

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

Dated: 11.11.2022

Date of Zero Draft MoM sent to EAC: 08.11.2022

Approval by Chairman: 11.11.2022

Uploading on PARIVESH:11.11.2022

MINUTES OF THE 16th EXPERT APPRAISAL COMMITTEE (INDUSTRY-1 SECTOR) MEETING HELD ON NOVEMBER 3, 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

NOVEMBER 3, 2022 [THURSDAY]

(i) Opening Remarks by the Chairman, EAC

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

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 15th Meeting of the EAC (Industry-1 Sector) held during October 17-18, 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 **15th Meeting of the EAC (Industry-1 Sector) held during October 17-18, 2022** conducted through Video Conferencing (VC), and noted that no request has been received for modifications/factual correction, in the minutes of the 15th EAC meeting for the project/activities, and confirmed the same.

Based on the deliberation held in the meeting w.r.t. venue of the next EAC meeting to be held on November 14-16, 2022, the Chairman has approved the conduction of the next EAC meeting to be held during November 14-16, 2022 through Hybrid Mode. The EAC members may attend the EAC meeting physically/virtually at MoEFCC, New Delhi and PP can participate the meeting with Hybrid mode.

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. 16.1

16.1 Expansion of approved capacity to produce 24,000 TPA to 44,000 TPA Product Mix of Silico Manganese, Ferro Manganese and Ferro Silicon with 2 nos. of Submerged Arc Furnace (2 x 9 MVA) and 36,000 TPA Billets with 1 no. of Induction Furnace of 15 Ton Capacity by M/s Aryavarta Khanija Pvt. Ltd., located at Village & Post-Hat Ashuria, Mauza-Basudevpur, P.S-Barjora, District-Bankura, West Bengal – Consideration of Environmental Clearance under the provisions of para 7(ii) of EIA Notification, 2006.

[Proposal No. IA/WB/IND/282453/2022; File No. IA-J-11011/410/2019-IA-II(I)]

[Consultant: CPTL- EIA Division; valid upto 12.02.2025]

16.1.1 M/s Aryavarta Khanija Pvt. Ltd. has made an online application vide proposal no. IA/WB/IND/282453/2022 dated 11th Oct 2022 along with copy of Addendum EIA report, Form – 2 and certified compliance report seeking Environment Clearance (EC) under the provisions of para 7(ii) of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

16.1.2 Name of the EIA consultant: M/s. Chandigarh Pollution Testing Laboratory –EIA Division [NABET Certificate / Extension Letter No: NABET/EIA/2225/RA 0250 valid till 12.02.2025].

Details submitted by the project proponent

16.1.3 The project of M/s. Aryavarta Khanija Pvt. Ltd. located at Village & Post-Hat Ashuria, Mauza-Basudevpur, P.S-Barjora, District-Bankura, West Bengal is for expansion of approved capacity to produce 24,000 TPA to 44,000 TPA Product Mix of Silico Manganese, Ferro Manganese and Ferro Silicon with 2 nos. of Submerged Arc Furnace (2 x 9 MVA) and 36,000 TPA Billets with 1 no. of Induction Furnace of 15 Ton Capacity under the provisions of para 7(ii) of EIA Notification, 2006.

16.1.4 Environmental site settings:

S. No.	Particulars	Details	Remarks																		
i.	Total land	The total land of 8.3 Acres or 3.359 ha is available for the existing project and its expansion.	Land Use – Converted to Industrial Use																		
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Entire land is under the possession of M/s. Aryavarta Khanija Pvt. Ltd.																			
iii.	Existence of habitation & involvement of R&R, if any.	<p>Nil, expansion in the existing land, no additional land is required for proposed expansion.</p> <p>Nearest Habitation:</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Distance & Direction from project Site</th> </tr> </thead> <tbody> <tr> <td>Mangram</td> <td>2.6 km, E</td> </tr> <tr> <td>Hatashuria</td> <td>1.4 km, SSE</td> </tr> <tr> <td>Sahebdihi</td> <td>1.2 km, SSW</td> </tr> <tr> <td>Mandarbani</td> <td>2.1 km, ESE</td> </tr> <tr> <td>Rajprasadpur</td> <td>2.1 km, ESE</td> </tr> <tr> <td>Barjora</td> <td>2.0 km, NNW</td> </tr> <tr> <td>Birsingpur</td> <td>0.9 km W</td> </tr> <tr> <td>Songram</td> <td>1 km, WNW</td> </tr> </tbody> </table>	Location	Distance & Direction from project Site	Mangram	2.6 km, E	Hatashuria	1.4 km, SSE	Sahebdihi	1.2 km, SSW	Mandarbani	2.1 km, ESE	Rajprasadpur	2.1 km, ESE	Barjora	2.0 km, NNW	Birsingpur	0.9 km W	Songram	1 km, WNW	
Location	Distance & Direction from project Site																				
Mangram	2.6 km, E																				
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Barjora	2.0 km, NNW																				
Birsingpur	0.9 km W																				
Songram	1 km, WNW																				
iv.	Latitude and Longitude of the project site	<table border="1"> <tbody> <tr> <td>Latitude</td> <td>23°24'36.97"N, 23°24'33.14"N, 23°24'29.30"N, 23°24'32.23"N</td> </tr> <tr> <td>Longitude</td> <td>87°17'47.29"E, 87°17'56.26"E, 87°17'54.26"E, 87°17'45.52"E</td> </tr> </tbody> </table>	Latitude	23°24'36.97"N, 23°24'33.14"N, 23°24'29.30"N, 23°24'32.23"N	Longitude	87°17'47.29"E, 87°17'56.26"E, 87°17'54.26"E, 87°17'45.52"E															
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Longitude	87°17'47.29"E, 87°17'56.26"E, 87°17'54.26"E, 87°17'45.52"E																				
v.	Elevation of the project site	76.2 m																			
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	<p>Project site: Nil</p> <p>Study area: Damodar River – 5.0 km, NE Kanjor Reservoir – 3.12 km, SE Sali River: 8.1km, SSE</p>																			
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	<p>Nil, following are forest present in study area: Beliator PF: 1.9 km/ West Gobindapur PF: 6.2km/ South Gangabandh PF: 9.9km/ South</p>																			

16.1.5 The existing project has granted environmental clearance vide F. No. J-11011/410/2019-IA.II (I) dated 6th August 2021 for Ferro Alloy Plant 2x9 MVA Submerged Arc Furnace to produce 24000 TPA (Fe-Mn / Fe-Si/ Si-Mn) and Induction Furnace (1x15 Ton) alongwith 5 MT Laddle and 1 Nos 2 strand continuous Caster for manufacturing of 36,000 TPA MS Billets. The

industry has got CTE vide letter no. 614-2N-85/2020 (E) dated 08/09/2021 from West Bengal Pollution Control Board. However, construction work had not started up to April 2022 due to expansion proposal, though PP has started the construction of the administrative building, furnace shed foundation, weighbridge, one 132 KV Line Tower and Toilet from 1st May 2022 onwards. So, CTO is not obtained as of now.

16.1.6 Implementation status of the existing EC dated 6th August 2021:

S.No.	Facilities	Units	As per EC dated	Implementation Status as on date	Production as per CTO
1.	Submerged Arc Furnace	9 MVA x 2 Nos	6 th August, 2021	Not Implemented	CTO not obtained. Construction work had not started upto April 2022 due to proposed expansion, though PP has started the construction of the administrative building, furnace shed foundation, weighbridge, one 132 KV Line Tower and Toilet from 1 st May 2022 onwards.
2.	Induction Furnace	15 Tons x 1 No	6 th August, 2021	Not Implemented	

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

S. No.	Plant Equipment / Facility	Existing facilities as per EC dated 6 th August 2021								Proposed Units		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.	Submerged Arc Furnace (SAF)	2 Numbers x 9 MVA	24,000 TPA Ferro Alloy	Not Implemented	---	2 Numbers x 9 MVA	24,000 TPA Ferro Alloy	NA	NA	2 Numbers x 9 MVA as per existing EC	Additio nal 20,000 TPA	2 Numbers x 9 MVA	44,000 TPA
2.	Induction Furnace (IF)	1 Number x 15 TPH	36,000 TPA Billets	Not Implemented	--	1 Number x 15 TPH	36,000 TPA Billets	NA	NA	-	-	1 Number x 15 TPH	36,000 TPA

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

For Ferro Manganese

S.No.	Raw material	Quantity required per annum in TPA (After Expansion)			Source	Distance from Site	Mode of transportation
		Existing	Expansion	Total			
1.	Manganese Ore	52,800	54,120	1,06,920	Purchase from mines in Odisha	200 to 250 km	By Road
2.	Coke	10,800	16,920	27,720	Purchase from Dhanbad	90 to 100 km	
3.	Dolomite	6,000	23,700	29,700	Purchase from mines in Odisha	200 to 250 km	
4.	Carbon Paste	480	532	1,012	Purchase from Local Traders	20 – 30 km	

For Billets (No change in quantity)

S.No.	Raw material	Quantity required per annum in TPA (After Expansion)	Source	Distance from Site	Mode of transportation
1.	Sponge Iron	32,400	Purchased from local units	5-10 Km	By Road through covered trucks
2.	Pig Iron	4,320	Purchased from Durgapur	10-15 km	
3.	MS Scrap	6,480	Purchased from local Traders	5-10 km	

16.1.9 The total water requirement of the project is estimated at 96.0 KLD. The daily requirement of water will be met from WTP of DVC located approx. 5 km away in WBIDC-Barjora, for which permission from concerned authority has already been obtained vide letter no. – MD/DVRR/W-6(144/2020/1475-80 dated 07/01/2021.

16.1.10 The total power requirement for the proposed project is estimated as 25 MW. The demand of electricity will be sourced from Damodar Valley Corporation. One D.G. Sets (500 kVA) is there as power failure back-up.

16.1.11 Baseline Environmental Studies:

Period	7 th December 2019 to 7 th March 2020					
AAQ parameters at 8 locations	<ul style="list-style-type: none"> • PM₁₀ = 52.50 to 64.50 µg/m³ • PM_{2.5} = 24.20 to 34.80 µg/m³ • SO₂ = <4.0 to 10.14 µg/m³ • NO₂ = 11.80 to 25.05 µg/m³ • CO = <0.1 to 0.50 mg/m³ 					
AAQ modelling (Incremental)	Pollutant	Predicted Value	Highest 24-hr avg PM ₁₀ value	Superimposed Value, µg/m ³	National Standards	

GLC)		MGLC in $\mu\text{g}/\text{m}^3$ (24-hour avg)	in downwind area in $\mu\text{g}/\text{m}^3$		$\mu\text{g}/\text{m}^3$
	PM ₁₀	0.5	64.5	65.0	100
	PM _{2.5}	0.2	34.8	35.0	60
	SO ₂	0.1	10.1	10.2	80
	NOx	0.2	25.1	25.3	80
Ground water quality at 8 locations	<ul style="list-style-type: none"> pH of the surface water collected ranged from 6.82-6.92. Total hardness was found to be 180-268 mg/l. Fluorides varies from 0.5 mg/l to 0.6 mg/l. Heavy metals is <2 mg/l. Total Coliform is absent 				
Surface water quality at 8 locations	<ul style="list-style-type: none"> pH varies from to 7.23 to 7.5 Dissolved Oxygen varies from 5.8 to 6.7 mg/l. Total Dissolved Solids varies from 165 to 228 mg/l. Chloride varies from 11.98 mg/l to 31.80 mg/l Nitrate varies from 2.30 mg/l to 4.79 mg/l. Sulphate varies from 14.60 mg/l to 28.60 mg/l Calcium varies from 14.03 mg/l to 18.84 mg/l Magnesium varies from 2.88 mg/l to 7.68 mg/l Iron varies from 0.05 mg/l to 0.15 mg/l Heavy metals is <2 mg/l Total Coliform varies from 1.1 x 10³ MPN/100 ml to 1.8 x 10³ MPN/100 ml. 				
Noise levels at 8 locations	Noise levels in the study area vary from 45.36 to 52.47 dB(A) Leq. during day time and 35.94 to 43.1 dB(A) Leq. at night time.				
Traffic assessment study findings	Particulars				Details
	Traffic Load (Baseline) (PCU/Day)				1016
	Additional traffic load during operation of the expansion project (PCU/Day)				604
	Total traffic load during operation of existing and proposed expansion (PCU/day)				1620
	Traffic Capacity As Per The IRC 73: 1980 For Highways (PCU/Day)				6000
Flora and fauna	No Schedule- I flora and fauna is found in the study area. No threatened, rare or endangered plant species are found in the study area.				

16.1.12 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	Treatment before Disposal	Mode of Disposal
1	Slag	SAF	36000	Manually broken to pieces	Fe-Mn slag will be used for making Silico Manganese. Si-Mn slag & Fe-Si slag will be given

S. No.	Type of Waste	Source	Quantity, TPA	Treatment before Disposal	Mode of Disposal
					for use in cement making and road making.
2	Slag	IF	3000	Crushed as granules	It will be crushed and then metal recovery will be done. The crushed slag will be given for road making and as filler material in various civil construction purpose.
3	Bag Filter Dust	SAF	20000	None	Given for use in road making or land filling or plinth filling
4	Bag Filter Dust	IF	900	None	Given for use in road making or land filling or plinth filling
5	Used Oil	DG Sets	0.5 kl/year	None	will be collected and given to authorized re-processors

16.1.13 Public Consultation (As per previous EC dated 6th August, 2021)

Details of advertisement given	Public hearing notice was published on 21.12.2021 in a prominent newspapers namely 'Times of India', 'Kolkata Edition' and local newspaper 'Bartaman'.
Date of public consultation	Public hearing was conducted at project site on 27.01.2021
Venue	Barjora Panchayat Samiti Meeting Hall, PS-Barjora, Dist-Bankura, West Bengal.
Presiding Officer	Additional District Magistrate (General). Bankura
Major issues raised	<ol style="list-style-type: none"> 1. Development of approach road from Metsil plant to proposed plant (500 m) 2. Giving slag to local contractors and panchayats for road development 3. Employment to local people 4. Development of facilities in school, drinking water facility 5. Concern about Health of local people

16.1.14 The capital cost of the project is Rs. 110.35 Crores including the cost of expansion and the capital cost for environmental protection measures is proposed as Rs 285 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 70 Lakhs. The proposed project will provide employment to total 99 numbers of people.

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

Certified compliance report from Regional Office:

16.1.16 The Status of compliance of earlier EC was obtained from Integrated Regional Office, Kolkata vide letter no. 102-688/22/EPE/390, dated 14.09.2022 in the name of M/s Aryavarta Khanija Pvt. Ltd. As reported, a boundary wall is present on the premises. The construction of the administrative building, furnace shed foundation, weighbridge, one 132 KV Line Tower and

Toilet is under process. As the project has not been set up, EC stipulated conditions for the EC dated 06.08.2021 could not be verified, as reported by the IRO, MoEFCC.

Deliberations by the Committee

16.1.17 The Committee noted the following:

1. The instant proposal is for expansion of approved capacity to produce 24,000 TPA to 44,000 TPA Product Mix of Silico Manganese, Ferro Manganese and Ferro Silicon with 2 nos. of Submerged Arc Furnace (2 x 9 MVA) and 36,000 TPA Billets with 1 no. of Induction Furnace of 15 Ton Capacity under the provisions of para 7(ii) of EIA Notification, 2006.
2. The EAC noted that the instant proposal involves increase in Product Mix of Silico Manganese, Ferro Manganese and Ferro Silicon from 24,000 TPA to 44,000 TPA which is approximately 84% increase in production capacity keeping the same configuration. As per Ministry's O.M. vide F.No. 1A3-22/10/2022-IA.III [E 177258] dated 11.04.2022 pertaining to guidelines for granting EC under para 7(ii)(a) of EIA Notification, 2006, paragraph 5 states that the proposals shall be processed for considering expansion of up to 50% of capacity as mentioned in the existing EC, in minimum three phases under para 7(ii)(a) of EIA Notification, 2006. Since in this case the expansion is beyond 50% of capacity, the EAC asked PP for justification for miscalculation of proposed production capacity and thereby applying for EC under para 7(ii)(a) of EIA Notification, 2006. Also, in the instant case PP has asked for exemption of Public Hearing (PH), however, as per para 4 (Table) of the O.M., PH is not required only when there is increase in capacity up to 40% based on successful compliance of previous environmental safeguard conditions related to expansion of 20%. Therefore, EAC is of the opinion that the instant expansion does not fall under the provisions of para 7(ii) of EIA Notification 2006 as para no. 4 of the O.M. dated 11.04.2022 is not complied. Therefore EAC cannot take up this case based on the information furnished and in pursuance to Ministry's O.M. dated 11.04.2022.
3. The project proponent during the presentation also admitted before the EAC that there is some miscalculation of increase in production capacity. Also, the PP has submitted the baseline data collected during the appraisal of previous EC proposal based on which EC dated 06.08.2021 was granted. Thus, EAC noted that the instant application is not prepared in line with the requirements for appraisal of application under provisions of para 7(ii) of EIA Notification 2006.
4. The EAC also noted that previous EC dated 06.08.2021 involved project land area of 3.877 Ha. However, in the instant case, PP has stated that expansion will take in the existing land area of 3.359 ha. Thus, there is mismatching of project land area which PP was not able to explain to EAC. Also, the proposed greenbelt area of 1.23 ha also differed from the greenbelt area mentioned in previous EC dated 06.08.2021 wherein 1.28 ha of greenbelt area was involved.
5. The EAC noted that project proponent has not made any revision in cost proposed for environmental protection measures and is same as per the previous EC dated 06.08.2021.

Recommendations of the Committee

16.1.18 In view of the foregoing and after deliberations, the Committee recommended that proposal to be **returned in its present form as the instant expansion proposal do not fall under the provisions of para 7(ii) of EIA Notification 2006 since para no. 4 of the O.M. dated**

11.04.2022 is not complied. The EAC also advised the Consultant to read the various provisions of the EIA Notification, 2006 and OMs & Guidelines issued under.

Re-Consideration of Environmental Clearance

Agenda No. 16.2

16.2 Greenfield project for a DRI based Steel plant to produce Sponge Iron 198,000 TPA; Mild Steel Billets 345,800 TPA; Rerolled Steel Products through Hot Charging and through Reheating Furnace 342,144 TPA; Ferro Alloys 35,000 TPA and/or Pig Iron 70,000 TPA from 9 MVA x 2 Nos. SAF; Captive Power of 20 MW (12 MW through WHRB and 8 MW through AFBC); Pipes 150,000 TPA; Galvanizing products 100,000 TPA; and Fly Ash Bricks 34,600 TPA by M/s Gauri Ganesh Ispat Private Limited, located at Village - Madhi, Tahsil –Tilda, District - Raipur, CHHATTISGARH – Consideration of Environmental Clearance.

**[Proposal No. IA/CG/IND/239481/2021; File No. IA-J-11011/486/2021-IA-II(IND-I)]
[Consultant: M/s Anacon Laboratories Pvt. Ltd. Nagpur; valid upto 29.03.2023]**

16.2.1 M/s. Gauri Ganesh Ispat Private Limited has made an online application vide Proposal No. IA/CG/IND/239481/2021 dated 26th August, 2022 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provision of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (ferrous & non-ferrous) and 1(d) Thermal power plant under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

16.2.2 Name of the EIA consultant: M/s. Anacon Laboratories Pvt. Ltd. Nagpur [Sl. No. 66, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/SA 0160; valid upto 29.03.2023, Rev. 25, Sept 05, 2022].

Details submitted by the project proponent

16.2.3 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord	ToR Validity
18/11/2021	49 th Meeting of Re-constituted EAC (Industry-I) held on 16 th -17 th Dec, 2021	Terms of references	10/01/2022	09/01/2026

16.2.4 The project M/s. Gauri Ganesh Ispat Private Limited located at Village - Madhi, Tahsil - Tilda, District - Raipur, Chhattisgarh is for setting up of a new project for a DRI based Steel plant to produce several products which includes: Sponge Iron 198,000 TPA; Mild Steel Billets 345,800 TPA; Rerolled Steel Products through Hot Charging and through Reheating Furnace

342,144 TPA; Ferro Alloys 35,000 TPA and/or Pig Iron 70,000 TPA from 9 MVA x 2 Nos. SAF; Captive Power of 20 MW (12 MW through WHRB and 8 MW through AFBC); Pipes 150,000 TPA; Galvanizing products 100,000 TPA; and Fly Ash Bricks 34,600 TPA.

16.2.5 Environmental site settings

Sl.	Particulars	Details				Remarks
i.	Total land	Total land – 26.93 Ha (Private land)				
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Total 26.93 Ha land has been acquired by M/s. Gauri Ganesh Ispat Private Limited for the proposed project				Entire 26.93 Ha Private land has been registered in the name of company Application for change in land use for industrial purpose has been submitted and PP hopes to get this diverted in next 2 months.
iii.	Existence of habitation & involvement of R&R, if any.	Project Site: Nil				-
		Study Area:				
		Habitation	Distance	Direction		
		Madhi	1.0 km	S		
		Khapri	1.5 km	E		
		Janjgira	1.0 km	SW		
No R&R is involved.						
iv.	Latitude and Longitude of all corners of the project site.	Point	Latitude	Longitude		-
		BP1	21°27'18.12"N	81°48'0.59"E		
		BP2	21°27'43.59"N	81°48'3.93"E		
		BP3	21°27'41.39"N	81°48'16.77"E		
		BP4	21°27'28.86"N	81°48'26.95"E		
		BP5	21°27'27.77"N	81°48'19.18"E		
		BP6	21°27'18.79"N	81°48'13.04"E		
		BP7	21°27'27.81"N	81°48'6.69"E		
BP8	21°27'31.83"N	81°48'7.13"E				
v.	Elevation of the project site	291 m - 297 m above mean sea level				The entire area is almost flat with moderate gradient
vi.	Involvement of Forest land if any.	No involvement of Forest Land				-
vii.	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within	Study area:				
		S. No.	Name of the Water Body	Distance (KM)	Direction	
		1	Kirna Tank / Jalso dam	1.0	W	
		2	Dhumma Nala	1.4	NW	

Sl.	Particulars	Details				Remarks			
	the project site as well as study area	3	Kirna Irrigation Canal	2.6	W				
		4	Kulhan Nala	2.2	WSW				
		5	Rindergaon Main Irrigation Canal	7.4	SSE				
		6	Siliari Distributary	1.7	S				
		7	Jamuniya Nadi	3.5	E				
		8	Bhatapara Branch (Maha Nadi Canal)	1.9	NW				
		9	Pikridih Tank	9.6	SE				
		10	Jheel garden	4.0	NNW				
		11	Khambha Talab	4.1	W				
		12	Pindraon Tank	8.0	SE				
		13	Bannubai Talab	9.7	N				
		14	Dalal Talab	9.6	N				
		15	Lakhan lal Mishra Jalasay (Bangoli tank)	7.5	SE				
		viii.	Existence of ESZ/ESA / national park/ wildlife sanctuary/ biosphere reserve/tiger reserve/ elephant reserve etc. if any within the study area	Nil Study Area: Khaulidabri PF – 9.2 km/SE, Mohrenga PF – 6.0 km/E				-	

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

S. No.	Process plant	Proposed configuration of the plant	Product Name	Capacity (in TPA)
1	DRI Kiln (Coal Fired)	200TPD X 2No. & 100TPD X 2No.	Sponge Iron	198,000
2	Induction Furnace along with CCM and LRF	Induction Furnace (20Tons X 6 Nos) and LRF (20ton x 1 No)	MS Billet	345,800
3	Hot Rolling Mill			342,144
	Hot Charging Rolling Mill	Electrical driven Rolling Mill about 529TPD	Rerolled Steel product (Wire Rod, TMT bar, Structure Steel etc.)	174,636
	Billet Reheating	Reheating Furnace based	Rerolled Steel products	167,508

S. No.	Process plant	Proposed configuration of the plant	Product Name	Capacity (in TPA)
	Furnace	Rolling Mill about 507 TPD	(Sheets, Strips and Rerolled Structural Steel etc.)	
4	Sub-Merged Arc Furnace	Electrically operated Sub-Merged Arc Furnace 9 MVA x 2 nos	Ferro Alloys (FeSi, FeMn, SiMn) [*FeSi – 22600 TPA/ FeMn-70000 TPA/ SiMn -35000 TPA either of combination of the above]	35,000
			And/or	
			Pig Iron	70,000
5	Captive Power Plant (Boiler and TG based)	Waste Recovery Heat Boilers (WHRB)	Captive Power	12 MW
		Atmospheric fluidized bed combustion (AFBC)		8 MW
6	Pipe Mill Unit	Pipe mill with 454 TPD capacity	Pipes	150,000
7	Galvanizing unit	Galvanizing unit	GI Pipes & other galvanized products	100,000
8	Fly Ash Bricks/ Block making unit	Fly Ash product making facilities	Fly Ash Bricks/ Blocks	34,600

16.2.7 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.	Units	Raw Material	Qty. (TPA)	Source	Distance from site	Mode of transportation	Total qty. (TPA)
1.1	Sponge Iron plant	Iron ore	326,700	NMDC/ OMC/ PELLET PLANTS AND PRIVATE MINES	600	By rail up to nearest rail way siding thereafter by road through covered truck	581,427
1.2		Coal	247,500	SECL/MCL COAL MINES or From Imported Coal	300	By rail up to nearest rail way siding thereafter by road through covered truck	
1.3		Dolomite	6,930	Local Mines	150	Road through covered truck	
1.4		Refractory material	297	Local Units	300	Road through covered truck	

Sl. No.	Units	Raw Material	Qty. (TPA)	Source	Distance from site	Mode of transportation	Total qty. (TPA)
2.1	Induction Furnace, (Steel Melting Shop)	Sponge Iron	356,400	Captive plant and from nearby sponge iron plants	50	Captive generation, if required from outside then through Road by covered truck	435,579
2.2		Pig Iron / CI Scrap	44,090	Captive Plant/ Local Market	150	Captive generation, if required from outside then through Road by covered truck	
2.3		Melting Scrap	7,400		50	Captive generation, if required from outside then through Road by covered truck	
2.4		Ferro Alloys	3,564		50	Captive generation, if required from outside then through Road by covered truck	
2.5		Aluminum	356	Open Market/ BALCO	180	through Road by covered truck	
2.6		Ramming Mass	891	Open Market	180	through Road by covered truck	
2.7		Steel Sheet Former	90	SAIL/ Open Market	50	through Road by covered truck	
2.8		LDO for Ladle Preheating	691	OMC/ like IOL/HPCL/ BPCL	80	through Road by tankers	
2.9		Calcined Lime for Refining of Liquid Steel	17,820	from Katani area units	250	through Road by covered truck	
2.10		Fluorspar and other additives for de phos	3,564	Open Market	250	through Road by covered truck	
2.11		Electrode for LRF (Arc Furnace)	713	HEG/ Open Market	450	through Road by covered truck	
3	For Hot Charging Rerolling Mill	Hot Billets	178,200	Captive plant	-	Captive, internal transfer	178,200

Sl. No.	Units	Raw Material	Qty. (TPA)	Source	Distance from site	Mode of transportation	Total qty. (TPA)
4.1	Reheating Furnace based Rerolling Mill (for strip rolling – Specialized rerolled product)	Cold MS Billets	178,200	Captive plant / Local market as per requirement	-	Captive, internal transfer	196,020
4.2		Coal for Reheating Furnace	17,820	SECL Mines/ Local Market	300	By rail up to nearest rail way siding thereafter by road through covered truck	
5.1	Ferro Alloys Plant (SiMn, FeMn, FeSi)	Manganese Ore	66,016	Mines at Orissa and Madhya Pradesh and Vidarbha region	350	By rail up to nearest rail way siding thereafter by road through covered truck	102,737
5.2		High Manganese Ore Slag	12,574	Own Unit/ Open Market	50	Captive generation, if required from outside then through Road by covered truck	
5.3		Quartz	2,515	Mines in Raigarh	250	through Road by covered truck	
5.4		Coke/Coal/Charcoal	18,862	Open Market	300	By rail up to nearest rail way siding thereafter by road through covered truck	
5.5		Dolomite	944	Mines in Bilaspur	150	Road through covered truck	
5.6		Electrode Paste	944	Local Industries	450	through Road by covered truck	
5.7		M.S. Item.	315	Local Industries	50	through Road by covered truck	
5.8		Lancing Pipe and Canister Sheet	472	Local Industries	50	through Road by covered truck	
5.9		Oxygen Gas	95	Local Industries	50	through Road by covered truck	
6.1	Captive AFBC Power Plant (12 MW)	Char/ Dolochar	49,500	captive generation in SID	-	By closed conveyor	74,286
6.2		Coal	24,636	SECL Mines (200 KM)	300	By rail up to nearest rail way siding thereafter by road through covered truck	

Sl. No.	Units	Raw Material	Qty. (TPA)	Source	Distance from site	Mode of transportation	Total qty. (TPA)
6.3		Fluidizing Bed Media	150	Open Market; (100 KMs)	50	through Road by covered truck	
7.1	Pipe Mill & Galvanizing Unit	MS Strip through reheating furnace	160,714	Captive generation from Billet Reheating Furnace	-	Internal transfer	174,764
7.2		Zinc	5,000	Open Market	1600	through Road by covered truck	
7.3		Lead	50	Open Market	1600	through Road by covered truck	
7.4		LSHS/LDO	2,000	Open Market	80	through Road by tankers	
7.5		Acid	4,500	Open Market	250	through Road by tankers	
7.6		Lime for Treatment	2,500	Katani area units and Open Market	350	through Road by covered truck	
8.1	Fly Ash Brick Plant	Fly Ash	22,490	Captive Plant	-	Internal transfer	34,600
8.2		Gypsum	3,460	Open Market; (100 KMs)	450	through Road by covered truck	
8.3		Grounded Slag from Induction Furnace	8,650	Own unit from Induction Furnace section	-	Internal transfer	

16.2.8 The water requirement is estimated to be 1700 KLD. Out of which 360 KLD will be recycled back so final requirement will be 1340 KLD. However, the application for grant has been made on the basis of total Yearly water requirement @ 1700 KLD * 330 days = 561,000 KLA which will be sourced from Surface Water i.e. from nearest source, for which application for allotment of water from Jalso Dam has already been submitted to Chhattisgarh Water Resource Department. The management had decided to implement A 50,000 KL Rain water collection Tank which will be able to collect sufficient rain water during rainy days which would continuously be collecting rain water during the rainy days. This extends to almost 75 days. Thus, water requirement will be met through rain water collections from it for 75 days. PP has submitted an undertaking that they will adopt all the best practices for reducing the Water consumption and reduced it from 1700 KLD as shown in TOR to 1360 KLD and will try to further reduce it to around 1290 KLD.

16.2.9 Total power requirement will be 60 MW out of which 20 MW will be met through captive power plant and 40 MW will be sourced through State Grid (CSPDCL) In addition to this total 2 Nos. of 3300 kVA DG sets are proposed for emergency backup.

16.2.10 Baseline Environmental Studies

Period	Post monsoon season (15 st October 2021 – 15 th January 2022)			
AAQ parameters at 8 Locations (min. and max)	<ul style="list-style-type: none"> • PM₁₀ = 48.9 – 77.6 µg/m³ • PM_{2.5} = 19.2 – 36.4 µg/m³ • SO₂ = 5.8 – 12.2 µg/m³ • NO₂ = 12.6 – 22.5 µg/m³ • CO = 273 – 500 µg/m³ 			
	<ul style="list-style-type: none"> ○ 15th Jan to 15th Feb – 2022 • PM₁₀ = 49.7 – 78.4 µg/m³ • PM_{2.5} = 19.7 – 34.8 µg/m³ • SO₂ = 6.5 – 11.9 µg/m³ • NO₂ = 13.9 – 20.9 µg/m³ • CO = 222 – 463 µg/m³ 			
Incremental GLC level	<ul style="list-style-type: none"> • PM₁₀ = 1.0 µg/m³ (Level at 1.0 km SW and SSW Direction) • PM_{2.5} = 0.04 µg/m³ (Level at 1.0 km SW and SSW Direction) • SO₂ = 4.8 µg/m³ (Level at 1.4 km SW and WSW Direction) • NO_x = 3.6 µg/m³ (Level at 1.2 km SW and WSW Direction) • CO (DG Set) = 3.19 µg/m³ (0.5 km in SW direction) • CO Due to Traffic Movement CO is 23.0 µg/m³ 			
Ground water quality at 8 locations	<ul style="list-style-type: none"> • pH: 7.21 – 7.64, • Total Hardness: 176 - 297 mg/l, • Fluoride: BDL (DL-0.1) – 0.62 mg/l, • Chloride: (DL-0.1) – 0.62 mg/l, • TDS: 254-498 mg/l, • Nitrate: 3.81 – 12.46 mg/l • Sulphate: 6.74 – 23.32 mg/l 			
Surface water quality at 8 locations	pH: 7.71 to 7.84 ; DO: 6-6.4 mg/l; BOD: 2.91 – 5.33 mg/l and COD : 9.24 –16.48 mg/; TDS: 342 – 538 mg/l mg/l; Total Hardness: 153.92 – 395.76 mg/l as CaCO ₃			
Noise levels Leq. (Day and Night)	<p>Noise levels at every station were within CPCB standards.</p> <p>Residential Area – 50.8 to 54.1dBA for day time and 38.9 to 42.7 dBA for night time.</p> <p>Commercial Area – 59.2 to 57.7 dBA for day time and 43.8 to 44.5 dBA for night time.</p> <p>Silence Zone – 46.5dBA to 48.2dBA for day time and 37.4 dBA to 38.3dBA for night time.</p> <p>Industrial area - 53.1dBA for day time and 40.6 dBA for night time.</p>			
Traffic assessment study findings	<ul style="list-style-type: none"> • Traffic study has been conducted at NH-130 B which is 11.7 km/ W from project site. • The raw material will be transported through road by covered trucks. • Present Traffic Density and No. of Vehicles Per Day 			
	Description	No. of Trucks and Buses	No. of Passenger car	Two /three Wheeler
	Approach road	36	65	142
	<ul style="list-style-type: none"> • Proposed traffic contribution due to activity of project is: • The present PCU load will be increased by 2342 PCU/day after proposed project and level of service (LOS) will be: 			

ROAD	INCREASED PCU'S- STATE/ NATIONAL HIGHWAY	V (VOLUME IN PCU/DAY)	C (CAPACITY IN PCU/DAY)	MODIFIED V/C RATIO	LOS
Approach road	1134+1481=2615	2615	6000	0.44	C
* Note: Capacity as per IRC: 64-1990 Guideline for capacity for roads.					
Sl. No.	Mode of Transportation	Total Trips /day	Passenger Car Unit (PCU)	PCU	
1.	Trucks/Dumpers	476	3	1428	
2.	Car	25	1	25	
3.	Two / Three-Wheeler	38	0.5	19	
4.	Bus	3	3	9	
				1481	
Conclusion: The LoS value from the proposed activity is found to be “very good” for NH-130B and “Good” for Approach road. So the additional load only of (452 trips/day) will add insignificant contribution on the carrying capacity of the concern roads. Hence it is concluded that it is not likely to have any significant adverse effect.					
Flora and fauna	No schedule – I species were observed in the study area as per Wild Life Protection Act (1972).				

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

Name of Solid Waste generated	Qty (TPA)	Proposed Disposal Plan
Char / Dolochar (SID)	49,500	Captive use in Captive Power plant
Kiln Accretion & Refractory waste (SID)	300	Sold to authorized recyclers
Bottom Flue Dust Ash (SID)	39,600	Used for Road making and Land filing and can also be supplied to Cement plants .
Mill Scale (IF)	5,346	Captive use in Ferro Alloys Plants
Refractory & Ramming Mass waste (IF)	446	Sold to authorized recyclers
Defective Billets (IF)	5,346	Reused in own Induction furnace
Slag from Induction Furnace	64,598	Captive use in own Fly Ash Brick unit and remaining (after recovery of metal) used for Road making and Land filing
Defective and Miss Roll (RM)	8,019	Reused in own Induction furnace
Mill Scale (RM)	6,238	Captive use in Ferro Alloys Plants
Ash from Coal firing in PG Plant (RM)	6,237	Used in own Fly Ash Brick making unit

Name of Solid Waste generated	Qty (TPA)	Proposed Disposal Plan
Slag from Ferro Alloys Plant	39,789	Used for Road making and Land filing.
Fluidized Bed Material (PP)	150	Used in own Fly Ash Brick making unit
Fly Ash from Char / Dolochar (PP)	37,125	Captive use in own Fly Ash Brick unit
Ash From Coal (PP)	11,087	Sold to nearby Cement plants.
MS Scrap Generated	10,500	Reused in own Induction furnace
Mill Scale Generated in Pickling	1,000	Used in own Ferro Alloys Plants.
Total	285,281	

HAZARDOUS WASTE GENERATION

Name of Hazardous Waste generated	Qty (TPA)	Proposed Disposal Plan
Zinc dross Generated (Sch. 1) 6.2	3,500	Sold to registered recyclers
Acid Neutralization Lime Sludge Generated	7,000	Out of this 3400 TPA lime sludge will be sold to registered recyclers/ Cement Plants; and 3600 TPA (KLA) neutralized water will be recovered and reused in process.
Lead Dross generation (Sch.) 9.2	13	Sold to registered recyclers
Total	10,513	

HAZARDOUS WASTE GENERATION FROM UTILITY

Type of Haz. Waste	H. W. Category	Quantity	Disposal
Waste Oil/Used Oil	5.1 (as per HWM Sch. I)	6 KL/annum	Will be given to authorized recycler having authorization from competent authority.
ETP Sludge	34.3 (as per HWM Sch. I)	70 tons/year	Composted and applied on green Belt
Used Lead acid batteries	HWM Rule 2016, Sch. IV, Sr. No.17	30 Batteries/ annum	The lead acid battery or dry battery will be given to authorized recycler having authorization from competent authority

16.2.12 Public Consultation:

Details of advertisement given	<ul style="list-style-type: none"> • Loksatya, New Delhi Dated 27.02.2022 • Hari Bhumi (Hindi Newspaper) Dated 27.02.2022
Date of public consultation	30/03/2022
Venue	Village-Marhi, Sarkari khula Bhatha (Shamilat chaaragah) Khasra no. 7, P.H.No. 35, NRHM Bengali, Tehsil-Kharora (former Tehsil-Tilda), District-Raipur (Chhattisgarh)
Presiding Officer	ADM and Additional Collector, District Raipur

Major issues raised	<ul style="list-style-type: none"> • Concern about Conduction of Public Hearing, venue, advertisement • Concern about employment, agreement with respect to employment to local 550 people • Concern about irrigation system as water will be source from Jalso and Dhanauli Dam • Concern about adverse impact on Crops, Human Health, Children in nearby located School, on devotees in Banjari Khapri Mata Temple due to likely Air Pollution and transportation • Concern about Moharenga Nature Safari (being made as Bird Safari by C.G. Forest Dept.) due to effect of Air Pollution • Equipment required for preparation of Manure through Cow dung
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Action plan as per MoEF&CC O.M. dated 30/09/2020

Sr. No.	Particulars	Physical Status	Target of Implementation of Action Plan (Timeline)			Rs. (in lakhs)
			1 st Year	2 nd Year	3 rd Year	
1	Vocational Training Centre for Youth	Location: Village Madhi at community land provided by Village Panchayat/ Local Authority. Size of Building: Approx 1000 Sqft. (50 X 20 sqft) Quality: RCC Roof and Floor, Fly Ash Brick Wall. Facilities proposed in Centre: Lathe Machine, Welding Machine, Fabrication instruments, knitting machine, embroidery machine, Grinding machine to prepare Papad and Pickle, Computer, Printer etc.	Work will be started simultaneously with implementation of project activity Village - Madhi on April 2024.	Completed in 2 nd year i.e. December 2025	-	40.00
2	Human Health / Pathology Centre Clinic	Location: Village: Madhi, Size of Room: 20 X 30 = 600 Sqft Facility: 1 OPD chamber, 1 Lab room, 1 Patient waiting area, 1 Ambulance, First Aid and Minor OT, ECG and Sonography	Site selection and approval from Local authority at Village- Madhi October 2024	Starting of construction at Village Madhi January 2025	Completion of work and start the functioning of centre October 2026	50.00

Sr. No.	Particulars	Physical Status	Target of Implementation of Action Plan (Timeline)			Rs. (in lakhs)
			1 st Year	2 nd Year	3 rd Year	
		Machine etc/ Quality: RCC Roof and Floor, Fly Ash Brick Wall.				
3	Rural Infrastructure like strengthening of Road/ Rain Water Harvesting Structures / Solar Streetlight at village Road	Location: Village Madhi Work: <ul style="list-style-type: none"> Strengthening of internal Road of village Madhi approx- 2 KM Providing Street light with poles in the village Road Khapari village to Madhi village Rain Water Harvesting at Community land of Madhi – 4 Nos. 	Starting of Work of Road Strengthening at Madhi Village December 2024	Starting and Completion of work of Rain Water Harvesting and implementation of Street lights December 2025	Completion of work March 2026	80.00
4	Drinking Water facility at Village	Location – Village Madhi and Khapri Work: 6 Nos. of Borewell for drinking water and storage facility as per Village Panchayat demand	3 Nos. Borewell and storage facility and water supply system	3 Nos. Borewell and storage facility and water supply system	Completion of work	70.00
5	School Upliftment	Location- High School Madhi Work: Air Purifire – 8 Nos. with 5 years AMC Greenbelt development – approx 100 trees Separate Toilet upgradation for boy and grist- 2 Nos. Solar Lighting – 1 kWh Potable Drinking water (RO) with 5 years AMC	Starting of work at Madhi Village and completed by December 2024			25.00
6	Construction of Cow shed at Gothan (Community Cow grazing area)	Construction of 2000 Square feet Cow Shed at Gothan At Village Madhi	Construction of 2000 Square feet Cow Shed April 2024 to December 2024	--	--	10.00
7	Farmers Training and Facilitation Centre to improve crop quality and production	Location: Village Madhi at community land provided by Village Panchayat/ Local Authority. Building Size: Approx 1000 Sqft. (50 X 20 sqft)	Site selection and approval from Local authority at Village- Madhi April 2024	Starting of construction at Village Madhi December 2025	Completion of work and start the functioning of training center and facilitation center	25.00

Sr. No.	Particulars	Physical Status	Target of Implementation of Action Plan (Timeline)			Rs. (in lakhs)
			1 st Year	2 nd Year	3 rd Year	
		Quality: RCC Roof and Floor, Fly Ash Brick Wall. Facilities: Agriculture and horticulture Expert- 1 person on behalf of the company. A Rapid soil testing facility/kit will be provided along with the beneficial Books on Crop Agronomy and Horticulture and Dairy etc in Hindi. Activity: Half yearly Soil sampling, and analysis and awareness to farmers for better productivity and better selection of crops. Training for efficient crop management Awareness for “Jaivik and Sustainable Agriculture”			December 2026	
Total Rs. Three Crores only						300.00
Note: PP proposed to adopt 2 villages namely village Madhi and Khapari under CER and CSR scheme and formulate Village development program under consultation with local panchayat and district administration for need-based community development activities which would be in addition to the development plans being undertaken by state and central government.						

16.2.13 The capital cost of the proposed project is Rs. 280.10 Crores and the capital cost for environmental protection measures is proposed as Rs. 36 Crores. The annual recurring expenses mainly on repair; maintenance; consumable etc. will be about Rs. 0.650 Crores has been allocated for implementation of the Environmental Management Plan for proposed project. The details of cost for environmental protection measures is as follows:

Sl.	Particulars	Amount (in Crores Rs.)	Operation and Maintenance cost 5% (in Crores Rs.)
Plant and Machinery proposed for EMP			
1	Dry ESP for DRI Kilns with 4 field – (4 Nos.)	10	0.05
2	Dry ESP for Power Plant with 4 field (1 Nos)	2.5	0.013
3	Bag Houses (PTFE Type) for the Sponge Iron Kilns (8 Nos.)	3.2	0.016
4	Cost of Bag Houses (PTFE Type) with spark arrestors for Induction Furnaces (2 Nos)	0.7	0.004
5	Cost of Bag Houses (PTFE Type) with FD Coolers for Ferro	0.7	0.004

Sl.	Particulars	Amount (in Crores Rs.)	Operation and Maintenance cost 5% (in Crores Rs.)
	Alloys		
6	Cost of Rotary Vane Wet Scrubber for Rolling Mill for Reheating Furnaces (1 Nos)	0.4	0.002
7	Cost of Bag Houses for Boiler Furnaces for Power Plant Coal Handling and Ash Handling Area (4 Nosl.)	1.6	0.008
	Building and Civil works used for EMP		
8	Cost of a Common Chimney (Sponge Iron Plant)- (79 Meter- 1 No.)	1	0.005
9	Cost of Common Chimney for IF. LRF (33 meter – 1 Nos.)	0.3	0.002
10	Cost of Chimney for SAF (45 meter X 1 No.)	0.3	0.002
11	Cost of chimney for FBC (42 meter X 1 No.)	0.5	0.003
12	Cost of Chimney Galvanizing unit (35 meter X 1 No.)	0.3	0.002
13	Cost of Industrial ETP (500 KLD)	1.37	0.012
14	Oil Trap in the drains system (1 Nos.)	0.1	0.001
15	Silt Arrestation Pit in Storm Water Drains	0.35	0.002
16	Internal Road Black topping and other construction works for Paving the Floors	1	0.005
17	Drainage system	0.7	0.004
	Exclusive cost of works used for EMP		
18	Cost of STP for Domestic Waste (30 KLD)	0.55	0.003
19	Green Belt Plantation along with Irrigation System and Pipe Line	1.2	0.006
20	Fugitive dust Control Spray system in Plant	0.3	0.002
21	Movable Vacuum cleaning system	0.2	0.001
22	Wheel Washing System in Security area	0.15	0.002
23	On Line stack Monitoring three sets in DRI with Power; Induction Furnace and in Rolling mill	0.25	0.001
24	On Line AAQ station	0.75	0.004
25	High Volume sampling and Stack Monitoring Kits	0.05	0.002
26	Weather Monitoring Station	0.05	0.002
27	Ground water Monitoring Piezo Meters	0.03	0.001
28	On Line Effluent Quality Monitoring System(EQMS)	0.15	0.002
29	Environment Monitoring Laboratory Testing Equipments and Chemicals and Furniture and computer systems etc	0.75	0.004
30	Rain Water Harvesting and Recharge system with Roof Harvesting and Rain Water Collection Tank	0.5	0.003
31	Noise Reduction enclosure/ anti vibrating pad etc.	0.45	0.002
32	Miscellaneous including crop protection	0.25	0.08
33	Environmental Monitoring Cost		0.2
34	Solar Power Plant	4.00	0.20

Sl.	Particulars	Amount (in Crores Rs.)	Operation and Maintenance cost 5% (in Crores Rs.)
35	CER works for improvement of Social Infrastructure and surrounding Environment (CAPEX)	2.10	-
	Total Expenses in Crores Rs.	36.75	0.650

16.2.14 Greenbelt of 33.16% (i.e. 8.93 Ha.) will be maintained. A 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. The total plantation about 22325 Saplings (above 6 ft. height) will be planted within two years in coming Monsoon (after receipt of EC) whereas survival rate shall be maintained in subsequent years. Indigenous and broad leaf species for greenbelt development i.e. Kadamb, Neem, Bargad, Karanj, Dumer, Tamhan, Tacoma, etc. will be preferred. Plantation will also carry all along approach road (Avenue plantation). At least 20 M thick greenbelt will be developed towards South West and South direction from the project site. The plantation will be completed within two year time.

Yr.	AREA (in Ha.)	NO. OF SAMPLING (@ 2500 Sapling/Ha.)	Remarks
1 st	4.93	12325	Greenbelt of 33.16% (i.e. 8.93 Ha.) will be maintained. Thus, the total plantation about 22325 Saplings (above 6 ft. height) will be planted whereas survival rate shall be maintained in subsequent years. Indigenous and broad leaf species for greenbelt development i.e. Kadamb, Neem, Bargad, Karanj, Dumer, Tamhan, Tacoma, etc. will be preferred. Plantation will also carry all along approach road (Avenue plantation). Proposed Budget: Green Belt Plantation along with Irrigation System and Pipe Line Capital Rs.1.2 Cr.
2 nd	4.00	10000	
	8.93	22325 nos. in 8.93 Ha. (33.16 %)	

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

16.2.16 The proposal was initially considered in the 13th meeting of the EAC for Industry-I sector held on 14-15th September, 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 September, 2022)

16.2.17 The Committee noted the following:

1. The total project area is 26.93 ha which is a private land. Project proponent reported that the land has already been acquired and under the possession of the company and

application for change in land use for industrial purpose has been submitted. The EAC is of the view that the land use conversion to industrial purpose shall be obtained from the Competent Authority.

2. As reported by PP, the water requirement of 1700 KLD will be sourced from Surface Water for which application for allotment of water from Jalso Dam has been submitted to Chhattisgarh Water Resource Department. However, the EAC noted that the source of water in the granted ToR dated 10.01.2022 is Bangoli Tank. PP shall provide the clarification on the same and shall submit the requisite water permission letter from the Competent Authority.
3. Industry shall consider reduction in the water consumption, rework on water quantity demarcated to greenbelt development, revisit the evaporation losses and submit the revised water balance.
4. The committee deliberated on details of carbon foot prints and carbon sequestration study w.r.t. proposed project and observed that project proponent, inter-alia, submitted that pet coke will be replaced with charcoal in SAF to reduce GHG emission and Carbon foot print. The EAC is of the view that this mitigation measure may not be very effective and suggested PP to revisit and submit details alongwith calculations.
5. Madhi, Janjira and Khapri villages are in the vicinity of the project site. Also, there is a school at Madhi Village at a distance of 0.31 Km. Project Proponent shall submit appropriate environmental safeguard measures to minimise the impact on the habitation of the locals.
6. 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 is of the view that revised action plan shall be submitted including the provision for RO water instead of Borewell supply to nearby villages.
7. PP shall undertake village adoption and formulate Village Adoption program consisting of need-based community development activities, in consultation with the district administration and the village panchayats and implement the same to develop them into model villages.
8. The EAC noted that greenbelt in 33.16% (i.e. 8.93 Ha.) will be maintained. The total plantation about 22325 Saplings (above 6 ft. height) will be planted within two years in coming Monsoon. The EAC is of the view that a detailed action plan for Greenbelt development shall be submitted.
9. Engineering layout of the project shall be reworked for the facilities to be established as the facilities in the submitted plan appears in a packed manner.
10. Multiple water bodies are within the study area of the project site. The EAC is of the opinion that the water bodies shall not be disturbed. 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.
11. The EAC noted that there is a variation in the project cost mentioned in the ToR dated 10.01.2022 and the project cost submitted in the EC proposal. PP is required to clarify the same.

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

16.2.18 In view of the foregoing and after detailed deliberations, the committee recommended to **defer the proposal** due to certain deficiencies in the proposal and sought requisite information on the points referred at para no. 16.2.17 above. The proposal shall be considered after submission of requisite information on Parivesh Portal.

16.2.19 The proponent submitted the ADS reply vide letter dated 18.10.2022 uploaded on PARIVESH on 18.10.2022. Point-wise reply of ADS is given as below:

Sl.	ADS Observations	Clarification submitted by the PP
1	The total project area is 26.93 ha which is a private land. Project proponent reported that the land has already been acquired and under the possession of the company and application for change in land use for industrial purpose has been submitted. The EAC if of the view that the land use conversion to industrial purpose shall be obtained from the Competent Authority.	<p>In response to PP's application, the authorities have assessed the revised premium and annual rent for diversion of land; accordingly PP has paid the amount of Rs.1478918.00 (Total Rs fourteen lakhs seventy eight thousand nine hundred eighteen) on dated 29th September 2022 to the Govt of Chhattisgarh. A copy of the Challan receipt is submitted.</p> <p>PP during the meeting submitted that the land diversion order dated 07.10.2022 as per which entire 29.63 Hectare land is now diverted for industrial purpose has been received from the competent authority.</p>
2	As reported by PP, the water requirement of 1700 KLD will be sourced from Surface Water for which application for allotment of water from Jalso Dam has been submitted to Chhattisgarh Water Resource Department. However, the EAC noted that the source of water in the granted ToR dated 10.01.2022 is Bangoli Tank. PP shall provide the clarification on the same and shall submit the requisite water permission letter from the Competent Authority.	<p>The PP is regularly following up the proposal for the grant of Surface Water from Govt. of Chhattisgarh and the application are being actively considered by WRD for a Policy decision to first supply water for Jal Jivan Mission and Amrit Mission and then allot the water to industry. Thus, the process is getting delayed. Since there are several sources of surface water in the Vicinity of the plant so PP is confident that the WRD of CG Govt. will definitely allot the surface water to PP.</p> <p>In addition to this the Chhattisgarh State Industrial Development Corporation (CSIDC) is also proposing to develop a network of water supply in this area.</p> <p><i><u>PP understand that the grant of Surface water resource is quite vital for operation of proposed project. Thus, PP herewith undertake that they will not use any ground water for the operation of the project and will not start the project construction unless they are granted surface water sanction by WRD of CG Govt.</u></i></p> <p>So PP requests to grant conditional sanction of EC.</p>
3	Industry shall consider reduction in the water consumption, rework on water quantity demarcated	The water requirement in the proposed project is largely for heat dissipation in Sponge Iron Kilns Cooler ; in Induction Furnace Coils , in Rolling Mill for rolls cooling and in Ferro Alloys for cooling of Mandrils; Yokes; Bus Tubes and Electrode pads; Slipping devices,

Sl.	ADS Observations	Clarification submitted by the PP
	to greenbelt development, revisit the evaporation losses and submit the revised water balance.	<p>etc. Thus the water consumption has been considered due to evaporation loss based on heat dissipation required in individual process as well as general experience in industry which varies from season to season as well as on several operating factors.</p> <p>PP has also discussed about the water consumption in a few industries of similar nature. It is found from that PP's water consumption is not more than being consumed by similar units.</p> <p>Thus based on a general experience an average for the whole year has been considered which would vary according to the ambient temperature and humidity also. For Conservation of Water, PP has proposed air cooled condenser in Power Plant. Similarly PP has also proposed to construct at least 3 months water storage facility in the plant to store rain water for use in Summer time.</p> <p>PP will adopt all the best practices for reducing the Water consumption and as suggested by honourable expert members PP had reduced it from 1700 KLD as shown in TOR to 1360 KLD and PP will try to further reduce it to around 1290 KLD.</p> <p>As per SIPB (Govt of CG) policy the recommendation of water allotment to WRD is considered on conservative manner.</p>
4	The committee deliberated on details of carbon foot prints and carbon sequestration study w.r.t. proposed project and observed that project proponent, inter-alia, submitted that pet coke will be replaced with charcoal in SAF to reduce GHG emission and Carbon foot print. The EAC is of the view that this mitigation measure may not be very effective and suggested PP to revisit and submit details alongwith calculations.	<p>The proposal to use Carbon Neutral reductant (Wood Charcoal) was considered as per UNFCCC guidelines and IPCC default values calculation of emission and possible reduction for the production of Ferro Silicon.</p> <p>As per deliberation of the committee, PP has revised GHG emission reduction estimates with removal of GHG reduction due to use of charcoal considered previously in SAF as fuel source. PP has submitted the Revised GHG emission and reduction plan.</p>
5	Madhi, Janjira and Khapri villages are in the vicinity of the project site. Also, there is a school at Madhi Village at a distance of 0.31 Km. Project Proponent shall submit appropriate environmental safeguard measures to minimise the	<p>The revised EMP cost (Capital Cost Rs. 36.75 Crores & Recurring Cost Rs. 0.65 Crores) includes the mitigation measures for possible impact due to project activity. The same is updated at para 16.2.13 above.</p> <p>Besides site specific mitigation measures already provided in EIA report following additional measures will be provided to minimise the impact on school. The details are as under:</p> <ul style="list-style-type: none"> • Boundary wall of 15 feet height will be constructed towards school at Madhi Village as a safeguard measures to protect dust

Sl.	ADS Observations	Clarification submitted by the PP
	<p>impact on the habitation of the locals.</p>	<p>and noise from plant.</p> <ul style="list-style-type: none"> • The unit will provide at least or >25 Meter thick green belt comprising of fast growing broad leaves local species with large and dense crown, towards school side as well as also support the school in developing a thick green belt in its premises also towards the plant. • Water Sprinkling from time to time will be done to control fugitive emission along approach road • 2 Nos of Mist fogging system will also be provided in the project area to minimize the fugitive dust impact. The project will limit the PM emission level within 30 mg/Nm³. • Zero discharge is proposed to be maintained. No use of ground water is proposed. • The gate of school is at different direction, and has different approach road which will not be used for transportation, thus there will be no impact on school due to traffic of factory. • As per wind-rose study the direction of wind is mostly form NE to SW direction, whereas the school is at East direction which is considered under least impact zone. • As per AAQ modelling studies, it was observed that, maximum GLC of pollutants predicted at SW and SSW direction. Thus, the school being located at east direction insignificant impact is anticipated. • 8 nos. of mobile Air purifier will be provided in school under CER program. • Drinking water (RO water) facilities will be provided by the unit at school. • PP will also provide Solar panels (1 Kw) for electricity generation in the school. • Toilets facilities in the school will be upgraded. • Post project quarterly noise and AAQ monitoring will be carried out at school. <p>Environmental safeguard measures to minimise the impact on the habitation of the locals:</p> <p>PP has proposed 5 nos. separate ESPs with atleast 4 fields to ensure 30 mg/NM³, 11 Nos High Capacity PTFE type Bag filters and 1 No. of high efficiency Wet scrubber (Rotary Vane Wet Scrubber) to control air pollution.</p> <p>PP has proposed 7 nos. of storage sheds to store raw materials, silos will be provided for dry fly ash. Coal, Iron ore Pellet, Sponge iron, Char waste will be stored in covered shade which will be helpful to control fugitive emissions to greater extent.</p>

Sl.	ADS Observations	Clarification submitted by the PP
		<p>Wheel washing system in the entry and exit points will be adopted. Adequate and best available practices of Housekeeping shall be adopted to mitigate air pollution.</p> <p>All internal road will be asphalted/pucca road for movement of vehicles.</p> <p>PP will provide one number of automatic sweeping machine for road cleaning on regular basis to control fugitive emissions. PP is committed to commission mobile as well as stationery water sprinkling systems both to arrest ground level dust and also Mobile Fog/mist type sprinklers to arrest suspended particulate matter in the atmosphere. PP shall operate these mobile water and Fog sprinklers in the Madhi village in the vicinity of the project site.</p> <p>PP has proposed to plant 22325 Nos. (considering 2500/Ha. density) of tall growing plants in all around the compound in about 8.93 Hectare (33.16% of Area).</p> <p>PP will plant tall growing plants in all around the compound wall. PP will provided wind breaking walls minimum 15 feet height and further provide a wind braker above the wall with galvanized sheet towards the school on compound wall.</p> <p>After consultation with the village panchayat, PP shall also do adequate plantation with tall trees of native species in the village area and a green shelter belt between the village and project.</p> <p>This will mitigate air/dust and noise pollutions that would impact the above village significantly.</p> <p>PP is fully committed to safeguard the habitants of this village from all types of industrial impacts arising out of operations. PP is committed to operate all its operations under ZLD protocols and shall ensure that no effluents are allowed to pass beyond project premises. PP is fully committed to minimize the air, water and noise pollution impacts.</p>
6	<p>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 is of the view that revised action plan shall be submitted including the provision for RO water instead of Borewell</p>	<p>The revised action plan to meet the public expectations is submitted that PP will provide drinking water supply to village Madhi including with 4 Nos. of Borewell for drinking water and storage and RO facility as per Village Panchayat demand; and PP will also provide RO water facility at School.</p> <p>As advised by the Committee PP has revised the allocated funds for PH/Socio-economic development/CER expenditure from Rs.1.35 crores to Rs.2.10 crores, which would be about 0.75% of the proposed project cost. The same is updated at para 16.2.12 above.</p> <p>PP will incur most of the capital expenditure in the 1st -2nd years and maintenance shall be done in the following years from the recurring</p>

Sl.	ADS Observations	Clarification submitted by the PP											
	supply to nearby villages.	allocated funds.											
7	PP shall undertake village adoption and formulate Village Adoption program consisting of need-based community development activities, in consultation with the district administration and the village panchayats and implement the same to develop them into model villages	<p>PP herewith propose to adopt village Madhi under CER and CSR scheme and formulate Village development program under consultation with local panchayat and district administration for need-based community development activities which would be in addition to the development plans being undertaken by state and central government.</p> <p>PP will also conduct Socio-economic Study for pre and post CER/CSR activities.</p> <p>PP submit that as their proposed project cost is Rs.278 crores only, PP is committed to adopt the Madhi village.</p> <p>PP will formulate a sound Village adoption program consisting of need based community development activities with the objective of developing it into a model village.</p> <p>All the above activities will be carried out under CER / CSR activities in coordination with the local Gram Panchayat.</p>											
8	The EAC noted that greenbelt in 33.16% (i.e. 8.93 Ha.) will be maintained. The total plantation about 22325 Saplings (above 6 ft. height) will be planted within two years in coming Monsoon. The EAC is of the view that a detailed action plan for Greenbelt development shall be submitted	<p>PP has proposed greenbelt with density 2500 tree/hectare and proposed to plant about 22325 Trees within 8.93 Hectare i.e. 33.16% of total project area.</p> <p>PP herewith is committed to plant fast growing dense canopy trees (at least 6 feet height) within plant premises before the commencement of construction activities in project site.</p> <p>The plantation will be completed within two year time.</p> <p style="text-align: center;">ACTION PLAN FOR GREEN BELT DEVELOPMENT</p> <table border="1" data-bbox="584 1350 1485 2045"> <thead> <tr> <th data-bbox="584 1350 679 1496">Yr.</th> <th data-bbox="679 1350 820 1496">AREA (in Ha.)</th> <th data-bbox="820 1350 1034 1496">NO. OF SAMPLING (@ 2500 Sapling/Ha.)</th> <th data-bbox="1034 1350 1485 1496">Remarks</th> </tr> </thead> <tbody> <tr> <td data-bbox="584 1496 679 1534">1st</td> <td data-bbox="679 1496 820 1534">4.93</td> <td data-bbox="820 1496 1034 1534">12325</td> <td data-bbox="1034 1496 1485 2045" rowspan="2">Greenbelt of 33.16% (i.e. 8.93 Ha.) will be maintained. Thus, the total plantation about 22325 Saplings (above 6 ft. height) will be planted whereas survival rate shall be maintained in subsequent years. Indigenous and broad leaf species for greenbelt development i.e. Kadamb, Neem, Bargad, Karanj, Dumer, Tamhan, Tacoma, etc. will be preferred. Plantation will also carry all along approach road (Avenue plantation). Proposed Budget: Green Belt</td> </tr> <tr> <td data-bbox="584 1534 679 2045">2nd</td> <td data-bbox="679 1534 820 2045">4.00</td> <td data-bbox="820 1534 1034 2045">10000</td> </tr> </tbody> </table>	Yr.	AREA (in Ha.)	NO. OF SAMPLING (@ 2500 Sapling/Ha.)	Remarks	1 st	4.93	12325	Greenbelt of 33.16% (i.e. 8.93 Ha.) will be maintained. Thus, the total plantation about 22325 Saplings (above 6 ft. height) will be planted whereas survival rate shall be maintained in subsequent years. Indigenous and broad leaf species for greenbelt development i.e. Kadamb, Neem, Bargad, Karanj, Dumer, Tamhan, Tacoma, etc. will be preferred. Plantation will also carry all along approach road (Avenue plantation). Proposed Budget: Green Belt	2 nd	4.00	10000
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Sl.	ADS Observations	Clarification submitted by the PP		
				<p>Plantation along with Irrigation System and Pipe Line Capital Rs.1.2 Cr.</p>
		8.93	22325 nos. in 8.93 Ha. (33.16 %)	
		The same is updated at para 16.2.14 above.		
9	Engineering layout of the project shall be reworked for the facilities to be established as the facilities in the submitted plan appears in a packed manner	Engineering layout of the project has been revised and reworked for each facilities to be established and revised layout plan submitted which reveals that the facilities are quite sparse and open and not in a packed manner.		
10	Multiple water bodies are within the study area of the project site. The EAC is of the opinion that the water bodies shall not be disturbed. 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.	<p>PP hereby undertake that no drain is crossing from project site. We further undertake that, PP will not disturb any water bodies in the surroundings of the project area.</p> <p>The drainage and soil conservation plan is prepared by Samadhan.</p> <p>There are a number of Mined out pits surrounding the project site which has now been abandoned after excavation of Morram and Limestone. These pits also have accumulated rain waters in their voids. The contour plan will reveal that there is no water body in the project area. However the unit will built a rain water storage Pond to meet its 3 months water requirements in summer. This pond will serve also to harvest rain water during monsoon.</p> <p>The Drainage map of the study area which reveals that there will not be any hindrance to any natural existing micro drains or major drains. The project area is situated in a mondy (elevated) surface having elevation 291 to 297 meters above sea level. The project area is likely to have annual rain water harvest potential of total 1,88,231 cubic meter rain water or surface run off which will be firstly utilized for rain water recharge and storage within the project boundary.</p> <p>In order to facilitate the flow of upstream drainage flowing from upper regions the industry will provide a free drain passage in its peripheral drainage system. The size of drain will be 1 meter wide x 1.25 Meters deep. The Top soil in the project area will be collected and stored before starting construction and the same will be spread back on the open areas after completing the construction works for planting green belt and grass. For any land filling and plinth filling Soil will not be used and in its place only fly ash; slag and other solid waste available from nearby industries will be used. All safety will be taken to ensure that there is no erosion to top soil.</p> <p>The drainage system will be built with silt arrestation pits to ensure</p>		

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		<p>that the silt is not flown out of the project area to natural drains. An oil trap will also be provided in the project drain outlet.</p> <p>The contour plan prepared as a part of drainage and conservation plan reveals that there is no water body within the project area.</p> <p>The study area consists of following Water Bodies</p> <table border="1" data-bbox="580 501 1487 1348"> <thead> <tr> <th data-bbox="580 501 695 580">S. No</th> <th data-bbox="695 501 1150 580">Water Body</th> <th data-bbox="1150 501 1313 580">Distance</th> <th data-bbox="1313 501 1487 580">Direction</th> </tr> </thead> <tbody> <tr><td data-bbox="580 580 695 618">1</td><td data-bbox="695 580 1150 618">Kirna Tank / Jalso dam</td><td data-bbox="1150 580 1313 618">1.0</td><td data-bbox="1313 580 1487 618">W</td></tr> <tr><td data-bbox="580 618 695 656">2</td><td data-bbox="695 618 1150 656">Dhumma Nala</td><td data-bbox="1150 618 1313 656">1.4</td><td data-bbox="1313 618 1487 656">NW</td></tr> <tr><td data-bbox="580 656 695 694">3</td><td data-bbox="695 656 1150 694">Kirna Irrigation Canal</td><td data-bbox="1150 656 1313 694">2.6</td><td data-bbox="1313 656 1487 694">W</td></tr> <tr><td data-bbox="580 694 695 732">4</td><td data-bbox="695 694 1150 732">Kulhan Nala</td><td data-bbox="1150 694 1313 732">2.2</td><td data-bbox="1313 694 1487 732">WSW</td></tr> <tr><td data-bbox="580 732 695 819">5</td><td data-bbox="695 732 1150 819">Rindergaon Main Irrigation Canal</td><td data-bbox="1150 732 1313 819">7.4</td><td data-bbox="1313 732 1487 819">SSE</td></tr> <tr><td data-bbox="580 819 695 857">6</td><td data-bbox="695 819 1150 857">Siliari Distributary</td><td data-bbox="1150 819 1313 857">1.7</td><td data-bbox="1313 819 1487 857">S</td></tr> <tr><td data-bbox="580 857 695 896">7</td><td data-bbox="695 857 1150 896">Jamuniya Nadi</td><td data-bbox="1150 857 1313 896">3.5</td><td data-bbox="1313 857 1487 896">E</td></tr> <tr><td data-bbox="580 896 695 983">8</td><td data-bbox="695 896 1150 983">Bhatapara Branch (Maha Nadi Canal)</td><td data-bbox="1150 896 1313 983">1.9</td><td data-bbox="1313 896 1487 983">NW</td></tr> <tr><td data-bbox="580 983 695 1021">9</td><td data-bbox="695 983 1150 1021">Pikridih Tank</td><td data-bbox="1150 983 1313 1021">9.6</td><td data-bbox="1313 983 1487 1021">SE</td></tr> <tr><td data-bbox="580 1021 695 1059">10</td><td data-bbox="695 1021 1150 1059">Jheel garden</td><td data-bbox="1150 1021 1313 1059">4.0</td><td data-bbox="1313 1021 1487 1059">NNW</td></tr> <tr><td data-bbox="580 1059 695 1097">11</td><td data-bbox="695 1059 1150 1097">Khambha Talab</td><td data-bbox="1150 1059 1313 1097">4.1</td><td data-bbox="1313 1059 1487 1097">W</td></tr> <tr><td data-bbox="580 1097 695 1135">12</td><td data-bbox="695 1097 1150 1135">Pindraon Tank</td><td data-bbox="1150 1097 1313 1135">8.0</td><td data-bbox="1313 1097 1487 1135">SE</td></tr> <tr><td data-bbox="580 1135 695 1173">14</td><td data-bbox="695 1135 1150 1173">Dalal Talab</td><td data-bbox="1150 1135 1313 1173">9.6</td><td data-bbox="1313 1135 1487 1173">N</td></tr> <tr><td data-bbox="580 1173 695 1261">15</td><td data-bbox="695 1173 1150 1261">Lakhan lal Mishra Jalasay (Bangoli tank)</td><td data-bbox="1150 1173 1313 1261">7.5</td><td data-bbox="1313 1173 1487 1261">SE</td></tr> <tr><td data-bbox="580 1261 695 1348">16.</td><td data-bbox="695 1261 1150 1348">Century Cement Plant (open pits became pond)</td><td data-bbox="1150 1261 1313 1348">4.1</td><td data-bbox="1313 1261 1487 1348">NW</td></tr> </tbody> </table> <p>The project boundary is located within 291 m to 297 m MSL, whereas the nearest water body Kirna Tank (1.0 KM/W) is of 285 m to 286 m MSL. Thus nearest water body is about 6 m below the project site. It is not proposed to divert any Nalla, Canal or seasonal drain therefore no impact is envisaged due to the project activity.</p> <p>However the unit will built a water storage Pond to meet its 3 months water requirement in summer, which will also help to improve the water level due to natural recharge.</p> <p>Mitigation measures w.r.t. Drainage conservation and soil conservation:</p> <ul style="list-style-type: none"> • No water shall be drained to the reservoir through local natural drainage pattern as the company is ensuring zero liquid discharge norms. • The company will maintain Zero Liquid discharge Policy (ZLD) by which the water from the plant will never be 			S. No	Water Body	Distance	Direction	1	Kirna Tank / Jalso dam	1.0	W	2	Dhumma Nala	1.4	NW	3	Kirna Irrigation Canal	2.6	W	4	Kulhan Nala	2.2	WSW	5	Rindergaon Main Irrigation Canal	7.4	SSE	6	Siliari Distributary	1.7	S	7	Jamuniya Nadi	3.5	E	8	Bhatapara Branch (Maha Nadi Canal)	1.9	NW	9	Pikridih Tank	9.6	SE	10	Jheel garden	4.0	NNW	11	Khambha Talab	4.1	W	12	Pindraon Tank	8.0	SE	14	Dalal Talab	9.6	N	15	Lakhan lal Mishra Jalasay (Bangoli tank)	7.5	SE	16.	Century Cement Plant (open pits became pond)	4.1	NW
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Sl.	ADS Observations	Clarification submitted by the PP					
		<p>allowed to mix with the water of the reservoir.</p> <ul style="list-style-type: none"> • Besides the Boundary wall inside factory premises, garland drains and settling ponds shall be provided to take care of soil erosion during rainy season. • Storm water collected within the plant area would be returned to the plant through return water pipeline and reused for domestic and plantation purpose and recharging the Rainwater pond. • This would reduce the soil erosion due to discharge of storm water significantly. • A thick green belt of 15 mtr of native tree species with deep roots will be provided along with the boundary facing towards reservoir. The spaces in between the tree plantations would be augmented with shrubs to further prevent soil erosion. No plant facility will be installed in that area, some portion of the area will also be kept for beautification purposes, such as Flower park. Greening and paving shall be adopted in the project premises. 					
11.	The EAC noted that there is a variation in the project cost mentioned in the ToR dated 10.01.2022 and the project cost submitted in the EC proposal. PP is required to clarify.	<table border="1" data-bbox="580 981 1005 1570"> <thead> <tr> <th data-bbox="580 981 1005 1016">Project Cost Given in ToR</th> <th data-bbox="1005 981 1487 1016">Project Cost Given in ToR</th> </tr> </thead> <tbody> <tr> <td data-bbox="580 1016 1005 1570">The capital cost of the project is Rs. 280.10 Crores including CER cost and proposed CER expenses is Rs 135 Lakhs Pls. refer approved ToR Pg. No.7 of 18</td> <td data-bbox="1005 1016 1487 1570">Project Cost provided EC proposal (Pls. refer Pg. 3 of EC Proposal) is as under: Total Cost of the Project at current price level (in Crores) – Rs 278.75 Crores. Funds Allocated Towards CER (Corporate Environment Responsibility) (in Crores) Rs 1.35 Crores Thus, cost of project is of Rs. 280.10 Crores Note: Now CER cost is being revised as Rs. 2.10 Crores instead of Rs. 1.35 Crs.</td> </tr> </tbody> </table>	Project Cost Given in ToR	Project Cost Given in ToR	The capital cost of the project is Rs. 280.10 Crores including CER cost and proposed CER expenses is Rs 135 Lakhs Pls. refer approved ToR Pg. No.7 of 18	Project Cost provided EC proposal (Pls. refer Pg. 3 of EC Proposal) is as under: Total Cost of the Project at current price level (in Crores) – Rs 278.75 Crores. Funds Allocated Towards CER (Corporate Environment Responsibility) (in Crores) Rs 1.35 Crores Thus, cost of project is of Rs. 280.10 Crores Note: Now CER cost is being revised as Rs. 2.10 Crores instead of Rs. 1.35 Crs.	Thus the cost is same there is no variation in the project cost.
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16.2.20 Based on the above information, the proposal is considered in the 16th meeting of the EAC for Industry-I sector held on 3rd November, 2022. The deliberations and recommendations made by the EAC are as follows:

Written representations:

16.2.21 During the meeting, based on the deliberations made by the EAC, the project proponent vide letter dated 03.11.2022 through email dated 03.11.2022 submitted the following information:

1. Increase in Proposed CER Budget:

PP had originally proposed CER budget as Rs. 1.35 Crores (0.5% approx.), now PP undertake that they will spend Rs. 3.00 Crores (approx. 1.1%) under CER activity (social infrastructure development) as per the revised Social Infrastructure Development Plan updated at para 16.2.12 above.

2. Adoption of Two Villages (namely- Village Madhi and Village Khapri):

PP undertakes to adopt two villages namely (1) Village Madhi, and (2) Village Khapri, Tahsil- Kharora (previously Tilda), District- Raipur (CG) under CER and CSR scheme and formulate Village development program under consultation with local panchayat and district administration for need-based community development activities which would be in addition to the development plans being undertaken by state and central government. PP will also conduct Socio-economic Study for pre and post CER/CSR activities. The same is updated at para 16.2.12 above.

3. Submission of diversion order for land:

PP submitted the diversion order dated 07.10.2022 as per which entire 29.63 Hectare land is now diverted for industrial purpose.

Deliberations by the Committee

16.2.22 The Committee noted the following:

1. The instant proposal is for setting up of a new project for a DRI based Steel plant to produce several products which includes: Sponge Iron 198,000 TPA; Mild Steel Billets 345,800 TPA; Rerolled Steel Products through Hot Charging and through Reheating Furnace 342,144 TPA; Ferro Alloys 35,000 TPA and/or Pig Iron 70,000 TPA from 9 MVA x 2 Nos. SAF; Captive Power of 20 MW (12 MW through WHRB and 8 MW through AFBC); Pipes 150,000 TPA; Galvanizing products 100,000 TPA; and Fly Ash Bricks 34,600 TPA.
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 26.93 ha. Land has already been acquired and under the possession of the company. Application for change in land use for industrial purpose has been submitted. PP has reported that in response to the application, the authorities have assessed the revised premium and annual rent for diversion of land; accordingly PP has paid the same.
6. Madhi (1.0 Km, S), Janjgira (1.0 Km, SW) and Khapri (1.5 Km, E) villages are in the vicinity of the project site.
7. The EAC noted that initially the PP has estimated the water consumption @1700 KLD. Further, after detailed deliberations, the water requirement was re-estimated by the PP and to be 1360 KLD which will be sourced from Surface Water for which application for allotment of water from Jalso Dam has been submitted to Chhattisgarh Water Resource Department. PP has given an undertaking that they will not use any ground water for the operation of the project and will not start the project construction unless they are granted surface water sanction by WRD of CG Govt. As committed, the PP will adopt all the best practices for reducing the water consumption further.
8. Multiple water bodies are within the study area of the project site. The EAC is of the opinion that the water bodies shall not be disturbed. Mitigation measures w.r.t. safeguarding the water bodies shall be implemented.
9. The Committee has found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
10. The EAC noted that greenbelt in 33.16% (i.e. 8.93 Ha.) will be maintained. The total plantation about 22325 Saplings (above 6 ft. height) will be planted within two years in coming Monsoon. The Committee deliberated on the action plan and budget allocation for green belt development and found it satisfactory.
11. The committee deliberated on the revised 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 written submission of the Project 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:

16.2.23 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 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. The PP shall obtain the land use conversion to industrial purpose from the Competent Authority prior to commencement of project work.
- iv. As committed by the PP, 1360 KLD of water requirement after the proposed expansion shall be met from Surface Water with proper permission from the Competent Authority. No ground water abstraction is permitted. Also, the PP shall adopt all the best practices for reducing the Water consumption.
- v. Following additional arrangements to control fugitive dust shall be provided:
 - a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.
 - b. Proper covered vehicle shall be used while transport of materials.
 - c. Wheel Washing mechanism shall be provided in entry and exit gates with complete recirculation system.
- vi. 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.
- vii. 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.
- viii. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.
- ix. Particulate matter emission from stacks shall be less than 30 mg/Nm³. Action plan submitted to limit the dust emission shall be strictly implemented.
- x. One additional air quality monitoring station be installed for better and representative coverage of air quality.

- xi. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil as a fuel.
- xii. Submerged Arc Furnace shall be of closed type with 4th hole extraction system.
- xiii. 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.
- xiv. Multiple water bodies are within the study area of the project site. 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.
- xv. 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 effluent shall be treated in Sewage Treatment Plant.
- xvi. 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.
- xvii. Madhi (1.0 Km, S), Janjgira (1.0 Km, SW) and Khapri (1.5 Km, E) villages are in the vicinity of the project site. Project Proponent shall implement environmental safeguard measures to minimise the impact on the habitation of the locals. The company shall also include these locations in its environmental monitoring programme.
- xviii. As committed to adopt two villages namely Madhi village and Khapari, project proponent shall prepare and implement a robust plan to develop them into model villages in next 10 years.
- xix. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.
- xx. Three tier Green Belt shall be developed in at least 33% of the project area 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. PP shall develop greenbelt in the form of shelter belt comprising of total of 6 rows of 2x2 m plantation with tall trees & broad leaves with thick canopy to act as green barrier for air pollution & noise levels within the project site towards Janjgira village located at 1.0km in SW, Mandhi village located at 1.0 km in South and Khapri village located at 1.5 km in East. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.
- xxi. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
- xxii. Air Cooled condensers shall be used in the captive power plant.
- xxiii. GHG emission and reduction plan shall be strictly implemented and shall improvise in continual manner.
- xxiv. During operational phase at Captive Power Plant, PP shall measure coal dust exposures and to maintain coal dust exposures within stipulated standards at coal handling areas. PP shall

identify extreme hot areas through heat stress survey as well as noise monitoring within process plants to ensure that workers not exposed above 90 dBA levels as per Factories Act, 1948.

- xxv. As the PP is going to use coal & quartz, therefore during operational phase, Coal-coke dust and quartz dust needs to be measured using personal-area air samplers at process plants and shall be within the permissible limits as prescribed in the Indian Factories Act.
- xxvi. 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.
- 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 at process stacks to monitor stack emission as well as two Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs 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.
- vi. Tyre washing facilities shall be provided at the entrance/exit of the plant gates.

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 including plantation.
- 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 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 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, 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.

Modifications in Environment Clearance Proposal

Agenda No. 16.3

16.3 Expansion of Crude Steel Production from 2.2 MTPA to 4.5 MTPA and Cold Rolling Mill from 1.6 MTPA to 2.6 MTPA within the existing Steel Plant by M/s Jindal Stainless Limited, located at Kalinganagar Industrial Complex, Jajpur, Odisha– Consideration of Modification/ Bifurcation/ Partial Transfer of Environmental Clearance.

[Proposal No. IA/OR/IND/287346/2022; File No. IA-J-11011/281/2007-IA.II(I)]
[Consultant: M.N. Dastur & Company (P) Ltd., valid upto 17.11.2022]

- 16.3.1 M/s. Jindal Stainless Limited (JSL) has made an online application vide proposal no. IA/OR/IND/287346/2022 dated 07/10/2022 along with Form 4 and addendum EIA report and sought for amendment in Environmental Clearance accorded by the Ministry vide File no. IA-J-11011/281/2007-IA.II(I) dated 01.06.2022 following the transfer of Iron making facilities of 2.35 MTPA and Steel making facilities of 2.3 MTPA from Jindal Stainless Limited (JSL) to JSL Ferrous Limited (JSLFL) and further amendment in existing Blast Furnaces facilities of 1 x 720 m³ + 1 x 1,680 m³ (total volume 2,400 m³) to 1 x 2,307 m³ and Sinter Plant of 1 x 240 m² to 1 x 248 m² with no change in production capacity under JSL Ferrous Limited at Kalinganagar Industrial Complex, Jajpur, Odisha. In addition to this, M/s. JSL Ferrous Limited also submitted an application vide proposal no. IA/OR/IND/285473/2022 dated 23.09.2022 in Form 7 for part transfer of said Iron making facilities of 2.35 MTPA and Steel making facilities of 2.3 MTPA in their name.
- 16.3.2 Name of the EIA consultant: M/s .N. Dastur & Company (P) Ltd. [Sl. No. 182, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/SA0174; valid upto 17.11.2022, Rev. 25, Sept 05, 2022].

16.3.3 **Details submitted by the project proponent**
M/s. Jindal Stainless Limited (JSL) was originally accorded environmental clearance vide letter No. IA-J-11011/281/2007- IA.II(I), dated 01.06.2022 for expansion of Crude Steel Production from 2.2 MTPA to 4.5 MTPA and Cold Rolling Mill Production from 1.6 MTPA to 2.6 MTPA within the existing Steel Plant at Kalinga Nagar Industrial Complex, Jajpur Road, Odisha. As per the said EC following is the product capacities of various process units.

S No.	Plant Equipment/ Facility	Final	
		Configuration	Capacity
	Iron Making	-	2.35 MTPA
1	Blast Furnace	1x720 m ³ 1x1680 m ³	2.35 MTPA
2	Sinter Plant	1x120 m ² 1x240 m ²	3.64 MTPA
SMS			4.5 MTPA
3	EAF	2x150 T	-
4	Induction Furnace	3x30 T + 2x6 T + 1x200 kg	-
5	Cr Converter	1x70 T	-
6	BOF	1x110 T 1x150 T	-
	AOD	3x150 T	-
	LF	4x150 T	-
7	Caster Shop	4x1 Strand	-
CRM		-	2.6 MTPA
8	HAPL	3 lines	2 x 0.8 MTPA + 1 x 1.0 MTPA
9	CAPL	3 lines	2 x 0.45 MTPA + 1 x 0.5 MTPA
10	Tandem mill	1 mill	1 x 1.0 MTPA
11	Z mill	2 mills	2 x 0.15 MTPA
12	Bright annealing	2 lines	2 x 0.075 MTPA
13	Finishing lines (Slitting, cut to length, Skin pass mill etc.)	20 lines	-
Ferro Alloy Complex		-	0.33 MTPA
14	Pelletisation & Sintering of Cr ore	1 unit	0.7 MTPA
15	SAF –Ferro Chrome	2x60 MVA + 3x27.6 MVA	0.25 MTPA Increase in Fe-Cr production by change of feed from briquette to palletized sinter)
16	WHRB	2x28.5 TPH	13 MW
17	AFBC	50 TPH	
18	Briquette Plant	180 TPH	180 TPH
19	Jigging Plant	150 TPH	150 TPH
20	Thermal Power Plant	2x125 MW	250 MW

S No.	Plant Equipment/ Facility	Final	
		Configuration	Capacity
21	TRT (BF)	14 MW	14 MW
Flux Complex		-	0.74 MTPA
22	Lime –Dolo Calcining Plant	3 x 600 TPD + 1x450 TPD	-
23	Hydrated Lime Plant	200 TPD	-
24	Air Separation Plant	2x425 TPD + 1x900 TPD	2 x 425 TPD + 1 x 900 TPD
25	Metal Recovery	2x50 TPH + 3x80 TPH	340 TPH
26	Railway siding with wagon tippler	3nos. wagon tippler with 12 nos. line including ICD facility	-

16.3.4 Detail of Consent to Establishment/ Consent to Operate:

	Date	Details
CTE	16.09.2022	Consent to Establish for said expansion project was accorded by SPCB, Odisha vide letter No. 16913/IND-II-CTE-6660; dated : 16.09.2022.
CTO	19/03/2021	Latest Consent to Operate for the units prior to expansion was accorded by Odisha State Pollution Control Board vide Ir. No. 4558/IND-I-CON-5136 dated 19/03/2021. The validity of CTO is up to 31/03/2023.

16.3.5 The implementation status of the EC dated 01.06.2022 is furnished as below.

S No.	Plant Equipment/ Facility	Final		Implementation Status (Proposed facilities yet to install)
		Configuration	Capacity	
	Iron Making	-	2.35 MTPA	2.35 MTPA
1	Blast Furnace	1x720 m ³ 1x1680 m ³	2.35 MTPA	1 x 720 m ³ 1 x 1680 m ³
2	Sinter Plant	1x120 m ² 1x240 m ²	3.64 MTPA	1 x 120 m ² 1 x 240 m ² (3.64 MTPA)
	SMS		4.5 MTPA	2.3 MTPA
3	EAF	2x150 T	-	-
4	Induction Furnace	3x30 T + 2x6 T + 1x200 kg	-	2 x 30T
5	Cr Converter	1x70 T	-	1 x 70 T
6	BOF	1x110 T 1x150 T	-	1 x 110 T 1 x 150 T
	AOD	3x150 T	-	1 x 150 T
	LF	4x150 T	-	2 x 150 T
7	Caster Shop	4x1 Strand	-	2 x 1 Strand
	CRM	-	2.6 MTPA	1.0 MTPA

S No.	Plant Equipment/ Facility	Final		Implementation Status (Proposed facilities yet to install)
		Configuration	Capacity	
8	HAPL	3 lines	2 x 0.8 MTPA + 1 x 1.0 MTPA	1 x 1.0 MTPA
9	CAPL	3 lines	2 x 0.45 MTPA + 1 x 0.5 MTPA	1 x 0.5 MTPA
10	Tandem mill	1 mill	1 x 1.0 MTPA	1 x 1.0 MTPA
11	Z mill	2 mills	2 x 0.15 MTPA	2 x 0.15 MTPA
12	Bright annealing	2 lines	2 x 0.075 MTPA	2 x 0.075 MTPA
13	Finishing lines (Slitting, cut to length, Skin pass mill etc.)	20 lines	-	10 lines
Ferro Alloy Complex		-	0.33 MTPA	0.08 MTPA
14	Pelletisation & Sintering of Cr ore	1 unit	0.7 MTPA	0.7 MTPA
15	SAF –Ferro Chrome	2x60 MVA + 3x27.6 MVA	0.25 MTPA Increase in Fe-Cr production by change of feed from briquette to palletized sinter)	
16	WHRB	2x28.5 TPH	13 MW	-
17	AFBC	50 TPH		-
18	Briquette Plant	180 TPH	180 TPH	-
19	Jigging Plant	150 TPH	150 TPH	50 TPH
20	Thermal Power Plant	2x125 MW	250 MW	-
21	TRT (BF)	14 MW	14 MW	14 MW
Flux Complex		-	0.74 MTPA	0.39 MTPA
22	Lime –Dolo Calcining Plant	3 x 600 TPD + 1x450 TPD	-	2 x 600 TPD
23	Hydrated Lime Plant	200 TPD	-	
24	Air Separation Plant	2x425 TPD + 1x900 TPD	2 x 425 TPD + 1 x 900 TPD	1 X 900 TPD
25	Metal Recovery	2x50 TPH + 3x80 TPH	340 TPH	1 x 50 TPH + 2 x 80 TPH
26	Railway siding	3nos. wagon	-	2 nos. Wagon Tippler with 7nos.

S No.	Plant Equipment/ Facility	Final		Implementation Status (Proposed facilities yet to install)
		Configuration	Capacity	
	with wagon tippler	tippler with 12 nos. line including ICD facility		Line from Jakhapura/ Sukinda Road Station and ICD facilities

16.3.6 The instant proposal is for amendment in Environmental Clearance letter no. IA-J-11011/281/2007-IA.II(I) dated 01.06.2022 following the transfer of Iron making facilities of 2.35 MTPA and Steel making facilities of 2.3 MTPA from Jindal Stainless Limited (JSL) to JSL Ferrous Limited (JSLFL) and further amendment in existing Blast Furnaces facilities of 1 x 720 m³ + 1 x 1,680 m³ (total volume 2,400 m³) to 1 x 2,307 m³ and Sinter Plant of 1 x 240 m² to 1 x 248 m² with no change in production capacity under JSL Ferrous Limited at Kalinganagar Industrial Complex, Jajpur, Odisha. The reasons for part transfer of the said facilities is that M/s. JSL as a group company intends to enter into the Carbon Steel business as a separate entity.

S No.	Plant Equipment/ Facility	Existing as per EC dated 01.06.2022		Details after amendment/transfer				Submitted by the PP
		Configuration	Capacity	Jindal Stainless Limited (JSL)		JSL Ferrous Limited (JSLFL)		
				Configuration	Capacity	Configuration	Capacity	
	Iron Making	-	2.35 MTPA	-	-	-	2.35 MTPA	
1	Blast Furnace	1x720 m ³ 1x1680 m ³	2.35 MTPA	-	-	1x720 m ³ 1x1680 m ³	2.35 MTPA	In JSLFL, BF facility to be amended to 1 x 2,307 m ³ instead of 1 x 720 m ³ + 1 x 1680 m ³
2	Sinter Plant	1x120 m ² 1x240 m ²	3.64 MTPA	-	-	1x120 m ² 1x240 m ²	3.64 MTPA	In JSLFL, SP facility to be amended to 1 x 120 m ² + 1 x 248 m ² instead of 1 x 120 m ² + 1 x 240 m ² with no change of final production capacity
SMS			4.5 MTPA		2.2 MTPA		2.3 MTPA	
3	EAF	2x150 T	-	2x150 T	-	-	-	
4	Induction Furnace	3x30 T + 2x6 T + 1x200 kg	-	3x30 T + 2x6 T + 1x200 kg	-	-	-	

S No.	Plant Equipment/ Facility	Existing as per EC dated 01.06.2022		Details after amendment/transfer				Submitted by the PP
		Configuration	Capacity	Jindal Stainless Limited (JSL)		JSL Ferrous Limited (JSLFL)		
				Configuration	Capacity	Configuration	Capacity	
5	Cr Converter	1x70 T	-	1x70 T	-	-	-	
6	BOF	1x110 T 1x150 T	-	-	-	1x110 T 1x150 T	-	
	AOD	3x150 T	-	3x150 T	-	-	-	
	LF	4x150 T	-	2x150 T	-	2x150 T	-	Partial Transfer
7	Caster Shop	4x1 Strand	-	2x1 Strand	-	2x1 Strand	-	Partial Transfer
CRM		-	2.6 MTPA	-	2.6 MTPA	-	-	
8	HAPL	3 lines	2 x 0.8 MTPA + 1 x 1.0 MTPA	3 lines	2 x 0.8 MTPA + 1 x 1.0 MTPA	-	-	
9	CAPL	3 lines	2 x 0.45 MTPA + 1 x 0.5 MTPA	3 lines	2 x 0.45 MTPA + 1 x 0.5 MTPA	-	-	
10	Tandem mill	1 mill	1 x 1.0 MTPA	1 mill	1 x 1.0 MTPA	-	-	
11	Z mill	2 mills	2 x 0.15 MTPA	2 mills	2 x 0.15 MTPA	-	-	
12	Bright annealing	2 lines	2 x 0.075 MTPA	2 lines	2 x 0.075 MTPA	-	-	
13	Finishing lines (Slitting, cut to length, Skin pass mill etc.)	20 lines	-	20 lines	-	-	-	
Ferro Alloy Complex		-	0.33 MTPA	-	0.33 MTPA	-	-	
14	Pelletisation & Sintering of Cr ore	1 unit	0.7 MTPA	1 unit	0.7 MTPA	-	-	
15	SAF –Ferro Chrome	2x60 MVA + 3x27.6 MVA	0.25 MTPA Increase in Fe-Cr production by change of feed from briquette to palletized sinter)	2x60 MVA + 3x27.6 MVA	0.25 MTPA Increase in Fe-Cr production by change of feed from briquette to palletized sinter)	-	-	
16	WHRB	2x28.5 TPH	13 MW	2x28.5 TPH	13 MW	-	-	
17	AFBC	50 TPH		50 TPH		-	-	
18	Briquette	180 TPH	180 TPH	180 TPH	180 TPH	-	-	

S No.	Plant Equipment/ Facility	Existing as per EC dated 01.06.2022		Details after amendment/transfer				Submitted by the PP
		Configuration	Capacity	Jindal Stainless Limited (JSL)		JSL Ferrous Limited (JSLFL)		
				Configuration	Capacity	Configuration	Capacity	
	Plant							
19	Jigging Plant	150 TPH	150 TPH	150 TPH	150 TPH	-	-	
20	Thermal Power Plant	2x125 MW	250 MW	2x125 MW	250 MW	-	-	
21	TRT (BF)	14 MW	14 MW	14 MW	14 MW	-	-	
	Flux Complex	-	0.74 MTPA	-	0.74 MTPA	-	-	
22	Lime –Dolo Calcining Plant	3 x 600 TPD + 1x450 TPD	-	3 x 600 TPD + 1x450 TPD	-	-	-	
23	Hydrated Lime Plant	200 TPD	-	200 TPD	-	-	-	
24	*Air Separation Plant	2x425 TPD + 1x900 TPD	2 x 425 TPD + 1 x 900 TPD	2x425 TPD + 1x900 TPD	1 x 425 TPD + 1x1450 TPD	-	-	Amendment in configuration of one no. Air Separation Plant from 900 TPD to 1450 TPD
25	Metal Recovery	2x50 TPH + 3x80 TPH	340 TPH	2x50 TPH + 3x80 TPH	340 TPH	-	-	
26	Railway siding with wagon tippler	3nos. wagon tippler with 12 nos. line including ICD facility	-	3nos. wagon tippler with 12 nos. line including ICD facility	-	-	-	

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

- Form 4 for amendment in EC and Form 7 for transfer of Environment Clearance.
- No objection Certificate from M/s. Jindal Stainless Limited by way of affidavit in an India non-judicial stamp dated 17.06.2022 for partial transfer of Environment clearance dated 01.06.2022 to M/s. JSL Ferrous Limited.
- Undertaking from M/s. JSL Ferrous Limited by way of affidavit in an India non-judicial stamp dated 17.06.2022 stating that they will be comply with all the applicable conditions as stipulated in the Environment Clearance dated 01.06.2022.
- Certificate of Incorporation of M/s. JSL Ferrous Limited from ROC, Ministry of Corporate Affairs dated 21.11.2019 bearing CIN Number U27200HR2019PLC083764.
- Certificate of Incorporation of M/s. Jindal Stainless Limited from ROC, Ministry of Corporate Affairs dated 07.12.2011 bearing CIN Number L26922HR1980PLC010901.
- Facility matrix showing devolution of production facilities between JSL and JSLFL.
- Project Information Matrix between JSL and JSLFL
- Matrix of applicability of stipulations of EC and subsequent amendments between JSL and JSLFL.

- The addendum EIA report inter-alia including process details, emission levels, solid and hazardous waste management, raw material and fuel requirement, the Environmental Management Plan (EMP), etc. for the project.

S No	Name of Company	CIN No	Change of Ownership
1	M/s. Jindal Stainless Limited	L26922HR1980PLC010901	As per Sl. No 1 (f) of Form -7, the project proponent has submitted that the proposal involves change in ownership between M/s. Jindal Stainless Limited and M/s. JSL Ferrous Limited. Further the CIN numbers of the both companies are found different. In view of the same the proposal involves transfer of Environment Clearance from M/s. Jindal Stainless Limited to M/s. JSL Ferrous Limited.
2	M/s. JSL Ferrous Limited	U27200HR2019PLC083764	

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

I. Project Information Matrix

Sl. No.	Parameter	JSL	JSLFL																																										
1	Location	Kalinga Nagar Industrial Complex Village - Danagadi Tehsil – Danagadi District – Jajpur State - Odisha	Kalinga Nagar Industrial Complex Village - Danagadi Tehsil – Danagadi District – Jajpur State - Odisha																																										
2	Coordinates	<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Lat (N)</th> <th>Long (E)</th> </tr> </thead> <tbody> <tr><td>1</td><td>20.943441°</td><td>86.041976°</td></tr> <tr><td>2</td><td>20.952971°</td><td>86.038322°</td></tr> <tr><td>3</td><td>20.956561°</td><td>86.048814°</td></tr> <tr><td>4</td><td>20.954780°</td><td>86.049820°</td></tr> <tr><td>5</td><td>20.951177°</td><td>86.045451°</td></tr> <tr><td>6</td><td>20.946848°</td><td>86.047905°</td></tr> </tbody> </table>	Sl. No.	Lat (N)	Long (E)	1	20.943441°	86.041976°	2	20.952971°	86.038322°	3	20.956561°	86.048814°	4	20.954780°	86.049820°	5	20.951177°	86.045451°	6	20.946848°	86.047905°	<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Lat (N)</th> <th>Long (E)</th> </tr> </thead> <tbody> <tr><td>1</td><td>20.943441°</td><td>86.041976°</td></tr> <tr><td>2</td><td>20.952971°</td><td>86.038322°</td></tr> <tr><td>3</td><td>20.956561°</td><td>86.048814°</td></tr> <tr><td>4</td><td>20.954780°</td><td>86.049820°</td></tr> <tr><td>5</td><td>20.951177°</td><td>86.045451°</td></tr> <tr><td>6</td><td>20.946848°</td><td>86.047905°</td></tr> </tbody> </table>	Sl. No.	Lat (N)	Long (E)	1	20.943441°	86.041976°	2	20.952971°	86.038322°	3	20.956561°	86.048814°	4	20.954780°	86.049820°	5	20.951177°	86.045451°	6	20.946848°	86.047905°
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3	Land Area	348 ha (860.18 acre)	89.03 ha (220 acre)																																										
4	Greenbelt	127.07 ha (314 Acre)	29.4 ha (73 Acre)																																										
5	Utilities	Water: 1391 m ³ /hr Power: 333 MW	Water: 350 m ³ /hr Power: 126 MW																																										
6	Manpower	Construction phase: 1080 Operation phase: 1300	Construction phase: 1100 Operation phase: 940																																										
7	Project Cost	INR 11955 crore	INR 3249 crore																																										

8	EMP Cost	INR 1088 crore	INR 324.2
9	CER and PH raised issues implementation Cost	INR 34.41 crore	INR 20 crore

II. Raw Material Requirement

Sl. No.	Raw Material	JSL	JSLFL
1	Lime stone	1.94 MTPA	-
2	Dolomite	0.20 MTPA	-
3	Pyroxenite	0.03 MTPA	-
4	Quartz	0.03 MTPA	-
5	Ferro alloy	0.07 MTPA	-
6	Hot Rolled Coil	0.97 MTPA	-
7	Coke	-	1.11 MTPA
8	PCI Coal	-	0.25 MTPA
9	Coke Breeze	-	0.19 MTPA
10	Lump Iron Ore	-	0.35 MTPA
11	Iron Ore Fines	-	3.15 MTPA

III. Risk Matrix

Sl. No.	Event	Likelihood of occurrence	Likelihood of detection	Severity of consequence	Risk potential
A. M/s. Jindal Stainless Limited					
i	Fuel gas leaks from the pipe line/valves/gas holders	High (4)	Low (4)	High (10)	80
ii	Propane storage and handling	Very low (1)	High (2)	High (10)	30
iii	Unsafe disposal of oily wastes of Rolling Mills	Moderate (3)	Low (4)	Moderate (8)	56
iv	Occurrence of static electricity/electric spark in the Mill Cellar Room	Very low (1)	Very low (5)	High (10)	60
v	Leakage of acids/alkalis	Low (2)	Very low (5)	Moderate (8)	56
vi	Uncontrolled dust emissions/failure of emission control system	High (4)	Moderate (3)	Moderate (8)	56
vii	Oil wastes/oil sludge handling	Low (2)	High (2)	Moderate (8)	32
viii	Release of untreated wastewater	Low (2)	Very High (1)	High (10)	30
ix	Collapsing of acid/alkali storage tanks	Very low (1)	High (2)	High (10)	30
B. M/s. JSL Ferrous Limited					
i	Fuel gas leaks from the pipe line/valves/gas holders	High (4)	Low (4)	High (10)	80
ii	Propane storage and handling	Very low (1)	High (2)	High (10)	30
iii	Unsafe disposal of oily wastes of Rolling Mills	Moderate (3)	Low (4)	Moderate (8)	56

Sl. No.	Event	Likelihood of occurrence	Likelihood of detection	Severity of consequence	Risk potential
iv	Occurrence of static electricity/electric spark in the Mill Cellar Room	Very low (1)	Very low (5)	High (10)	60
v	Leakage of acids/alkalis	Low (2)	Very low (5)	Moderate (8)	56
vi	Failure of emission control system	High (4)	Moderate (3)	Moderate (8)	56
vii	Oil wastes/oil sludge handling	Low (2)	High (2)	Moderate (8)	32
viii	Release of untreated wastewater	Low (2)	Very High (1)	High (10)	30
ix	Collapsing of acid/alkali storage tanks	Very low (1)	High (2)	High (10)	30
x	Failure of Gas Cleaning Plant/ Fume Extraction System	Moderate (3)	High (2)	High (10)	50
xi	Wet scrubbers running dry	Low (2)	Moderate (3)	High (10)	50
xii	Collapsing of Gas holder	Very low (1)	High (2)	High (10)	30
xiii	Splashing of molten metal and slag	Low (2)	Very High (1)	High (10)	30

IV. EC conditions compliance matrix

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
A. Specific Conditions:			
i	Three tier Green Belt shall be developed in a time frame of one year covering 35% of total area (as committed by PP) 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 concern Regional Office of the MoEF&CC.	Three tier Green Belt shall be developed in a time frame of one year covering 35% of total area (as committed by PP) 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 concern Regional Office of the MoEF&CC. Compliance: JSL as a group company has planted 343374 nos. of trees covering an area of 194.04 Ha (about 38.7 % of the total area) of green belt inside the plant premises till August' 2022. Further Avenue Plantation of about 159180 nos. samplings have been made outside the plant & 95999 nos. samplings have been distributed at free of cost to the nearby villages and educational institutions till March' 2022.	Three tier Green Belt shall be developed in a time frame of one year covering 35% of total area (as committed by PP) 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 concern Regional Office of the MoEF&CC. Compliance: Out of 220 Acre of total plant area, around 73 Acres of land has been earmarked for green belt development.
ii	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface. Compliance: At present, Greening and Paving has been implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface. The same shall be adopted in the said expansion project.	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface. Compliance: Noted and agreed

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
iii	41,784 m ³ /day of water requirement after the proposed expansion shall be met from Brahmani River and by Internal recycling after prior approval of the Competent Authority. No ground water abstraction is permitted.	33,384 m ³ /day of water requirement after the proposed expansion shall be met from Brahmani River and by Internal recycling after prior approval of the Competent Authority. No ground water abstraction is permitted. Compliance: Post expansion of JSL, 33,384 m ³ /day water shall be met from Brahmani River and by Internal recycling with the approval of the Competent Authority. No ground water abstraction is permitted.	8,400 m ³ /day of water requirement after the proposed expansion shall be met from Brahmani River and by Internal recycling after prior approval of the Competent Authority. No ground water abstraction is permitted. Compliance: Noted and agreed.
iv	Cold Rolling Mill shall have its independent ETP. Hazardous waste generated in CRM shall be sent to TSDF and oily waste shall be sent to registered recyclers. Acid Recovery Plant shall be provided in CRM.	Cold Rolling Mill shall have its independent ETP. Hazardous waste generated in CRM shall be sent to TSDF and oily waste shall be sent to registered recyclers. Acid Recovery Plant shall be provided in CRM. Compliance: At present an independent ETP has been installed and the ETP sludge (hazardous waste) generated is being sent to SPCB approved CHWTSDF, Ramky at Sukinda. The same practice will be adopted in the expansion project.	Not Applicable.
v	Covered sheds and toe walls shall be provided for raw material storage to check any attrition of raw materials. Storage sheds shall have garland drains, material traps and shall be built on concrete platforms.	Covered sheds and toe walls shall be provided for raw material storage to check any attrition of raw materials. Storage sheds shall have garland drains, material traps and shall be built on concrete platforms. Compliance: At present Covered sheds with concrete flooring, toe walls, garland drains and settling pits have been made for storage of raw materials. The same practice will be adopted in the expansion project.	Covered sheds and toe walls shall be provided for raw material storage to check any attrition of raw materials. Storage sheds shall have garland drains, material traps and shall be built on concrete platforms. Compliance: Noted and agreed
vi	Top Recovery Turbine, Dry Gas Cleaning and Stove gas waste heat recovery systems shall be installed in BF.	Compliance: Not Applicable	Top Recovery Turbine, Dry Gas Cleaning and Stove gas waste heat recovery systems shall be installed in BF. Compliance: Noted and agreed
vii	Sinter Plant shall be equipped with Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant.	Compliance: Not Applicable	Sinter Plant shall be equipped with Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant. Compliance: Noted and agreed
viii	TCLP analysis of the AOD slag shall be carried out periodically. In case of presence of hazardous material, the same shall be sent to TSDF. In case of non-hazardous material, AOD slag shall be utilized at project site for brick manufacturing and construction work after the recovery of metal.	TCLP analysis of the AOD slag shall be carried out periodically. In case of presence of hazardous material, the same shall be sent to TSDF. In case of non-hazardous material, AOD slag shall be utilized at project site for brick manufacturing and construction work after the recovery of metal. Compliance: At present, TCLP analysis of AOD slag is being carried out by IMMT(CSIR – Institute of Minerals and Materials Technology),	Compliance: Not Applicable

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
		Bhubaneswar and the AOD slag is found to be non hazardous in nature. The slag after metal recovery is being used as low laying area filling and road construction at NHAI. The same practice will be adopted in the expansion project.	
ix	The Oil scum and oily waste from CRM shall be sent to registered recyclers	The Oil scum and oily waste from CRM shall be sent to registered recyclers. Compliance: At present, the Oil scum and oily waste generated from CRM is being sent to authorized recyclers. The same practice will be adopted in the expansion project.	Compliance: Not Applicable
x	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicle shall be used while transport of materials. EC Identification No. - EC22A008OR182825 File No. - IA-J-11011/281/2007-IA.II(I) Date of Issue EC - 01/06/2022 Page 6 of 13 c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. Compliance: At present, Dry fog systems have been installed at conveyors points and gun sprinklers were also installed at raw material storage yard to control fugitive emission. The same practice shall be followed in the said expansion project. b. Proper covered vehicle shall be used while transport of materials. EC Identification No. - EC22A008OR182825 File No. - IA-J-11011/281/2007-IA.II(I) Date of Issue EC - 01/06/2022 Page 6 of 13 Compliance: At present, all the raw materials are transporting through rail and covered vehicles and the same shall be followed in the said expansion project. c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system. Compliance: Wheel washing system with complete recirculation system has been installed.	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. Compliance: Noted and agreed b. Proper covered vehicle shall be used while transport of materials. EC Identification No. - EC22A008OR182825 File No. - IA-J-11011/281/2007-IA.II(I) Date of Issue EC - 01/06/2022 Page 6 of 13 Compliance: Noted and agreed c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system. Compliance: Noted and agreed
xi	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 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. Compliance: At present, all the internal roads and connecting road from project site to main highway are made with RCC/PCC and the same shall be followed in the said expansion project.	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. Compliance: Noted and agreed
xii	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC. Compliance: Performance test will be conducted on all	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC. Compliance: Noted and agreed

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
		pollution control systems every year and report will be submitted to Regional Office of the MoEF&CC.	
xiii	Particulate matter emission from stacks shall be less than 30 mg/Nm ³ .	Particulate matter emission from stacks shall be less than 30 mg/Nm ³ . Compliance: Suitable Pollution Control equipments will be installed to confirm the Particulate Matter emission from stacks less than 30 mg/Nm ³ .	Particulate matter emission from stacks shall be less than 30 mg/Nm ³ . Compliance: Noted and agreed
xiv	85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil as a fuel.	85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil as a fuel. Compliance: Slabs from SMS are being rolled directly in hot stage. RHF is operating using only Light Diesel Oil as a fuel.	Compliance: Not Applicable
xv	Submerged Arc Furnace and Electric Arc Furnace shall be of closed type with 4th hole extraction system.	Submerged Arc Furnace and Electric Arc Furnace shall be of closed type with 4th hole extraction system.	Compliance: Not Applicable
xvi	The progress made in CER shall be submitted along with six monthly compliance report to the IRO and also upload on the company web site.	The progress made in CER shall be submitted along with six monthly compliance report to the IRO and also upload on the company web site. Compliance: CER compliance status is being given in Half Yearly EC Compliance report and submitted to RO, SPCB.	The progress made in CER shall be submitted along with six monthly compliance report to the IRO and also upload on the company web site. Compliance: Noted and agreed.

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.	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. Compliance: Agreed	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. Compliance: Noted and agreed
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II. Air quality monitoring and preservation

i	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised
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SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
	according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Compliance: At present, CEMS have been installed at all major process stacks and connected to SPCB/CPCB servers and the same practice shall be followed in the said expansion project. Four numbers of continuous on-line ambient air quality monitoring systems (CAAQMS) have been installed in consultation with SPCB and the data is continuously transmitted to both SPCB & CPCB server.	under Environment (Protection) Act, 1986 or NABL accredited laboratories. Compliance: Noted and agreed
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.	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. Compliance: At present, fugitive emission monitoring at various locations is being carried out through NABL accredited laboratory on monthly basis. The same practice shall be followed in the said expansion project.	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. Compliance: Noted and agreed
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.	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. Compliance: At present, appropriate Air Pollution Control (APC) system have been provided for all the dust generating points including fugitive dust from all vulnerable sources to comply with prescribed stack emission and fugitive emission standards. The same practice shall be followed in the said expansion project.	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. Compliance: Noted and agreed
iv	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags. Compliance: Leakage detection and mechanized bag cleaning facilities will be provided for better maintenance of bags.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags. Compliance: Noted and agreed
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.	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. Compliance: At present, the fines collected from Pollution Control Equipments are being reused in the process after briquetting. The same practice shall be followed in the said expansion project.	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. Compliance: Noted and agreed
vi	The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.	The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation. Compliance: At present, all the raw materials are	The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation. Compliance: Noted and agreed

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
		transporting through rail and covered vehicles to prevent spillage/dust generation and the same shall be followed in the said expansion project.	
vii	The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.	The project proponent shall provide primary and secondary fume extraction system at all melting furnaces. Compliance: Primary and secondary fume extraction system will be provided at all melting furnaces.	The project proponent shall provide primary and secondary fume extraction system at all melting furnaces. Compliance: Noted and agreed
viii	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars. Compliance: At present, all the ventilation system for adequate air changes has been designed as per ACGIH document for all tunnels, motor houses and shop floors.	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars. Compliance: Noted and agreed
III. Water quality monitoring and preservation			
i	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. Compliance: At present, Continuous Effluent Monitoring System has been installed at ETP of Cold Rolling Mill and connected to SPCB/CPCB server. The same shall be followed in the said expansion project.	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. Compliance: Noted and agreed
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.	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. Compliance: At present, ground water quality is being monitored twice in a year (pre- and post-monsoon) through NABL accredited laboratory. The same shall be followed in the said expansion project.	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. Compliance: Noted and agreed
iii	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards. Compliance:	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
		At present, Three nos. of Sewage Treatment have been installed for treatment of domestic waste water to meet the prescribed standards.	Compliance: Noted and agreed
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.	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. Compliance: At present, Continuous Effluent Monitoring System has been installed at ETP of Cold Rolling Mill and connected to SPCB/CPCB server. The same shall be followed in the said expansion project.	Compliance: Not applicable
v	Garland drains and collection pits shall be provided for each stock pile to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off.	Garland drains and collection pits shall be provided for each stock pile to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off. Compliance: At present, Garland drains and collection pits have been provided for each stock pile to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off. . The same shall be followed in the said expansion project	Compliance: Noted and agreed
vi	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	Tyre washing facilities shall be provided at the entrance/exit of the plant gates. Compliance: Wheel washing system with complete recirculation system has been installed.	Tyre washing facilities shall be provided at the entrance/exit of the plant gates. Compliance: Noted and agreed
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.	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. Compliance: Noise quality is being monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report is being submitted to Regional Officer of the Ministry as a part of six-monthly compliance report. The same shall be followed in the said expansion project.	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. Compliance: Noted and agreed
V. Energy Conservation measures			
i	conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.	Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc. to minimize the energy consumption. Compliance: At present, LED lights are provided where ever possible and same shall be followed in the said expansion project. Floating solar project is being installed at water reservoir of JSL for generation of 7.3 MW power as RE power.	Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc. to minimize the energy consumption. Compliance: Noted and agreed
VI. Waste management			

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
i	Used refractories shall be recycled.	Used refractories shall be recycled. Compliance: At present, Used refractories generated from SMS are being recycled in process and same shall be followed in the said expansion project.	Used refractories shall be recycled. Compliance: Noted and agreed
ii	Kitchen waste shall be composted or converted to biogas for further use.	Kitchen waste shall be composted or converted to biogas for further use. Compliance: At present, An organic Waste Converter of capacity 100 kg/day has been installed and the compost produced is used for greenbelt development.	Kitchen waste shall be composted or converted to biogas for further use. Compliance: Noted and agreed
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.	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. Compliance: Noted and agreed	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. Compliance: Noted and agreed
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 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.	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 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. Compliance: Noted and agreed	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 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. Compliance: Noted and agreed
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.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented. Compliance: Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan will be implemented.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented. Compliance: Noted and agreed
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.	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. Compliance: Presently, Heat stress analysis for the workmen who work in high temperature work zone is being carried out and Personal Protection Equipment (PPE) as per the norms of Factory	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. Compliance: Noted and agreed

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
		Act is being provided to the workman. The same shall be followed in the said expansion project.	
iii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained. Compliance: Presently, Annual health check up of workers is being carried out and records are maintained. The same shall be followed in the said expansion project.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained. Compliance: Noted and agreed
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, PP has committed to adopt 20 nearby villages for development activities. Out of 20 villages PP has already identified six villages namely Tikar, Kumbhiragadia, Manpur, Balungabandhi, Marurtikar and Khurunti villages.	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, PP has committed to adopt 15 nearby villages for development activities. Out of 15 villages PP has already identified six villages namely Tikar, Kumbhiragadia, Manpur, Balungabandhi, Marurtikar and Khurunti villages. Compliance : Noted and Agreed.	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, PP has committed to adopt 5 nearby villages for development activities. Compliance: Noted and agreed
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.	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. Compliance: JSL already has framed Environmental Policy as a part of the QEOHS (Quality, Environment, Occupational Health & Safety) policy framework and is committed to maintain environment friendly, safe, healthy and sustainable working condition in all its operations. The same shall be followed in the said expansion project.	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. Compliance: Noted and agreed
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	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 Compliance: At present, JSL already has a well-constituted Environment, Horticulture & Safety (EHS)	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. Compliance: Noted and agreed

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
		department with qualified and experienced officers under the administrative control of Head EHS and Head EHS directly report to the Plant Head.	
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.	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. Compliance: Advertisement on grant of Environment Clearance have been published in newspapers namely ORISSA POST (English) and PRAMEYA (Odia) on 07.06.2022 respectively. Environment Clearance is displayed in the website of the company permanently.	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. Compliance: Noted and agreed
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.	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. Compliance: The copies of the environmental clearance has been submitted to the Heads of local bodies, Panchayats.	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. Compliance: Noted and agreed
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.	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. Compliance: Presently, six-monthly reports on the status of the compliance of the stipulated environmental conditions uploaded on company website and same shall be continued.	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. Compliance: Noted and agreed
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.	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. Compliance: Both online and manual Stack Monitoring is being carried out and the data are displayed on the display board installed at main gate for public view. The same shall be continued in	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. Compliance: Noted and agreed

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
		the said expansion project.	
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.	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. Compliance: Presently, six-monthly reports on the status of the compliance of the stipulated environmental conditions is being submitted to MOEF&CC and also uploaded on MoEF&CC website.	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. Compliance: Noted and agreed
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	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. Compliance: Presently, environmental statement for each financial year in Form-V is being submitted to SPCB, Odisha in due time and also display on company website. The same shall be continued in the said expansion project.	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. Compliance: Noted and agreed
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.	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. Compliance: Noted and agreed	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. Compliance: A Noted and agreed
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.	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. Compliance: Noted and agreed	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. Compliance: Noted and agreed
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).	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). Compliance: Noted and agreed	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). Compliance: Noted and agreed
x	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986	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 Compliance: Noted and agreed	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 Compliance:

SL NO.	Present Conditions of JSL as per EC	Conditions remain with JSL	Condition transferred to JSLFL
			Noted and agreed
xi	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory. Compliance: Noted and agreed	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory. Compliance: Noted and agreed
xii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions. Compliance: Noted and agreed	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions. Compliance: Noted and agreed
xiii	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	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. Compliance: Noted and agreed	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. Compliance: Noted and agreed
xiv	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	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. Compliance: Noted and agreed	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. Compliance: Noted and agreed

V. Environmental Monitoring Plan Matrix

Sl. No.	Parameter	Location	Schedule of monitoring	Under the scope of
1.	Meteorology: Dry bulb temp, wet bulb temp, relative humidity, wind speed, wind direction and rainfall	Meteorology data would be recorded at one (1) permanent station which is already installed in the plant premises near Security barracks.	Online continuous monitoring	JSL (Common for all group companies)
2.	Air Quality Monitoring Parameters: PM2.5, PM10, SO2, NOx & CO.	Four (4) monitoring stations already installed by JSL Group Company covering all four directions which will be common for JSLFL. The details of the location as follows: NE - Nursery South - Rohit Gate East -Security Barrack West -Tata Corner	Continuous ambient air quality monitoring stations (CAAQMS)	JSL (Common for all group companies)

Sl. No.	Parameter	Location	Schedule of monitoring	Under the scope of
3	Stack Emission Monitoring: PM, SO ₂ , NO _x , CO	All major stacks as per stack schedule. (For DE stacks only PM would be monitored)	Online continuous monitoring system (CEMS) as per OSPCB's guidance	JSLFL and JSL
4	Water Quality - effluents water quality, surface and ground as per CPCB standard.	Ground water quality Surface water - One location River - Brahmani Wastewater quality	Ground water quality analysis- Half Yearly Surface water quality - Monthly once Surface & ground water - in pre & post monsoon Waste water - All parameters monthly once and weekly monitoring of common parameters	JSL (Common for all group companies) JSLFL and JSL
5	Ambient noise level	Noise levels are monitored at the boundary of JSL group and will be continued for expansion project	Monthly once for each location	JSL
6	Fugitive dust emission and work zone dust monitoring	Near stock yard and other fugitive dust emitting sources like SMS building, BF Stock house, Sinter Discharge Section, CRM etc.	Monthly once	JSLFL and JSL
7	Work zone noise level	Existing locations of work zone noise monitoring will be continued with new locations in the proposed project	Monthly once for each location	JSL and JSLFL
8	Soil quality	Two locations within the plant (raw material storage area, solid waste storage area) and two from outside plant area.	As per soil nutrient cycle by NABL/MoEFCC approved agency	Inside plant (JSLFL and JSL) Outside plant (JSL)
9	TCLP test for solid wastes	One location for hazardous waste storage	Once in six (6) months or as directed by OSPCB	JSLFL and JSL
10	Inventory of solid Waste	Within plant premises	Monthly once or as directed by OSPCB	JSLFL and JSL
11	Water Consumption	Water meter at pump house	Continuous	JSL and JSLFL (At

Sl. No.	Parameter	Location	Schedule of monitoring	Under the scope of
				inlet from common water reservoir)
12	Energy Consumption	All consumer points through energy meter	Continuous	JSL and JSLFL

VI. Implementation of Mitigation Measures

Discipline	Potential impacts	Mitigation measures		Administrative Authority
		JSL	JSLFL	
Construction Phase				
Air environment	Emission of dust due to construction activities leading to adverse health & environmental impacts	Water sprinkling to arrest fugitive dust emission. Wind barrier screen provided to reduce the wind speed and consequently, reduce the fugitive dust emission. Logistics would be designed to minimize movement of trucks transporting construction materials and optimize storage of construction materials at site	Water sprinkling to arrest fugitive dust emission. Wind barrier screen provided to reduce the wind speed and consequently, reduce the fugitive dust emission. Logistics would be designed to minimize movement of trucks transporting construction materials and optimize storage of construction materials at site	Project - I/C
Water quality	Discharge of construction wastewater including sanitary and kitchen wastewater causing adverse health & ecological impacts	Labour hutments would be provided with proper sanitation facilities. The stockpiles would be protected with toe wall of adequate height along with concrete garland drain & catch pits to prevent uncontrolled discharge of runoffs during monsoon.	Labour hutments would be provided with proper sanitation facilities. The stockpiles would be protected with toe wall of adequate height along with concrete garland drain & catch pits to prevent uncontrolled discharge of runoffs during monsoon.	Project - I/C
Noise	Increase in noise level due to construction activities causing health effects	Provision of Personal Protective Equipment (PPE) like ear muffs, ear plugs etc. Noise prone construction activities such as piling, drilling, excavation, cutting, etc. would be done during daytime only	Provision of Personal Protective Equipment (PPE) like ear muffs, ear plugs etc. Noise prone construction activities such as piling, drilling, excavation, cutting, etc. would be done during daytime only	Project - I/C
Land environment	Adverse impact on land due to dumping of solid waste C & D	Proper segregation of the wastes and use of recyclable materials within	Proper segregation of the wastes and use of recyclable materials within	Head - Stores

Discipline	Potential impacts	Mitigation measures		Administrative Authority
		JSL	JSLFL	
	waste, Plastic waste and MSW like construction & demolition debris, excess concrete & Cement, rejected components, packing & shipping materials and domestic waste	the plant/ sell to external agencies for secondary use Handling & disposal of wastes by authorized agencies as per prevalent regulations	the plant/ sell to external agencies for secondary use Handling & disposal of wastes by authorized agencies as per prevalent regulations	
Socio-Economics	Continued opportunities of contractual work with low payments Continued levels of local underemployment due to lack of technical and vocational training amongst youth and women groups – Dhanurjoya Pur, Dhuligarh, Sarangapur, Duburi, Dhapanki and Kacherigan Influx of migrants in the region due to the proposed expansion Continued employment of migrant workers (with required skill set) by JSL. Contractors also provide economic opportunities to migrants due to non-availability of technically competent local candidates	During the Construction phase, peak work force to be employed would be around 1080 The work force to be employed under direct and indirect employment during the phase of operation would be around 1300 respectively The employment opportunities are primarily based on the prevailing guidelines of wage structure, notified by the Government of Odisha in the official gazette Support towards vocational and industrial training of local population (having basic qualification) is being provided for up-gradation of skill and will be continued	During the Construction phase, peak work force to be employed would be around 1080 comprising both direct and indirect. The work force to be employed under direct and indirect employment during the phase of operation would be around 1300 comprising both direct and indirect. The employment opportunities are primarily based on the prevailing guidelines of wage structure, notified by the Government of Odisha in the official gazette Support towards vocational and industrial training of local population (having basic qualification) is being provided for up-gradation of skill and will be continued	Head - HR/IR & Project - I/C
	Waste water discharge may increase in Ganda Nala and Kanar Nala by industry, with continued contamination of surface water bodies, impact- ing human & aquatic health of	Strict adherence to mitigation measures as mentioned in Chapter 2 & 4 (Air & Water Pollution Control Measures) and adoption of Zero Liquid Discharge (ZLD) Augmentation of existing Rain Water Harvesting programmes	Strict adherence to mitigation measures as mentioned in Chapter 2 & 4 (Air & Water Pollution Control Measures) and adoption of Zero Liquid Discharge (ZLD) Augmentation of existing Rain Water Harvesting programmes	Project - I/C

Discipline	Potential impacts	Mitigation measures		Administrative Authority
		JSL	JSLFL	
	Balunga Bandi & Kacherigan Dust Pollution may increase in the industrial zone, with continued negative impact on the air and surface water quality, agricultural yield and human health (TB & Allergies) - Kacherigan			
Ecology	Adverse effect on the ecology of the plant area not envisaged since there would be no removal of vegetation as plant premises already has built up areas	Strengthening of greenbelt & peripheral plantation	-	Head - EHS
Operation Phase				
Land environment	No impact on the land environment in terms of loss of agricultural land or loss of vegetation Potential negative impact due to temporary storage of raw materials and solid waste	All stockpiles would be on top of a concreted area to avoid leaching of materials during monsoon. Maximum reuse/recycling of the solid wastes through practicable ventures. Monitoring of ground water quality to detect contamination due to leaching	All stockpiles would be on top of a concreted area to avoid leaching of materials during monsoon. Maximum reuse/recycling of the solid wastes through practicable ventures. Monitoring of ground water quality to detect contamination due to leaching	Head- Operations
Surface Water Resource & quality	Marginal negative impact on surface water resource due to additional water requirement for expansion Plant designed on ZLD, no impact on surface water quality	Optimization of water requirement by recycling treated wastewater to the maximum extent and implementation of ZLD Collection & storage of rainwater for reuse, especially during lean months	Optimization of water requirement by recycling treated wastewater to the maximum extent and implementation of ZLD Collection & storage of rainwater for reuse, especially during lean months	Head - Utility
Ground water	- No impact on resource as groundwater extraction not envisaged - Minimal impact on groundwater quality due to seepage and leaching	- concrete box drains to prevent seepage and ground water contamination. - temporary solid wastes storage yard to be lined with suitable liner to avoid leaching through soil bed leading to contamination of ground water.	- concrete box drains to prevent seepage and ground water contamination. - temporary solid wastes storage yard to be lined with suitable liner to avoid leaching through soil bed leading to contamination of ground water.	Head - Civil
Air	Adverse impacts on	Selection & maintenance of	Selection & maintenance of	Head –

Discipline	Potential impacts	Mitigation measures		Administrative Authority
		JSL	JSLFL	
Environment	health & environment due to emission of PM, SO _x , NO _x .	<p>APC equipment for fugitive & point source emissions</p> <p>Process optimization to control emission</p> <p>Interlocking of APC equipment to shut down plant units in case of APC failure</p> <p>Pneumatic or covered conveying of raw material</p> <p>Maintenance of Plant roads and use of industrial vacuum cleaners & water sprinkling at regular intervals.</p> <p>Operation & maintenance of tyre washing system at the strategic locations of the plant</p>	<p>APC equipment for fugitive & point source emissions</p> <p>Process optimization to control emission</p> <p>Interlocking of APC equipment to shut down plant units in case of APC failure</p> <p>Pneumatic or covered conveying of raw material</p> <p>Maintenance of Plant roads and use of industrial vacuum cleaners & water sprinkling at regular intervals.</p> <p>Operation & maintenance of tyre washing system at the strategic locations of the plant</p>	Operations
Noise	Detrimental impact on the health of working personnel in and around the plant premises.	<p>Noise levels for the new equipment and machineries to be fixed at 85 dB(A) Leq within 3 m distance from the noise prone equipment.</p> <p>Highly noise prone equipment having Leq above 90 dB(A) would either be housed separately or the attending personnel need to be housed in a noise-shielded cubicle.</p> <p>Noise prone rotating/vibrating equipment provided with vibration dampening anchoring.</p> <p>Use of appropriate PPEs</p>	<p>Noise levels for the new equipment and machineries to be fixed at 85 dB(A) Leq within 3 m distance from the noise prone equipment.</p> <p>Highly noise prone equipment having Leq above 90 dB(A) would either be housed separately or the attending personnel need to be housed in a noise- shielded cubicle.</p> <p>Noise prone rotating/vibrating equipment provided with vibration dampening anchoring.</p> <p>Use of appropriate PPEs</p>	Project-I/C
Socio-Economics		Employment of 1300		
Ecology	<p>Insignificant impact on ecology of the study area</p> <p>No adverse impact on aquatic ecology as plant is based on 'ZLD' concept</p>	Strengthening of greenbelt within plant premises	Strengthening of greenbelt within plant premises	Head - EHS

Deliberations by the Committee

16.3.9 The Committee noted the following

- i. M/s. Jindal Stainless Limited (JSL) has been recently accorded environmental clearance vide letter dated 01.06.2022 for expansion of Crude Steel Production from 2.2 MTPA to 4.5 MTPA and Cold Rolling Mill Production from 1.6 MTPA to 2.6 MTPA within the existing Steel Plant. **The PP has submitted that they have not implemented the complete facilities as envisaged in the EC dated 01.06.2022.**
- ii. Instant proposal is for amendment in EC dated 01.06.2022 following the transfer of Iron making facilities of 2.35 MTPA and Steel making facilities of 2.3 MTPA from Jindal Stainless Limited (JSL) to JSL Ferrous Limited (JSLFL) and further amendment in existing Blast Furnaces facilities of 1 x 720 m³ + 1 x 1,680 m³ (total volume 2,400 m³) to 1 x 2,307 m³ and Sinter Plant of 1 x 240 m² to 1 x 248 m² with no change in production capacity under M/s. JSL Ferrous Limited. The EAC noted that PP intends to enter into the Carbon Steel business as a separate entity. The EAC deliberated that if PP wanted to enter into the Carbon Steel business as a separate entity then transferee i.e. M/s. JSL Ferrous Limited could have applied directly for EC in the first place since EC has been granted recently on 01.06.2022. **Therefore, EAC advised PP to submit the justified reasons for amendment/transfer of the said facilities in the proposed application.**
- iii. The EAC noted that project proponent has not submitted any requisite document pertaining to transfer of firm from M/s. Jindal Stainless Limited to M/s. JSL Ferrous Limited such as copy of board resolution wherein decision has been taken for such arrangements as proposed in the instant application.
- iv. A valid certified compliance report on the compliance of conditions of the existing EC's needs to be submitted for assessing the implementation status of facilities envisaged and status of compliance of conditions of the existing EC from the IRO MoEFCC.
- v. The EAC further deliberated on the furnished information in the Addendum EIA Report and is of the view that PP shall clearly spell out the liability and responsibility matrix pertaining to project activities for M/s. JSL and M/s. JSLFL.
- vi. The EAC also asked the PP to submit revised name of the project for M/s. Jindal Stainless Limited and name of the project for M/s. JSL Ferrous Limited as part of Project Information Matrix detailed in para 16.3.8 above.
- vii. **The PP was unable to provide the reply, hence the proposal was not discussed by the EAC and the Committee was of the view that first PP submit all the details for further deliberation in the EAC meeting.**

Recommendations of the Committee

- 16.3.10 In view of the foregoing and after detailed deliberations, the committee recommended to **defer the proposal** due to certain deficiencies in the proposal and sought requisite information on the points referred at para no. 16.3.9 above. The proposal may be considered after submission of requisite information in next EAC meeting. The PP shall upload the requisite information on Parivesh Portal.

Consideration of Terms of Reference/Modification in TOR

Agenda No. 16.4

16.4 Modification cum Expansion of Ferro Alloy Plant of existing 2x5 MVA SEAF's to 2x6 MVA SEAF, Modification of existing 1x7.5 MVA SEAF to 1x9 MVA SEAF, Existing 1x9.0 MVA SEAF, New 1x9 MVA SEAF & New 12MT per batch CLU Converter for refining liquid HC FeMn to MC/LC FeMn by M/s Bihar Foundry and Casting Limited, located at Plot No.0 1405, Ramgarh Industrial Area, Village Marar, District Ramgarh, Jharkhand – Consideration of TOR.

[Proposal No. IA/JH/IND1/400084/2022; File No. IA-J-11011/384/2010-IA-II(I)]
[Consultant: Pioneer Enviro Laboratories & Consultants Pvt. Ltd.]

16.4.1 M/s. Bihar Foundry & Casting Limited has made an online application vide proposal no. IA/JH/IND1/400084/2022 dated 21.10.2022 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 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. PP has applied for appraisal of proposal under violation category as per the provisions contained in the MoEF&CC Standard Operating Procedures dated 07.07.2021 pertaining to consideration of violation cases as PP has reported that they have constructed 5th Furnace i.e New 1 x 9 MVA SAF & CLU converter is under construction without prior environmental clearance.

16.4.2 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [NABET certificate vide no. NABET/EIA/1922/SA 0148 valid till 16-12-2022].

Details submitted by Project proponent

16.4.3 The project of M/S Bihar Foundry & Castings Limited located at Plot No.0 1405, Ramgarh Industrial Area, Village Marar, District Ramgarh, Jharkhand is for Modification cum Expansion of Ferro Alloy Plant of existing 2x5 MVA SEAF's to 2x6 MVA SEAF, Modification of existing 1x7.5 MVA SEAF to 1x9 MVA SEAF, Existing 1x9.0 MVA SEAF, New 1x9 MVA SEAF & New 12MT per batch CLU Converter for refining liquid HC FeMn to MC/LC FeMn.

16.4.4 Environmental site settings:

S.No.	Particulars	Details	Remarks			
i.	Total land	<ul style="list-style-type: none"> ➤ Total land: 2.91 Ha. (7.18 Acres) Status of land: ➤ Total 2.91 Ha. (7.18 Acres), of land has taken on lease from Jharkhand Industrial Area Development Authority (JIADA) for a period of 30 years. 	Land use: Industrial Land			
ii.	Existence of habitation & involvement of R&R, if any.	No habitation exists in plant site. Hence no R & R is involved.	---			
iii.	Latitude and Longitude of the project site	Latitude and Longitude of the project site: <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Point</td> <td style="text-align: center;">Latitude</td> <td style="text-align: center;">Longitude</td> </tr> </table>	Point	Latitude	Longitude	---
Point	Latitude	Longitude				

		Point # 1	23°39'33.79"N	85°30'20.85"E																						
		Point # 2	23°39'33.67"N	85°30'24.03"E																						
		Point # 3	23°39'26.99"N	85°30'25.12"E																						
		Point # 4	23°39'25.39"N	85°30'23.90"E																						
		Point # 5	23°39'25.35"N	85°30'19.63"E																						
iv.	Elevation of the project site	MSL of the plant area – 345 m to 348 m			---																					
v.	Involvement of Forest land if any.	No Forest land is involved in the project site.			---																					
vi.	Water body exists within the project site as well as study area	Project site: Nil Study area: <table border="1" data-bbox="571 622 1283 931"> <thead> <tr> <th>Water Body</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Damodar River</td> <td>1.4 Kms.</td> <td>S</td> </tr> <tr> <td>Raura Nala</td> <td>2.5 Kms.</td> <td>E</td> </tr> <tr> <td>Meramgarh Nala</td> <td>5.4 Kms</td> <td>E</td> </tr> <tr> <td>Unnamed stream</td> <td>0.5 Kms</td> <td>W</td> </tr> <tr> <td>Ramgarh Village pond</td> <td>4.0 Kms</td> <td>S</td> </tr> <tr> <td>Seota village Pond</td> <td>1.5 Kms</td> <td>NE</td> </tr> </tbody> </table> and other unnamed small ponds are existing within study area.			Water Body	Distance	Direction	Damodar River	1.4 Kms.	S	Raura Nala	2.5 Kms.	E	Meramgarh Nala	5.4 Kms	E	Unnamed stream	0.5 Kms	W	Ramgarh Village pond	4.0 Kms	S	Seota village Pond	1.5 Kms	NE	---
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Seota village Pond	1.5 Kms	NE																								
vii.	Existence of ESZ / ESA / National Park / Wildlife sanctuary / Biosphere reserve / Tiger reserve / Elephant reserve, etc. if any within the study area	Nil			---																					
viii.	Forests	Present within 10 Kms. radius of the plant site. <table border="1" data-bbox="544 1406 1241 1574"> <thead> <tr> <th>Name</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Unnamed PF</td> <td>0.4 Kms</td> <td>W</td> </tr> <tr> <td>Unnamed PF</td> <td>4.7 Kms</td> <td>NW</td> </tr> <tr> <td>Unnamed PF</td> <td>4.0 Kms</td> <td>W</td> </tr> </tbody> </table>			Name	Distance	Direction	Unnamed PF	0.4 Kms	W	Unnamed PF	4.7 Kms	NW	Unnamed PF	4.0 Kms	W										
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Unnamed PF	0.4 Kms	W																								
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ix.	Critically polluted area as per MoEF&CC Office Memorandum dated 13 th January 2010	Ramgarh is declared Severely Polluted area (SPA) with CEPI index 65.11 by CPCB vide No. B29012/ESS(CPA)/2015-16/ dated 26 th April 2016.																								

16.4.5 The existing project was accorded environmental clearance vide Ir. no. J-11011/384/2010-IA.II(I) dated 31/10/2011. Consent to Operate renewal for the existing unit was accorded by Jharkhand State Pollution Control Board in the name of M/s. Gautam Ferro Alloys (Unit of BFCL) vide Ir. no. Ref no JSPCB/HO/RNC/CTO/4412165/2020/1819 dated 10/11/2020. The validity of CTO is up to 31/12/2025. PP has submitted that they have submitted a request letter to JSPCB for name Change in CTO which is under process.

16.4.6 Implementation status of existing EC

S No	Facilities As per EC dated 31/10/2011	Implementation Status as on 24/11/2020	Production as per CTO
1	Ferro Alloys Plant of 96 TPD (2x5 MVA SAF's and 1x7.5+1x9 MVA SAF's with Jigging unit and Micro Pelletizing facility)	Ferro Alloy Plant of 96 TPD	96 TPD

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

S No	Name	Existing Units		Proposed Units (Modification-Cum-expansion)		Total (Existing + Proposed)	
		Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
1	Ferro Alloy unit	2x5+1x7.5+1x9 MVA SAF With Jigging unit and Micro Pelletizing facility	34,080 (96 TPD) (SiMn / FeMn)	Modification of existing 2x5 MVA to 2x6 MVA SEAFs Modification of existing 1x7.5 MVA to 1x9 MVA SEAF Existing 1x9 MVA SEAF New 1x9 MVA SEAF* New 12MT per batch CLU Converter for refining liquid HC FeMn to MC/LC FeMn	SiMn-24,495 TPA (69 TPD) (or) FeMn-59,995 TPA (169 TPD)	2x6 MVA + 3x9 MVA SEAFs + 12MT CLU Converter With Jigging unit and Micro Pelletizing facility	SiMn- 58,575 TPA (165 TPD) (or) HC/MC/LC FeMn-94,075 TPA (265 TPD)

Note:

* PP has reported that they have constructed 5th Furnace i.e New 1 x 9 MVA SAF & CLU converter is under construction (hence PP is applying a Fresh Application for E.C. under Violation as per SOP dated 07.07.2021)

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

S.No.	Raw Material	Quantity After Expansion (TPA)	Sources	Mode of Transport
1.	For Ferro Alloys (2x6 MVA + 3x9 MVA SEAFs)			
(i)	Ferro Manganese – 94,075 TPA			
a)	Manganese ore	2,35,188	Imported (South Africa)	By Rail & Road (through covered trucks)
b)	Coke	70,556	Local market / Imported (Australia)	By Rail & Road (through covered trucks)
c)	Electrode Paste	1410	Local market	By road (through covered trucks)
d)	Quartz	28,222	Localmarket	By road

				(through covered trucks)
e)	Dolomite	23,518	Imported (Bhutan)	By Rail & Road (through covered trucks)
(OR)				
(ii)	<i>Silico Manganese – 58,575 TPA</i>			
a)	Manganese Ore	1,46,438	Imported (South Africa)	By Rail & Road (through covered trucks)
b)	Coke	43,930	Local market / Imported (Australia)	---
c)	Carbon paste	878	Local market	----
d)	Dolomite	14,643	Imported (Bhutan)	By road (through covered trucks)
e)	Fe-Mn Slag	29,288	Inhouse	By road (through covered trucks)

16.4.9 The total water requirement for existing plant is 35 m³/day which is being met from Groundwater source. NOC from CGWA has been obtained to abstract ground water of 35 m³/day for industrial use vide letter No. CGWA/NOC/IND/ORIG/2021/10628 dated 02/01/2021 which is valid upto 01/01/2024. The total water requirement for the expansion project is estimated as 148 m³/day, which will be met from the Damodar River (Tenughat Reservoir) for which WRD, Govt. of Jharkhand has given a Recommendation letter.

16.4.10 Total power consumption is 33 MW, in which meet from DVC 28.5 MW & 4.5 MW from Captive power plant of adjacent unit of BFCL.

16.4.11 The capital cost of the project is Rs. 89.3 Crores. Employment generation from proposed project will be 250 nos. through direct employment and 500 nos. through indirect employment.

16.4.12 It has been reported by PP that there is no court case is pending related to the project, however, there is a violation under EIA Notification, 2006 related to the project under consideration. The PP has started installation of the 5th Submerged Arc Furnace of 1x9 MVA & CLU converter without completing the process of Environment Clearance because of the following reasons:

- Due to COVID restrictions and social lockdown wherein all the physical activities were restricted, PP could not move ahead with the study, interaction with officials and accordingly could not complete the process of EC due to delay from their end.
- PP has also given a completion date of 31st Dec 2021 for 5th furnace project to their consortium of banks.
- If the completion date is exceeded by a period of 6 months, the loan account will slip into a NPA (Non-Performing Asset) category.
- This situation would have led to bankruptcy of their company as well.
- Thus, to avoid such situation, installation/completion of the 5th furnace has been completed along with CLU converter.

16.4.13 **Present status of 5th Submerged Electric Arc Furnace & CLU converter:**

- Installation of 5th Submerged Electric Arc Furnace of 9 MVA capacity has been completed.
- Production is not yet started.
- Regarding installation of CLU converter, 70% of civil work, plant & machinery has been completed.

16.4.14 Proposed Terms of Reference submitted by the PP:

- Baseline data has been collected by earlier Consultant from 1st December 2019 to 29th February 2020 by M/s. Ampl Environ Pvt Ltd. Hyderabad.
- During of Final EC appraisal it was decided to submit the a fresh Application under Violation; Hence applying a fresh for ToR.
- Now due to unavoidable circumstances M/s. Bihar Foundry & Casting Limited changing the Environment Consultant.
- Subsequently the baseline data has been collected for further period of One month i.e. in May 2022 for Re-validation of Baseline data for preparation of EIA report by M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd.
- The Public Hearing was held on 15/03/2021. PP requests to consider the same for the present proposal submitting under Violation.
- There is no change in proposal & Production capacities.
- Standard Terms of Reference Prescribed for preparation of EIA report for Metallurgical Industries (Ferrous & Non-Ferrous), as prescribed in Notification S.O. 996 (E) dt. 10th April 2015 will be followed

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
Air			
i) Meteorological parameters	1	On hourly basis for ONE MONTH i.e. May 2022	Wind Speed Wind Direction Temperature Relative Humidity Rainfall
ii) AAQ parameters	8	24 hourly Twice a week for 1 month (i.e. May 2022)	Parameters were Monitored: PM _{2.5} , PM ₁₀ , SO ₂ , NO _x , CO,
2) Noise	8	On hourly basis for 24 Hrs. at each station	Parameters were Monitored: Day equivalent Night equivalent
3) Water			
i) Ground Water	8	One sample at each of the locations	Parameters was Monitored: as per IS: 10500
ii) Surface Water	5	One sample at each of the	Parameters were s Monitored: as

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
		locations	per BIS: 2296
4) Land			
i) Soil quality	5	One sample at each of the locations	Parameters were Monitored: Texture, infiltration rate, SAR bulk density, CEC, pH, Ca, Mg, Na, K, Zn, Mn
ii) Land use	--	--	LU map was prepared by concerned FAE for study area
5) Biological			
i) Aquatic	--	Once	---
ii) Terrestrial	--	Once	---
6) Socio economic parameters	--		Social Impact Assessment was carried out by concerned FAE for study area
7) Traffic Density	--	Once	Vehicular traffic study was carried out at Transportation route.
8) As the Plant is situated in Critically Polluted Area. The following additional studies will be carried out Assessment ecological damage Preparation of Remediation Plan Preparation of Natural resource and community resource augmentation plan			

16.4.15 M/s. Bihar Foundry & Casting Limited had earlier applied for grant of ToR vide proposal no. IA/JH/IND/172815/2020 dated 12/09/2020 for expansion of the existing unit for manufacturing of Ferro Alloys SiMn / FeMn based on Sub Merged Arc (SAF) technology. Accordingly, Terms of Reference was issued vide letter no. J-11011/384/2010-IAII(I) dated 24.11.2020.

16.4.16 Post compliance of ToR dated 24.11.2020, the PP had applied for EC vide proposal no. IA/JH/IND/223909/2020 dated 23/08/2021. The proposal was appraised by the EAC in its 44th meeting held on 13 – 14th September, 2021 wherein after deliberations, the Committee recommended to return the proposal in its present form. The observations and recommendations of the EAC are as follows:

Observations of the Committee (EAC during 13-14th September, 2021)

The Committee observed the following:

- i. Proposed expansion project site is located in a Severely Polluted Area. Additional safeguards such as 40% green belt development and provision of Continuous Ambient Air Quality station etc. have not been proposed by the proponent.
- ii. Existing EC as well as instant EC application is in the name of M/s. Bihar Foundry and Castings Limited whereas the Consents obtained from JSPCB is in the name M/s. Gautam Ferro Alloys (Unit of BFCL). PP informed that M/s. Gautam Ferro Alloys is a

- common name and no such legal entity exist. This needs to be revisited by the PP to ensure that the name in the EC as well as the Consents are in the same name.
- iii. There are serious non-compliances have been reported by RO including use of GW (4 bore wells) without permission; approval of Disaster Management Plan (DMP) by Factory Inspectorate; non-implementation of CER, Continuous Ambient Air Quality Monitoring station (CAAQMS) at project site has not been installed so far; medical examination records of workers are not available; CSR activities have not been taken up and six monthly reports have not been furnished etc. No tangible efforts have been taken by the proponent to comply with the said non-compliances as reported.
 - iv. Revised action plan for green belt development covering 40% of the project area with a density of 2500 sapling per ha will be required as the site is located in a severely polluted area.
 - v. Jigging and micro pelletizing facility is available. It is not clear if any up-gradation is planned for these facilities under expansion.
 - vi. Sewage treatment plant details has not been made available.
 - vii. EIA report has following shortcomings;
 - a. There are three EIA coordinators, the roles and responsibilities of the coordinators are not clear. Signatures of all Team Members are scanned.
 - b. Specific TOR points (i) and (iii) pertaining to use of surface water and emission levels less than 30 mg/Nm³ have not been complied. TOR Point 9 compliance has been given at three places in pieces in Annexure 5, Chapter 6 and Annexure 8. Accredited Consultant Organization (ACO) does not understand where this point should be addressed in EIA report.
 - c. Interpretation of physical data, EB data has not been addressed in Chapter 3.
 - d. Socio-economic data have not been given in Chapter 3 and not interpreted.
 - e. In section 4.5.7.2 of Chapter 4, impact on Social Environment has been given. It is not clear as to how impact has been predicted without determining the base line in Chapter 3?
 - f. Rain water harvesting program has been addressed only for water requirement added for expansion project.
 - g. In EIA report, at one place the designation of environment head is given as GM and at another place it is ADM. On page 170 of the report, it is mentioned that Electrical, Mechanical maintenance engineers and Security officer shall report to Environment Department.
 - h. Performance testing of pollution control equipment and systems has not been included in EIA report.
 - i. Project cost and EMP cost given in Table 6.4 is in variance from the data given in the presentation.
 - j. SIA has been presented in section 7.6. Only census data have been presented in the report. There is no evidence of systematic data collection and surveys conducted by ACO for carrying out SIA study. Interpretation of data has not been presented.
 - k. In Chapter 8 CER (EMP) activities given are not as per OM of 30th Sept 2020. At one place the completion period is shown as 7 years and at another place it is 5 years. Year wise activity with physical targets have not been given as per O.M. of 30th Sept 2020.
 - l. Chapter 10 description does not follow the requirement of Appendix III of EIA notification 2006.

Recommendations of the Committee (EAC during 13-14th September, 2021)

In view of foregoing and after deliberations, the Committee recommended to return the proposal in its present form. Further, the Committee also recommended to issue a Show Cause Notice to the EIA consultant for the shortcomings in the EIA report enumerated above.

- 16.4.17 The project proponent has now applied for fresh ToR for appraisal of proposal under violation category as per the provisions contained in the MoEF&CC Standard Operating Procedures dated 07.07.2021 pertaining to consideration of violation cases as PP has reported that they have constructed 5th Furnace i.e New 1 x 9 MVA SAF & CLU converter is under construction without prior environmental clearance. The deliberation and recommendations of the Committee are as follows:

Written representations:

- 16.4.18 During the meeting, based on the deliberations made by the EAC, the project proponent vide letter dated 03.11.2022 through email dated 03.11.2022 has requested that **instead of appraising the instant proposal for fresh ToR, the said proposal be appraised as modification/ amendment in TOR granted vide letter No. J-11011/384/2010-IAII(I) dated 24.11.2020 under violation category** as per the provisions contained in the MoEF&CC Standard Operating Procedures dated 07/07/2021 pertaining to consideration of violation cases.

Deliberation by the Committee

- 16.4.19 The Committee noted the following:
- i. The instant proposal is for Modification cum Expansion of Ferro Alloy Plant of existing 2x5 MVA SEAF's to 2x6 MVA SEAF, Modification of existing 1x7.5 MVA SEAF to 1x9 MVA SEAF, Existing 1x9.0 MVA SEAF, New 1x9 MVA SEAF & New 12MT per batch CLU Converter for refining liquid HC FeMn to MC/LC FeMn.
 - ii. The EAC noted that M/s. Bihar Foundry & Casting Limited had earlier obtained ToR vide letter dated 24.11.2020 for expansion of the existing unit for manufacturing of Ferro Alloys SiMn / FeMn based on Sub Merged Arc (SAF) technology. Post compliance of ToR, PP applied for EC vide proposal no. IA/JH/IND/223909/2020 dated 23/08/2021 wherein the EAC in its 44th meeting held on 13 – 14th September, 2021 recommended to return the proposal in its present form due to shortcomings.
 - iii. The project proponent in the instant application has applied for fresh ToR and decided to come before the committee for appraisal of proposal under violation category as per the provisions contained in the MoEF&CC Standard Operating Procedures dated 07.07.2021 pertaining to consideration of violation cases as PP has reported that they have constructed 5th Furnace i.e. New 1x9 MVA SAF & CLU converter is under construction without prior environmental clearance.
 - iv. PP has also reported that the Public Hearing for the project was already held on 15/03/2021.

- v. The EAC noted that it is a fit case of violation and to be apprised based on the provisions of the SOP dated 07.07.2021 [Violation Cases]. The Project proponent has to comply all the procedure as laid down in the SOP dated 07.07.2021.
- vi. The EAC has also advised that the Consultant should properly guide to the PP so that such violation has not arisen by the PP.
- vii. The EAC also took into consideration the request of PP submitted through written representation vide letter dated 03.11.2022 for appraisal of the instant proposal as modification/ amendment in TOR granted vide letter No. J-11011/384/2010-IAII(I) dated 24.11.2020 under violation category instead of issuance of fresh TOR.
- viii. Baseline data was earlier collected by previous Consultant M/s. Ampl Environ Pvt Ltd. Hyderabad from 1st December 2019 to 29th February 2020. Subsequently the baseline data has been collected for further period of one month i.e. in May 2022 for Re-validation of Baseline data for preparation of EIA report by M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd.
 - In pursuance to MoEF&CC O.M. vide F. No. IA3-22/10/2022-IA.III, dated 8th June 2022, the baseline data shall not be more than three years old at the time of submission of application for consideration of EC. Also, at the time of application for EC, in case baseline data is older than three years, but less than five years old in the case of River valley and HEP Projects, or less than four years old in the case of other projects, the same shall be considered, subject to the condition that it is revalidated with one season fresh non-monsoon data collected after three years of the initial baseline data. The Committee advised the PP to take note of it while submitting the application for EC and if the application is not submitted within the timelines, fresh baseline data for three months shall be collected in pursuance to Ministry's Guidelines.
 - In pursuance to Ministry's OM No. IA3-22/10/2022-IA.III [E 1772581], dated 8th June, 2022 pertaining to Certified Compliance Report (CCR) of the Integrated Regional Office of the Ministry of Environment, Forest and Climate Change/ or concerned authority 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. The Committee advised the PP to take note of it while submitting the application for EC.
- ix. Further, the EAC observed that the project falls in the Ramgarh district of Jharkhand. Ramgarh is declared as Severely Polluted area (SPA) with CEPI index 65.11 by CPCB vide No. B29012/ESS(CPA)/2015-16/ dated 26th April 2016. The EAC advised PP to comply with all the conditions applicable to CEPI.
- x. Existing EC as well as instant ToR application is in the name of M/s. Bihar Foundry and Castings Limited whereas the Consents obtained from JSPCB is in the name M/s. Gautam Ferro Alloys (Unit of BFCL). PP informed that that they have submitted a request letter to JSPCB for name Change in CTO which is under process.

Recommendations of the Committee

16.4.20 After deliberations, the Committee recommended the project proposal for **modification in TOR letter No. J-11011/384/2010-IAII(I) dated 24.11.2020** w.r.t. appraisal of proposal under violation category as per the provisions contained in the MoEF&CC Standard Operating Procedures dated 07/07/2021 pertaining to consideration of violation cases. All the terms and conditions stipulated in ToR letter no. J-11011/384/2010-IAII(I) dated 24.11.2020 shall remain the same with stipulation of the following specific conditions:

- i. The State Government/SPCB shall take action against the project proponent under the provisions of the Environment (Protection) Act, 1986, and further no consent to operate to be issued till the project is granted EC.
- ii. Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR).
- iii. Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
- iv. The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter (13) in the EIA report by the accredited consultants.
- v. Budget of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be completed within three years and to be prepared accordingly.
- vi. The project proponent shall require to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority.
- vii. Project proponent shall implement penalty provisions i.e., 1% of project cost attributable to the expansion, incurred up to the date of filing of application along with the EIA/EMP report as contained in the paragraph 12 of the Standard Operating Procedure dated 7/07/2021 shall be complied with.
- viii. In pursuance to MoEF&CC OMs dated 31st October, 2019 & 30th December, 2019 issued in compliance of the order of Hon'ble NGT in OA No. 1038/2018 dated 19th August, 2019, the compliance of all the conditions applicable to CEPI shall be prepared. Greenbelt shall be planned in 40% of the project area. CER allocation shall be 1.5 times of the normal calculated amount.
- ix. The project proponent shall obtain name change in Consents (CTE/CTO) for the existing project in the name of M/s. Bihar Foundry and Castings Limited.
- x. The PP shall submit the Action Plan as per Ministry's OM dated 30.09.2020 on the issues raised during the PH. In this instant case the PH was already conducted by the SPCB as per provisions of the EIA Notification, 2006.

- xi. The validity of the TOR will be counted from the earlier granted TOR by the Ministry.

Agenda No. 16.5

- 16.5 Expansion of existing steel plant by installation of Iron Ore Pellet Plant (1x0.85 MTPA) with Producer Gas Plant (8x7000 Nm³/hr), Sponge Iron Plant (1x250 TPD + 2x350 TPD DRI Kilns), Submerged ARC Furnaces (2x12 MVA) Induction Furnaces (2x12 T + 2x20 T) with matching LRF & CCM, 1,50,000 TPA Rolling Mill along with 31 MW capacity Captive Power Plant (21 MW WHRB based + 10 MW AFBC based) by M/s Alaknanda Balmukund Ispat Pvt. Ltd., located at Village - Gourandi, Mouza - Mosliya, P.O. Achuri Salboni, P.S. Bankura Sadar, District – Bankura, West Bengal– Consideration of TOR.**

**[Proposal No. IA/WB/IND/289025/2022; File No. IA-J-11011/329/2022-IA-II(IND-I)]
[Consultant: M/s. Envirotech East Pvt. Ltd.; validity upto 25.12.2022]**

- 16.5.1 M/s. Alaknanda Balmukund Ispat Pvt. Ltd. has made an application online vide proposal no. IA/WB/IND/289025/2022 dated 15th October, 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.
- 16.5.2 Name of the EIA consultant: M/s. Envirotech East Pvt. Ltd. [S. No. 180, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2124/SA 0145 valid till 25.12.2022; Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

- 16.5.3 The project of M/s Alaknanda Balmukund Ispat Pvt. Ltd. located at Village - Gourandi, Mouza - Mosliya, P.O. Achuri Salboni, P.S. Bankura Sadar, District – Bankura, West Bengal is for the expansion of existing steel plant by installation of Iron Ore Pellet Plant (1x0.85 MTPA) with Producer Gas Plant (8x7000 Nm³/hr), Sponge Iron Plant (1x250 TPD + 2x350 TPD DRI Kilns), Submerged Arc Furnaces (2x12 MVA), Induction Furnaces (2x12 T + 2x20 T) with matching LRF & CCM, 1,50,000 TPA Rolling Mill along with 31 MW capacity Captive Power Plant (21 MW WHRB based + 10 MW AFBC based). Among the existing facilities, the Rolling Mill (1,32,000 TPA) was installed based on Consent to Establish (CTE) dated 10.09.2007. As per NGT Order dated 12.02.2020 in Original Application No. 55/2019(WZ), this existing rolling Mill also requires Environmental Clearance.
- 16.5.4 Environmental site settings:

S. No.	Particulars	Details	Remarks
i.	Total Land	The proposed project will be installed on the	

S. No.	Particulars	Details	Remarks						
		available land within the existing plant area as well as on some additional land adjacent to its existing plant premises comprising of total land of 137 Acres (55.44 Hectares)							
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	The proposed project will be installed on the available land within the existing plant area as well as on some additional land adjacent to its existing plant premises comprising of total land of 137 Acres (55.44 Hectares), out of which 90 acres has been acquired and rest is in process.							
iii.	Existence of habitation & involvement of R&R, if any.	<p>Project Site: Village - Gourandi, Mouza - Mosliya, P.O. Achuri Salboni, P.S. Bankura Sadar, District – Bankura, West Bengal</p> <p>Study Area:</p> <table border="1"> <thead> <tr> <th>Habitation</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Bankura</td> <td>7.4 km</td> <td>South-east from the Project site</td> </tr> </tbody> </table>	Habitation	Distance	Direction	Bankura	7.4 km	South-east from the Project site	No R&R issue involved in the proposed project
Habitation	Distance	Direction							
Bankura	7.4 km	South-east from the Project site							
iv.	Latitude and Longitude of all corners of the project site.	Latitude: 23°16'25.16"N to 23°16'57.92"N Longitude: 87°1'26.98"E to 87°2'0.96"E							
v.	Elevation of the project site	381 ft (116 m) above mean sea level							
vi.	Involvement of Forest land if any.	No forest land is involved in the project site.							
vii.	Water body (Rivers, Lakes Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	Gandheswari River is passing about 3 km distance in NE direction w.r.t the project site.							
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil							

16.5.5 The details of the existing EC/CTE/CTO are as follows:

Sl. No.	Certificate Obtained	Memo No.	Date of Issue	Name of Units	Obtained from
1.	Consent to Establish (NOC) in the name of M/s Concast Bengal	Memo No. 6027-2N-381/2002	19.05.2004	▪ DRI Kilns (2x100 TPD) for production of 72,000 TPA Sponge Iron	West Bengal Pollution Control Board

Sl. No.	Certificate Obtained	Memo No.	Date of Issue	Name of Units	Obtained from
	Industries Ltd.			<ul style="list-style-type: none"> ▪ Induction Furnaces - 2x8.5 T 	(WBPCB)
2.	Consent to Establish (NOC) in the name of M/s Concast Bengal Industries Ltd.	Memo No. 907-256/WPB /SEE(K) – general/(pt I)	10.09.2007	<ul style="list-style-type: none"> • Rolling Mill (1,32,000 TPA TMT Bars) • Reheating Furnace - 30 TPH 	West Bengal Pollution Control Board (WBPCB)
3.	Environmental Clearance (EC) in the name of M/s Concast Bengal Industries Ltd.	Letter No. EN/379/T-II.1/087/2007	05.02.2010	<ul style="list-style-type: none"> • 1X60 TPD Cupola Furnace • *Induction Furnaces - 2x12 T • 20.5 MW Captive Power Plant (12.5 MW AFBC & 8 MW WHRBs) ** 	Department of Environment, Govt. of West Bengal
4.	Consent to Establish (NOC) in the name of M/s Concast Bengal Industries Ltd.	Memo No. 469-2N-42/2007 (E)	11.08.2010	<ul style="list-style-type: none"> • 1X60 TPD Cupola Furnace • *Induction Furnaces - 2x12 T • 20.5 MW Captive Power Plant (12.5 MW AFBC & 8 MW WHRBs) ** 	West Bengal Pollution Control Board (WBPCB)
5.	Consent to Operate (CTO) in the name of M/s Concast Bengal Industries Ltd., was Valid upto 30.04.2019	Memo No. 697-7/WPBD-Cont(2274)/05	18.04.2016	<ul style="list-style-type: none"> • DRI Kilns (2x100 TPD) for production of 72,000 TPA Sponge Iron • Induction Furnaces - 2x8.5 T + 2x12 T • Rolling Mill (1,32,000 TPA TMT Bars) • 20.5 MW Captive Power Plant 	West Bengal Pollution Control Board (WBPCB)
6.	Consent to Establish (NOC) for change of Company name from M/s Concast Bengal Industries Ltd. to M/s Alaknanda Balmukund Ispat Pvt. Ltd. in the above NOCs & CTO.	Memo No. 139-2N-42/2007 (E)	23.03.2022	--	West Bengal Pollution Control Board (WBPCB)
7.	Consent to Operate (CTO) in the name of M/s Alaknanda Balmukund Ispat Pvt. Ltd., Valid upto 31.03.2027	Memo No. 277-7 / WPBD - Cont (2274) / 05	14.07.2022	<ul style="list-style-type: none"> • DRI Kilns (2x100 TPD) for production of 72,000 TPA Sponge Iron • Induction Furnaces - 2x8.5 T + 2x12 T • Rolling Mill (1,32,000 TPA TMT Bars) • 20.5 MW Captive Power Plant 	West Bengal Pollution Control Board (WBPCB)

Sl. No.	Certificate Obtained	Memo No.	Date of Issue	Name of Units	Obtained from
Note:					
* 1x60 TPD Cupola Furnace is not installed.					
** It would be relevant to mention that out of total CPP capacity of 20.5 MW, 12.5 MW is based on AFBC boiler & 8 MW is based on WHR Boilers as per EC & CTE. However, the waste heat, generated from 2x100 TPD DRI Kilns may generate only 4 MW power. Therefore, the power plant capacity is modified as 16.5 MW based on AFBC boiler & 4 MW based on WHR Boilers. The total power plant capacity remains same as 20.5 MW.					

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

Particulars	Existing (as per consent to operate dt. 18.04.2016 Letter no –CO100527)	Proposed Expansion	Total Capacity after Expansion	Remarks
Pellet Plant	NA	1 X 0.85 MTPA	8,50,000 TPA Pellet	
Sponge Iron Plant	2 X100 TPD (72,000 TPA)	1 X250 TPD and 2X350 TPD (3,13,500 TPA)	3,85,500 TPA Sponge Iron	
Induction Furnace with matching LRF & CCM	2 X 12 T and 2X8.5 T	2X12 T and 2X20 T	2,75,880 TPA Billets	2 X 8.5 MT would be Discarded
Rolling Mill	1,32,000 TPA *	1,50,000 TPA	2,82,000 TPA TMT Bars, Rods & Structural	
Submerged Arc Furnace	NA	2 X 12 MVA	43,730 TPA Si-Mn Or 59,200 TPA Fe-Mn Or 20,266 TPA Fe-Si Or 44,800 TPA Fe-Cr	
Producer Gas Plant	NA	8 X 7000 NM ³ /Hr	56000 NM ³ /Hr	
Captive Power Plant	20.5 MW (4 MW WHRB +16.5 MW AFBC)	31 MW (21 MW WHRB based +10 MW AFBC based)	51.5 MW (25 WHRB + 26.5 MW AFBC)	

Note: * The existing Rolling Mill was installed based on CTE dated 10.09.2007. As per NGT Order dated 12.02.2020 in Original Application No. 55/2019(WZ), this existing rolling Mill also requires Environmental Clearance.

Induction Furnace: 10 Heats per day & 330 working days per year.

16.5.7 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	Annual Requirement (in TPA)			Source
		Existing	Proposed	Total	
IRON ORE PELLET PLANT					
1	Iron Ore Fines	-	864000	864000	Barbil, Orissa

Sl. No	Raw Material	Annual Requirement (in TPA)			Source
		Existing	Proposed	Total	
2	Bentonite	-	5185	5185	Local Market
3	Limestone	-	8640	8640	Local Market
DRI PLANT					
1	Pellet	62100	295000	357100	In house plant
2	Coal	80900	384300	465200	Indigenous / Imported coal
3	Dolomite	2700	12825	15525	Local Market
CAPTIVE POWER PLANT					
1	Dolochar	8945	56655	65600	In house
2	Coal	32084	48126	80210	Local Market
INDUCTION FURNACE					
1	Sponge Iron	78500	208860	287361	In house
2	Pig Iron	9187	24500	33689	Local Market
3	Ferro Alloys	542	10190	10735	In house
4	Scraps	3822	1445	5271	Local Market
FERRO ALLOYS					
FERRO-MANGANESE :					
1	Manganese Ore	-	153920	153920	Barbil
2	Coke	-	23680	23680	Local Market
3	Dolomite	-	1776	1776	Local Market
4	Coal	-	23680	23680	Local Market
SILICO-MANGANESE:					
1	Manganese Ore	-	74341	74341	Barbil
2	Quartz	-	31096	31096	Local Market
3	Coke	-	17492	17492	Local Market
4	Dolomite	-	27751	27751	Local Market
5	Fe-Mn slag	-	59200	59200	In house
6	Coal	-	17492	17492	Local Market
FERRO SILICON					
1	Quartz	-	228968	228968	Local Market
2	Mill Scrap	-	5809	5809	Local Market
3	M S scrap	-	270	270	Local Market
4	Lam Coke	-	7430	7430	Local Market
5	Charcoal	-	12159	12159	Local Market
FERRO CHROME					
1	Chrome Ore	-	116480	116480	Local Market
2	Coke	-	17920	17920	Local Market
3	Coal	-	8064	8064	Local Market
4	Quartz	-	896	896	Local Market
5	Dolomite	-	896	896	Local Market
6	Lime	-	1120	1120	Local Market
7	Molasses	-	2688	2688	Local Market
TOTAL		278780	2714571	2993351	

16.5.8 The water requirement for the overall project is estimated as 2320 m³/day (Existing – 615 KLD + Expansion - 1705 KLD) which will be met from Rainwater harvesting and Gandheswari river.

16.5.9 The power requirement for the overall project is estimated as 67 MW (Existing - 24.5 MW * + Expansion – 53 MW), which will be sourced from 51.5 MW CPP & balance from State Grid.

*(*Note: In the existing project, there are 2x12 T + 2x8.5 T Induction Furnaces. After the implementation of the proposed project, 2x8.5 T Induction Furnaces shall be discarded. Therefore, in the overall power consumption in the proposed scenario, the corresponding power requirement for 2x8.5 T IFs shall not be considered)*

16.5.10 The capital cost of the project is Rs. 491 Crores. The employment generation from the proposed project during operational phase will be 900 persons.

16.5.11 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.

16.5.12 Proposed Terms of Reference: [Baseline data collection period: **1st October, 2022 to 31st December, 2022**]

Attributes	Sampling		Parameters
	No. of Stations	Frequency	
A. Air			
a. Meteorological Parameters	1	Continuous on 24-hourly basis	Temperature, Relative Humidity, Atmospheric Pressure, Wind Speed, Wind Direction, Rainfall.
b. AAQ Parameters	8	Twice in a week	PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ & CO
B. Noise	10	Once (Day & Night)	Leq [dB (A)]
C. Water			
a. Surface Water	10	Once in the study period	Physical, Chemical & Biological
b. Ground Water	9	Once in the study period	Physical, Chemical & Biological
D. Land			
a. Soil Quality	4	Once in the study period	Physical and Chemical
b. Land Use	Study Area	Once in the study period	Land use using Satellite Imagery
E. Biological			

Attributes	Sampling		Parameters
	No. of Stations	Frequency	
a. Aquatic	Study Area	Once in the study period	Enlist local Flora and Fauna
b. Terrestrial	Study Area	Once in the study period	Enlist local Flora and Fauna
F. Socio-economic Parameters	Study Area	Based on Latest census data and sample survey	Population & Infrastructure Facilities

Deliberation by the Committee

16.5.13 The Committee noted the following:

- i. The proposal was earlier granted Environment Clearance by SEIAA vide Letter No. EN/379/T-II.1/087/2007 dated 05.02.2010 for expansion proposal comprising of 1X60 TPD Cupola Furnace for production of liquid metal, Induction Furnaces - 2x12 T along with LRF and CCM and 20.5 MW Captive Power Plant (12.5 MW AFBC & 8 MW WHRBs) in the name of M/s. Concast Bengal Industries Limited. Among the existing facilities, the Rolling Mill (1,32,000 TPA) was installed based on Consent to Establish (CTE) dated 10.09.2007. As per the submission of PP, the project envisaged in the EC dated 05.02.2010 has not been implemented. The project proponent failed to submit the justification for not been able to implement the project.
- ii. On perusal of the PFR, the EAC noticed that the details furnished in the PFR do not justify the proposed facilities envisaged in the project and therefore, project proponent is required to re-examine and revise the PFR as per the requirements of the project.
- iii. The proposed project will be installed on the available land within the existing plant area as well as on some additional land adjacent to its existing plant premises comprising of total land of 137 Acres (55.44 Hectares), out of which 90 acres has been acquired and rest is in process. As per Ministry's O.M. vide F.No. 22-76/2014-IA-III dated 07.10.2014 which reads as "*While full acquisition of land may not be a prerequisite for the consideration of the case for EC, there should be some credible document to show the status of land acquisition w.r.t project site when the case is brought before the concerned EAC/SEAC for appraisal.....*" Therefore in view of the same, credible document showing the status of land acquisition is required at the time of appraisal which was not furnished by the project proponent.
- iv. Since, the existing project is very old, PP needs to submit the status of the greenbelt at the project site along with requisite documents and photographs.
- v. The EAC also warned the Consultant [M/s. Envirotech East Pvt. Ltd.] for not guiding the project proponent properly with respect to fulfilling all the criteria at the time of preparation of application and submission of all the requisite documents at the time of appraisal of proposal.
- vi. In view of above, the Project Proponent requested the EAC to allow to reappear after revision of the application.

Recommendations of the Committee

- 16.5.14 In view of the foregoing and after deliberations, the Committee recommended that proposal to be **returned in its present form** to address the shortcomings enumerated at para no. 16.5.13 above and submit the revised application as per the provisions of EIA Notification, 2006.

Agenda No. 16.6

- 16.6 Expansion of Sponge Iron Unit from 200 TPD (2X100 TPD) to 550 TPD (1X350 TPD), Captive Co-gen Power Plant from 10 MW to 20 MW and Establishment of 6 Lakh Tonnes Per Year Iron Ore Pellet Plant with Coal gasifier, 1.3 Lakh Tonnes Per Year TMT rebar and other steel products like wire rod, narrow strips, light structures, etc. The manufacturing facility with respect to steel making is consisting of 2X20 Tonnes Induction Furnace, 1X30 Ton LRF, 6/11x2 Strand billet caster and 1.3 Lakh Tonnes Per Year Rolling Mill with Coal gasifier plant at Sy. No. 85, 85/2, 86, 86/2, 87, 87/5, 88/1, 88/2, 89/1, 89/2, 90/1, 90/2, 91/1, 91/2, 144/3, 146/3, 150, 151, 152/A, 152/B, 153/1, 153/2, 153/3, 154/1/B, 154/2/B, 154/3, 154/4, 155/1, 155/2, 155/3, 156 of Hirebaganal Village / Chikkabagnal / kunikera, (all are adjoining villages and sy nos adjoins each other) Ginigera Post, Koppal Taluk, Koppal District, Karnataka by M/s. Dhruvdesh Metasteel Pvt. Ltd.- – Consideration of TOR.**

[Proposal No. IA/KA/IND1/401343/2022; File No. IA-J-11011/399/2022-IA-II(IND-I)]

[Consultant:M/s. Environmental Health & Safety Consultants Pvt. Ltd.; valid till 24.08.2024]

- 16.6.1 M/s. Dhruvdesh Metasteel Pvt. Ltd. has made an application online vide proposal no. IA/KA/IND1/401343/2022 dated 8th October 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.
- 16.6.2 Name of the EIA consultant: M/s. Environmental Health & Safety Consultants Pvt. Ltd. [S. No. 51, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2124/RA 0241 valid till 24.08.2024; Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

- 16.6.3 The project of M/s. Dhruvdesh Metasteel Pvt. Ltd. located at Sy. No. 85, 85/2, 86, 86/2, 87, 87/5, 88/1, 88/2, 89/1, 89/2, 90/1, 90/2, 91/1, 91/2, 144/3, 146/3, 150, 151, 152/A, 152/B, 153/1, 153/2, 153/3, 154/1/B, 154/2/B, 154/3, 154/4, 155/1, 155/2, 155/3, 156 of Hirebaganal / Chikkabagnal / Kunikera Villages (all are adjoining villages and all the survey numbers as mentioned above adjoins each other), Ginigera Post, Koppal Taluk, Koppal District, Karnataka

for expansion of Sponge Iron Unit from 200 TPD (2X100 TPD) to 550 TPD (1X350 TPD), Captive Co-gen Power Plant from 10 MW to 20 MW and Establishment of 6 Lakh Tonnes Per Year Iron Ore Pellet Plant with Coal gasifier, 1.3 Lakh Tonnes Per Year TMT rebar and other steel products like wire rod, narrow strips, light structures, etc. The manufacturing facility with respect to steel making is consisting of 2X20 Tonnes Induction Furnace, 1X30 Ton LRF, 6/11x2 Strand billet caster and 1.3 Lakh Tonnes Per Year Rolling Mill with Coal gasifier plant.

16.6.4 Environmental site settings:

Sl. No.	Particulars	Details	Remarks			
i.	Total land	84.22 Acres Existing Plant: 47.22 Acres Proposed Expansion: 37 Acres	Land use: Converted for industrial use			
ii.	Land acquisition details as per Mo EF&CC O.M. dated 7/10/2014	The land is owned by M/s. Dhruvdesh Metasteel Pvt. Ltd.	--			
iii.	Existence of habitation & involvement of R&R, if any.	Project site: Hirebagnal / Chikkabagnal & Kunikera (all are adjoining villages)	Status of R&R. No R&R is involved.			
		Study Area:				
		Sl. No.		Particulars	Distance in Km	Direction
		1		Chikkabagnal Village	0.05	SE
		2		Lachanakeri Village	1.56	SW
		3		Kunikera Village	2.22	NW
		4		Karkihalli Village	2.54	SE
		5		Hirebagnala	3.12	N
		6		Hirekasanakandi	3.58	NE
		7		Mundargi	4.27	SW
		8		Allanagar	4.59	N
		9		Halwarti	5.05	NW
		10		Kanakapura Thanda	5.99	NE
		11		Hyati	7.28	SW
		12		Basapura	7.51	NW
		13		Huvinhall	7.91	NW
		14		Bevinhalli	8.08	NW
		15		Chikkasankandi	8.19	NW
		16		Hosahalli	8.25	NW
		17		Hosalingapura	8.36	NW
		18		Bahaddur – Bandi	8.46	NW
		19		Lingadahalli	8.71	NW
20	Hitnal	9.19	NW			
21	ThungaTheertha	9.27	SW			
iv.	Latitude and Longitude of all corners of the project site.	Points	Latitude	Longitude		
		A	15°16'58.01"N	76°14'30.10"E		
		B	15°16'56.97"N	76°14'24.88"E		
		C	15°16'55.95"N	76°14'24.87"E		
		D	15°16'54.90"N	76°14'16.48"E		
		E	15°16'53.55"N	76°14'16.89"E		

Sl. No.	Particulars	Details			Remarks									
		F	15°16'52.20"N	76°14'10.15"E										
		G	15°16'55.78"N	76°14'9.57"E										
		H	15°16'55.14"N	76°14'6.53"E										
		I	15°16'41.87"N	76°14'7.90"E										
		J	15°16'42.36"N	76°14'11.29"E										
		K	15°16'43.50"N	76°14'11.29"E										
		L	15°16'44.06"N	76°14'15.93"E										
		M	15°16'35.17"N	76°14'16.51"E										
		N	15°16'35.44"N	76°14'26.01"E										
		O	15°16'36.34"N	76°14'27.50"E										
		P	15°16'38.12"N	76°14'27.66"E										
		Q	15°16'38.03"N	76°14'28.65"E										
v.	Elevation of the project site	507m above mean sea level			-									
vi.	Involvement of Forest land if any.	No forest land involved.			-									
vii.	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	<p>Project site: No water body exists within the project site</p> <p>Study area:</p> <table border="1"> <thead> <tr> <th>Waterbody</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Tungabhadra Reservoir</td> <td>550 m</td> <td>E</td> </tr> <tr> <td>Ginigera Lake</td> <td>7.73 Km</td> <td>E</td> </tr> </tbody> </table>			Waterbody	Distance	Direction	Tungabhadra Reservoir	550 m	E	Ginigera Lake	7.73 Km	E	-
Waterbody	Distance	Direction												
Tungabhadra Reservoir	550 m	E												
Ginigera Lake	7.73 Km	E												
viii.	Existence of ESZ/ESA/ national park/wild life sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	<p>Project Area: Nil</p> <p>Study area Tungabhadra Otter Conservation Area is located at a distance of 9.95 Km from the project site.</p>			-									

16.6.5 The existing project was accorded CTE from KSPCB vide letter no. No. CFE-CELL/DMSPL/EIA-161/2004-2005/25 dated 29.09.2004 and subsequently Environmental Clearance from MOEF&CC vide letter No J-11011/391/2006-IA II (I) dated 23.12.2008 and validity extension vide letter dated 19/05/2014. Consent to Operate for the existing unit was accorded by Karnataka State Pollution Control Board vide letter No. AW-325031 dated 18.05.2021. The validity of CTO is up to 30.06.2026.

16.6.6 Implementation status as per EC/CTE/CTO:

Particulars	Document No.	Date	Validity	Implementation Status	Production as per CTO
Details of CTE	CFE-CELL/DMSPL/EI	29/09/2004	3 Years (up to	Implemented • Sponge Iron - 100	30000 Tonnes / Year

Particulars	Document No.	Date	Validity	Implementation Status	Production as per CTO
	A-161/2004-05/2005		2007)	TPD (1X100 TPD) [Implemented prior to EIA Notification, 2006]	
Details of Earlier EC	No. F. No. J-11011/391/2006-IA II(I)	23/12/2008	5 years (up to 2013)	Implemented • Sponge Iron - 100 TPD (1X100 TPD) • Co- gen Captive Power Plant – 10 MW (12/15 MW) Not Implemented • Induction furnace – 2X10/12 Tonnes • Ladle Furnace – 1X10/14 TPD • 2 Strand Continuous Billet casting Machine, bar & Rod Mill – 80,000 TPA	60000 TPA 10 MW
Extn. of EC	No. F. No. J-11011/391/2007-IA II (I)	19/05/2014	5 years (up to 2018)		
Details of CTE (Expansion)	CFE-CELL/DMSPL/EI A-142/2008-09/1083	30/03/2009	5 year (up to 2014)	Implemented • Sponge Iron - 100 TPD (1X100 TPD) • Co- gen Captive Power Plant – 10 MW (12/15 MW) Not Implemented • Induction furnace – 2X10/12 Tonnes • Ladle Furnace – 1X10/14 TPD • 2 Strand Continuous Billet casting Machine, bar & Rod Mill – 80,000 TPA	
Details of CTO	AW-325031	18/05/2021	5 Years (Up to 2026)	Implemented • Sponge Iron - 200 TPD (2X100 TPD) • Co- gen Captive Power Plant – 10 MW (12/15 MW)	--

16.6.7 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 23/12/2008				Proposed Units	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.	Sponge Iron	2X100 TPD	60000 TPA	2X100 TPD	60000 TPA	-	-	2X100 TPD	60000 TPA	350 TPD	150000	550 TPD	210000
	Captive Power Plant	12/15 MW	10 MW	12/15 MW	10 MW	-	-	12/15 MW	10 MW	-	10 MW	-	20 MW
	Induction furnace	2X10/12 TPD	2X10/12 TPD	-	-	2X10/12 TPD	2X10/12 TPD	-	-	-	2X20 Tonnes	-	2X20 Tonnes
	Ladle Furnace	1X10/14 TPD	1X10/14 TPD	-	-	1X10/14 TPD	1X10/14 TPD	-	-	-	1X30 Tonnes	-	1X30 Tonnes
	Continuous Billet Casting Machine Bar & Road Mill	80,000 TPA	80,000 TPA	-	-	80,000 TPA	80,000 TPA	-	-	-	6/11x2	-	6/11x2
2	Iron Ore Pellet Plant	-	-	-	-	-	-	-	-	6 LTPY	6 LTPY	6 LTPY	6 LTPY
3	MS- Billet	-	-	-	-	-	-	-	-	135500 Tonnes	135500 Tonnes	135500 Tonnes	135500 Tonnes
4	TMT-rebar & wire	-	-	-	-	-	-	-	-	130000	130000	130000	130000

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

Sl. No.	Raw Material	Quantity required per annum			Source	Distance from site (Km)	Mode of Transportation
		Existing	Expansion	Total			
A. Iron ore pellet Plant							
1	Iron ore fines	0	606000	606000	Iron ore mines located at Ballari, Chitradurga & Tumkur Dist	150 Km	By road through covered trucks
2	Bentonite	0	4800	4800	Bhuj, Gujarat	930 Km	By road through covered trucks
3	Lime Stone	0	3000	3000	Karnataka and Andhra Pradesh	Karnataka 140 Km	By road through covered trucks
4	Dolomite	0	3000	3000	Karnataka and Andhra Pradesh	Andhra Pradesh 250 Km	By road through covered trucks
5	Anthracite Coal	0	6000	6000	Mangalore/Goa Port	300 Km	By road through covered trucks
6	SA - RB-2 Coal	0	24500	24500	Mangalore/Goa Port	300 Km	By road through covered trucks
B. Sponge iron plant							
1	Iron ore pellet	85200	213000	298200	In house	-	Belt Conveyors
2	SA - RB-2 Coal	54000	135000	189000	Mangalore/Goa/ Krishnapattinam Port	300 Km	By road through covered trucks

Sl. No.	Raw Material	Quantity required per annum			Source	Distance from site (Km)	Mode of Transportation
		Existing	Expansion	Total			
3	Dolomite	2400	6000	8400	Karnataka and Andhra Pradesh	Andhra Pradesh 250 Km	By road through covered trucks
C. Steel Plant							
1	Sponge Iron	0	85610	85610	In house	-	Belt Conveyors
2	MS Scrap	0	64859	64859	Indigenous market	Within a radius of 400 Km	By road through covered trucks
3	Return Scrap	0	8775	8775	In house	-	Belt Conveyors
4	Ferro alloy	0	2106	2106	Indigenous market	30 Km	By road through covered trucks
D. Power Plant							
1	Dolo Char	36000	0	36000	Entire required quantity will become captive after implementing 350 TPD Sponge Iron Plant. Presently, around 22500 Tonness of Dolochar annually sourced from Local market.	10 Km	Belt Conveyors
2	Coal	26000	0	26000	Mangalore/ Goa/ Krishnapattinam Port	300 Km	By Road

16.6.9 Existing Water requirement is 216 m³/day which is obtained from Upstream of Tungabhadra River and permission for the same has been obtained from Water Resource Department vide letter No. WRD 03 MTB 2015 dated 30.05.2017. The water requirement for the proposed project is estimated as 1947 m³ /day, out of which 1920 m³/day of fresh water requirement will be obtained from the Upstream of Tungabhadra River and the remaining requirement of 27 m³/day will be met from the Borewell. The renewal of water permission letter has been submitted to Water Resource Department vide letter No. DMSPL/2021-22/295 dated 09.03.2022.

16.6.10 Existing power requirement of 0.8 MW is met from 10 MW Co-gen Captive Power Plant. The power requirement for the proposed project is estimated as 27.7 MW, out of which considering 85% is the load in the given time, the requirement of power works out to 24.27 MW, say 25 MW. The power of 18.5 MW will be sourced internally from captive power plant & remaining 6.5 MW will be sourced from Gulbarga Electricity Supply Company Ltd (GESCOM).

16.6.11 The capital cost of the project is Rs 545.78 Crores. The employment generation from the proposed project / expansion is 600 Nos.

16.6.12 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.

16.6.13 Proposed Terms of Reference: [Baseline data collection period: **October 2022 to December 2022**]

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
A. Air				
a. Meteorological parameter	Solar radiation (srd) (watt / sq. m), relative humidity (hmd) (%), temperature (temp) (°c), rainfall (rnf) (mm), wind direction (wnd) (deg), wind gust (wng) (km/hr), wind speed (wns) km/hr, dew point (dew) (°c).	1	Once	-
b. AAQ parameters	PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ , CO, O ₃ , Pb, NH ₃ , C ₆ H ₆ , As, Ni, BaP	9	24 Hours, Twice a week for 3 months	-
B. Noise	Monitoring of Ambient Noise Level [Leq (Day) and Leq (Night)]	8	24 Hours, Once in Study Period	-
C. Water				
a. Surface water	pH, Temperature, Colour, Total Suspended Solids, Total Dissolved Solids, Total Hardness, Alkalinity, Nitrate as NO ₃ , Total Phosphate as PO ₄ , Chloride as Cl, Sulphate as SO ₄ , Total Nitrogen, Total Kjeldahl Nitrogen, Turbidity, Conductivity, Anionic Detergents, Ammonical Nitrogen, Sodium, Sodium Absorption Ration (SAR), Potassium, Calcium as Ca, Magnesium as Mg, Fluoride as F, Manganese as Mn, Residual Sodium Carbonate, Silver as Ag, Lead as Pb, Arsenic as As, Cadmium as Cd, Total Chromium, Chromium Hexavalent, Copper as Cu, Zinc as Zn, Iron as Fe, Mercury as Hg, Nitrite, Carbonate, Bicarbonate, Phenolic compounds, Oil and Grease, Total Coliform, Fecal Coliform, E-Coli	6	Once in Study Period	-
b. Ground water quality parameters	pH, Temperature, Colour, Dissolve Oxygen, BOD (3 days @27°C), Chemical Oxygen Demand, Turbidity, Electrical Conductivity, Total Suspended Solids, Total Dissolved Solids, Total Hardness, Oil & Grease, Alkalinity, Anionic Detergents,	8	Once in Study Period	

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
	Ammonical Nitrogen, Nitrate as NO ₃ , Chloride as Cl, Sulphate as SO ₄ , Total Nitrogen, Total Kjeldahl Nitrogen, Potassium, Calcium as Ca, Magnesium as Mg, Fluoride as F, Phenolic Compounds, Manganese as Mn, Residual Free Chlorine, Silver as Ag, Lead as Pb, Boron, Selenium, Cyanide, Mercury as Hg, Arsenic as As, Cadmium as Cd, Hexavalent Chromium, Copper as Cu, Zinc, Iron as Fe, Nitrite, Carbonate, Bicarbonate, Sodium, Sodium absorption ratio, Total Pesticide, Total phosphate, Poly Aromatic Hydrocarbon (PAH), Total Coliform, Fecal Coliform, E-Coli			
D. Land				
a. Soil quality b. Land use	Composite Sampling and Analysis pH, Color, Texture, Sand (%), Silt (%), Clay (%), Bulk density (gm/cc), Conductivity (µs/cm), Organic carbon (%), Moisture Content (%), Organic Matter (%), Soil salinity, Available Nitrogen (Kg/Ha), Available Phosphorous (Kg/Ha), K+(kg/ha), Na+(mg/100g), Ca (mg/100g), Mg(mg/100g), SAR (mg/100g), SO ₄ (mg/100g), Cu(mg/100g), Mn(mg/100g), Cl (mg/100g), Zn mg/kg, Boron (mg/100g)	6	Once in Study Period	
E. Biological a. Aquatic b. Terrestrial	Through field visit during the study period once	9	Once in Study Period	
F. Socio-economic parameters	Based on the House Holds	12	Once in Study Period	

Deliberation by the Committee

16.6.14 The Committee noted the following:

- i. The nearest habitation to plant is Chikkabaganal Village which is at distance of 0.05 Km from the boundary of the plant in the SE direction. There are around 20 other villages in the study area of the project site. The project proponent further reported that the air flow receptor is towards Chikkabaganal Village. The EAC is of the opinion that the Project Proponent needs to undertake air modelling of pollutants and to furnish the environmental safeguard measures to minimise the impact on the habitation of the locals.
- ii. This is an expansion proposal and PP has to revise the table w.r.t. implemented and non-implemented part of the earlier EC and also submit the latest copy of compliance report of earlier EC which was forwarded to IRO, MoEFCC for understanding the status of implementation of the project.

- iii. Tungabhadra Reservoir is at a distance of 550 m from the project site in the East direction. The EAC is of the opinion that HFL data of Tungabhadra River authenticated from Competent Authority needs to be furnished.
- iv. The project proponent also needs to submit the NOC from the concerned State Irrigation Department.
- v. The EAC noted that Form on PARIVESH has not been filled properly and many details are incomplete. The EAC also observed that the Consultant has not prepared the report adequately and there are many lacunas in the application. PP needs to completely fill the relevant information sought in the form for appraisal by the Committee.
- vi. **The EAC also warned the Consultant [M/s. Environmental Health & Safety Consultants Pvt. Ltd.] for not guiding the project proponent properly with respect to fulfilling all the criteria at the time of preparation of application and submission of all the requisite documents at the time of appraisal of proposal.**
- vii. In view of above, the Project Proponent requested the EAC to allow to reappear after revision of the application.

Recommendations of the Committee

- 16.6.15 In view of the foregoing and after deliberations, the Committee recommended that proposal to be **returned in its present form** to address the shortcomings enumerated at para no. 16.6.14 above and submit the revised application as per the provisions of EIA Notification, 2006.

Agenda No. 16.7

- 16.7 Enhancement of Sponge Iron Production from 54000 TPA to 174,000 TPA, Installation of 3x20 Ton Induction Furnaces with Billet Casters for production of 180,000TPA MS Billets, Rolling Mill for production of 174,000TPA Rolled Products along with 24 MW Captive Power Plant (WHRB – 12MW & AFBC – 12 MW) by M/s Sundaram Steels Private Limited, located at B-7, Phase-III, Bokaro Industrial Area, Balidih, Bokaro, Jharkhand– Consideration for Modification of TOR.**

[Proposal No. IA/JH/IND/293088/2022; File No. J-11011/128/2010-IA-II(I)]

- 16.7.1 M/s. Sundaram Steels Private Limited (SSPL) has made an application online vide proposal no. IA/JH/IND/293088/2022 dated 21.10.2022 along with Form 3, revised Form-1 and revised PFR seeking amendment in Terms of Reference accorded by the Ministry vide letter no. J-11011/128/2010-IA-II(I) dated 01.07.2019.

16.7.2 Name of the EIA consultant: M/s. Vardan Environet [Sl. No. 37, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/SA 0158; valid upto 05.05.2023, Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

16.7.3 M/s. Sundaram Steels Private Limited (SSPL) had earlier applied for grant of ToR vide proposal no. IA/JH/IND/102711/2019 dated 18.04.2019 for enhancement of Sponge Iron Production from 54000 TPA to 174,000 TPA, Installation of 3x20 Ton Induction Furnaces with Billet Casters for production of 180,000TPA MS Billets, Rolling Mill for production of 174,000TPA Rolled Products along with 24 MW Captive Power Plant (WHRB – 12MW & AFBC – 12 MW) located at B-7, Phase-III, Bokaro Industrial Area, Balidih, Bokaro, Jharkhand. Accordingly, Terms of Reference was issued vide letter no. J-11011/128/2010-IA-II(I) dated 01.07.2019.

16.7.4 The instant proposal is for seeking modification in ToR dated 01.07.2019 for appraisal of proposal under violation category as per the provisions contained in the MoEF&CC Standard Operating Procedures dated 07.07.2021 pertaining to consideration of violation cases as PP has reported that the company has installed 3x20T Induction Furnace along with 3strands, 9/11m radius CCM to produce 180,000 TPA MS Billets within the existing plant area of 25 Acres (10.117Ha) without prior environmental clearance. PP is ready to comply all the points of TOR for Violation Project and follow SOP dated 07.07.2021 for handling of Violation cases under EIA notification 2006.

16.7.5 **Reason for seeking amendment in ToR:** Under market/financial pressure and to make the plant operations economically viable, proponent decided to install the downstream facilities. During August, 2019 to October, 2019 company installed 3x20T Induction Furnace along with 3strands, 9/11m radius CCM to produce 180,000 TPA MS Billets within the existing plant area of 25 Acres (10.117Ha). As these units for production of Billets were installed without prior environmental clearance, the proposal attracts provisions of S.O. 804 (E) issued by MoEF&CC dated 14.03.2017 and OM, dated 07.07.2021 regarding SOP for identification and handling for the projects under Violation.

16.7.6 Further, PP has submitted that the environmental clearance accorded to the company is for 2x90TPD sponge iron production but in the year 2018-2019, 2019-2020 and 2021-2022 the company has exceeded the production limits as mentioned below:

Year (FY) Since commissioning	Production details for Sponge Iron		Production under Violation from 3x20T Induction Furnace along with 3strands, 9/11m radius CCM
	As per EC granted by MoEF&CC on 14.01.2011 & CTO valid up to 30.06.2024	Production under Violation	
2012-13	13800.870	NIL	NIL
2013-14	19234.780	NIL	NIL
2014-15	16725.430	NIL	NIL

2015-16	25983.940	NIL	NIL
2016-17	44717.170	NIL	NIL
2017-18	35748.110	NIL	NIL
2018-19	45818.450	NIL	NIL
2019-20	54000.00	5,886.73	12,245.450
2020-21	54000.00	8,502.75	1,07,617.25
2021-22	54000.00	2,468.37	1,17,673.56
2022-23 (up to 31.08.2022)	20,457.71	NIL	58,535.27
TOTAL	3,89,486.46	16,857.85	2,96,071.530

16.7.7 In view of above, the PP now proposes to obtain Environmental clearance for:

- I. Enhancement of sponge iron production from 54,000TPA to 174,000 by installing additional 2x200TPD DRI Kilns,
- II. 180,000TPA MS Billets production from already installed 3x20T Induction Furnace along with 3-strand, 9/11m radius CCM, (**installed and under violation**)
- III. Production of 174,000TPA MS Long Rolled Products by installing proposed rolling mill of 580TPD and
- IV. To install captive power plant of 24MW capacity [12MW WHRB based & 12MW AFBC based] within the existing plant area of 25 Acres (10.117Ha).

S N	Project Details	Existing Installed Units				Proposed Units		Final Configuration (Seeking EC for)	
		As per prior EC 14.01.2011		Under violation					
		Unit	Prod. (TPA)	Unit	Prod. (TPA)	Unit	Prod. (TPA)	Unit	Prod. (TPA)
1	Sponge Iron Plant	2X90 TPD	54,000	--	--	2x200 TPD	120,000	2x90 TPD + 2x200 TPD	174,000
2	Induction Furnaces			3X20T				3X20T	
3	Billet Caster	-	-	3-strands 9/11m	180,000	--	--	3strand 9/11m	180,000
4	Rolling Mill	-	-	-	-	580 TPD	174,000	580 TPD	174,000 MS Long Rolled Products
5	Captive Power Plant – 24 MW			-	-				
	AFBC Boiler					1	12 MW	1	12 MW
	WHRB					4	12MW	4	12 MW

16.7.8 Other Changes in the ToR:

S.no	Reference of Approved ToR	Description as per Approved ToR	Description as per Proposal.	Remarks
1	Point No. 3 of TOR issued on 01.07.2019	3x20T IF-CCM under proposed expansion	3x20T IF-CCM is installed & is under violation	3x20T IF-CCM is under violation
2	Point 11 of TOR issued on 01.07.2019	3x20T IF-CCM under proposed expansion	3x20T IF-CCM is installed & is under violation	3x20T IF-CCM installed under violation
3	Point 13 of TOR issued on 01.07.2019	Req. of Ferro Alloys 3600TPA, Coal AFBC: 90000TPA	Req. of Ferro Alloys 3680TPA, Coal AFBC: 63000TPA	Better quality of coal will be purchased.
4	Point No. 10 of TOR issued on 01.07.2019	Project Cost: 159Cr., Manpower: 521	Project Cost: 154.21Cr., Manpower: 200	Cost and Manpower is reduced
5	Point 14 of TOR issued on 01.07.2019	Water Req. 1570KLD	Water Req. 833KLD	Air Cooled Condenser will be used now instead of previously proposed water cooled condenser in Captive Power Plant.

16.7.9 PP has reported that Public Hearing for the project was held on 25.02.2020 at BIADA Bhawan, Bokaro Industrial Area, Balidih village, District Bokaro, in the state of Jharkhand. There is no change in the plant configuration, production capacity or production process for which the ToR was granted on 01.07.2019 and Public Hearing was held.

16.7.10 PP has submitted that no litigation is pending against the project nor any direction/order has been passed by any Court of Law against the project. Also, the unit has not received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts.

Deliberation by the Committee

16.7.11 The Committee noted the following:

- i. M/s. Sundaram Steels Private Limited (SSPL) was granted ToR vide letter no. J-11011/128/2010-IA-II(I) dated 01.07.2019 for enhancement of Sponge Iron Production from 54000 TPA to 174,000 TPA, Installation of 3x20 Ton Induction Furnaces with Billet Casters for production of 180,000TPA MS Billets, Rolling Mill for production of 174,000TPA Rolled Products along with 24 MW Captive Power Plant (WHRB – 12MW & AFBC – 12 MW).
- ii. The instant proposal is for seeking modification in ToR dated 01.07.2019 for appraisal of proposal under violation category as per the provisions contained in the MoEF&CC

Standard Operating Procedures dated 07.07.2021 pertaining to consideration of violation cases as PP has reported that the company has installed 3x20T Induction Furnace along with 3strands, 9/11m radius CCM to produce 180,000 TPA MS Billets within the existing plant area of 25 Acres (10.117Ha) without prior environmental clearance.

- iii. PP has submitted the request before the committee for this case under violation category as per the provisions contained in the MoEF&CC Standard Operating Procedures dated 07/07/2021 pertaining to consideration of violation cases. PP is ready to comply all the points of TOR for Violation Project and follow SOP dated 07.07.2021 for identification & handling of Violation cases under EIA notification 2006.
- iv. PP has also reported that Public Hearing for the project was held on 25.02.2020 and since there is no change in the plant configuration, production capacity or production process for which the ToR was granted on 01.07.2019.
- v. The EAC noted that it is a fit case of violation and to be apprised based on the provisions of the SOP dated 07.07.2021 [Violation Cases]. The Project proponent has to comply all the procedure as laid down in the SOP dated 07.07.2021.
- vi. The EAC has also advised that the Consultant should properly guide to the PP so that such violation has not arisen by the PP.
- vii. The EAC further advised the PP on the following:
 - In pursuance to MoEF&CC O.M. vide F. No. IA3-22/10/2022-IA.III, dated 8th June 2022, the baseline data shall not be more than three years old at the time of submission of application for consideration of EC. Also, at the time of application for EC, in case baseline data is older than three years, but less than five years old in the case of River valley and HEP Projects, or less than four years old in the case of other projects, the same shall be considered, subject to the condition that it is revalidated with one season fresh non-monsoon data collected after three years of the initial baseline data. The Committee advised the PP to take note of it while submitting the application for EC and if the application is not submitted within the timelines, fresh baseline data for three months shall be collected in pursuance to Ministry's Guidelines.
 - In pursuance to Ministry's OM No. IA3-22/10/2022-IA.III [E 1772581], dated 8th June, 2022 pertaining to Certified Compliance Report (CCR) of the Integrated Regional Office of the Ministry of Environment, Forest and Climate Change/ or concerned authority 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. The Committee advised the PP to take note of it while submitting the application for EC.

Recommendations of the Committee

- 16.7.12 After deliberations, the Committee **recommended** for modification in ToR dated 01.07.2019 w.r.t. appraisal of proposal under violation category as per the provisions contained in the MoEF&CC Standard Operating Procedures dated 07/07/2021 pertaining to consideration of

violation cases. All the terms and conditions stipulated in ToR letter no. J-11011/128/2010-IA-II(I) dated 01.07.2019 shall remain the same with stipulation of the following specific conditions:

- i. The State Government/SPCB shall take action against the project proponent under the provisions of the Environment (Protection) Act, 1986, and further no consent to operate to be issued till the project is granted EC.
- ii. Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR).
- iii. Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
- iv. The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter (13) in the EIA report by the accredited consultants.
- v. Budget of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be completed within three years and to be prepared accordingly.
- vi. The project proponent shall require to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority.
- vii. Project proponent shall implement penalty provisions i.e., 1% of project cost attributable to the expansion, incurred up to the date of filing of application along with the EIA/EMP report as contained in the paragraph 12 of the Standard Operating Procedure dated 7/07/2021 shall be complied with.
- viii. The PP shall submit the Action Plan as per Ministry's OM dated 30.09.2020 on the issues raised during the PH. In this instant case the PH was already conducted by the SPCB as per provisions of the EIA Notification, 2006.
- ix. The validity of the TOR will be counted from the earlier granted TOR by the Ministry.

Additional Items with the permission of the Chairman

Agenda No. 16.8

Setting of 3.2 MTPA Pellet Plant (PP) and 3.6 MTPA Pellet feed cum Beneficiation Plant (BP) by M/s. Resources Pellets Concentrates Private Limited (RPCL), located at Somalapura Village, Sandur Taluk, Bellary District, Karnataka – Consideration of Environmental Clearance

[Proposal No.: IA/KA/IND/225778/2021; File No. J- 11011/39/2021-IA I]

M/s. Resource Pellets & Concentrate Pvt Ltd (RPCL) made an online application vide proposal no. IA/KA/IND/225778/2021 Dated 18.08.2022 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provision of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (ferrous & non-ferrous) and 2(b) Mineral Beneficiation under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

The proposal cited above was initially considered during the 12th meeting of the EAC for Industry-I sector held on 30-31st August, 2022 wherein after deliberations, the Committee recommended for site visit of the proposed project area by a sub-committee of EAC Industry-1 members to conduct the site visit and submit the Report. The EAC further recommended that the proposal will be appraised based on the findings of the sub-committee and deliberation of EAC.

The site visit to M/s. Resources Pellets Concentrates Private Limited (RPCL), located at Somalapura Village, Sandur Taluk, Bellary District, Karnataka was undertaken on 22nd September, 2022 by the Sub-Committee of EAC Industry-1 members. The Sub-Committee of the EAC has submitted its Site-Visit-Report. The Committee deliberated the Report. After detailed deliberation, the EAC is of the view that the report may be shared with the PP so that PP can accordingly update the application and include the recommendations of the visit report. Further, the EAC advised the Ministry to place the instant proposal before the next EAC meeting for further deliberations.

Agenda No. 16.9

Proposed Greenfield Clinkerisation Plant of 3.63 Million TPA capacity along with WHRS of 16 MW & DG Set of 750 kVA by M/s Calcom Cement India Ltd. [A subsidiary of Dalmia Cement (Bharat) Ltd.], located at village 19 Kilo Umrangso, Tehsil: Umrangso, District: Dima Hasao (earlier N.C. Hills), Assam – Consideration of TOR.

[Proposal No. IA/AS/IND/285957/2022; File No. IA-J-11011/306/2022-IA-II(IND-I)]

M/s. Calcom Cement India Limited (CCIL), a Unit of Dalmia Cement (Bharat) Limited, made an application online vide proposal No. IA/AS/IND/285957/2022 dated 09.08.2022 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(b) Cement Plants under Category “A” of the schedule of the EIA Notification, 2006 and appraised at central level.

The proposal cited above was initially considered during the 13th meeting of Expert Appraisal Committee [EAC] (Industry-I) held on 14th-15th September, 2022 wherein after deliberations, the

Committee recommended for site visit of the proposed project area by a subcommittee of EAC Industry-1 members. The EAC further recommended that the proposal will be appraised based on the findings of the sub-committee and deliberation of EAC.

The site visit to M/s. Calcom Cement India Limited, Umrangso was undertaken during 30th-31st October 2022 by the Sub-Committee of EAC Industry-1 members. The Sub-Committee of the EAC has submitted its Site-Visit-Report. The Committee deliberated the Report. After detailed deliberation, the EAC is of the view that the report may be shared with the PP so that PP can accordingly update the application and include the recommendations of the visit report. Further, the EAC advised the Ministry to place the instant proposal before the next EAC meeting for further deliberations.

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 <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • IS 5182 Part 1-20 • Site specific primary data is essential • Secondary data from IMD, New Delhi • CPCB guidelines to be considered.
Pollutants <ul style="list-style-type: none"> • PM_{2.5} • PM₁₀ • SO₂ • NO_x • CO 	At least 8-12 locations	As per National Ambient Air Quality Standards,	<ul style="list-style-type: none"> • Sampling as per CPCB guidelines • Collection of AAQ data (except in monsoon season) • Locations of various

Attributes	Sampling		Remarks
	Network	Frequency	
<ul style="list-style-type: none"> • HC • Other parameters relevant to the project and topography of the area 		CPCB Notification.	<p>stations for different parameters should be related to the characteristic properties of the parameters.</p> <ul style="list-style-type: none"> • 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			
<ul style="list-style-type: none"> • Hourly equivalent noise levels 	At least 8-12 locations	As per CPCB norms	-
C. Water			
<p>Parameters for water quality</p> <ul style="list-style-type: none"> • pH, temp, turbidity, magnesium hardness, total alkalinity, 	<p>Samples for water quality should be collected and analyzed as per:</p> <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Total Carbon pH Dissolved Oxygen Biological Oxygen Demand Free NH₄ Boron Sodium Absorption Ratio Electrical Conductivity TDS 	<ul style="list-style-type: none"> Surface water quality of the nearest River (60m upstream and downstream) and other surface water bodies 	<ul style="list-style-type: none"> Yield of water sources to be measured during critical season Standard methodology for collection of surface water (BIS standards) 	
For Ground Water	<ul style="list-style-type: none"> 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			
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> • Particle size distribution • Texture • pH • Electrical conductivity • Cation exchange capacity • Alkali metals • Sodium Absorption Ratio (SAR) • Permeability • Water holding capacity • Porosity 			
<p>Land use/Landscape</p> <ul style="list-style-type: none"> • Location code • Total project area • Topography • Drainage (natural) • Cultivated, forest, plantations, water bodies, roads and settlements 	-		
E. Biological Environment			
<p>Aquatic</p> <ul style="list-style-type: none"> • 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) <p>Terrestrial</p> <ul style="list-style-type: none"> • Vegetation-species list, economic 			<ul style="list-style-type: none"> • 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	
importance, forest produce, medicinal value <ul style="list-style-type: none"> • Importance value index (IVI) of trees • Fauna • Avi fauna • Rare and endangered species • Sanctuaries / National park / Biosphere reserve • Migratory routes 			
F. Socio-economic			
<ul style="list-style-type: none"> • Demographic structure • Infrastructure resource base • Economic resource base • Health status: Morbidity pattern • Cultural and aesthetic attributes • Education 			<ul style="list-style-type: none"> • 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
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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.

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

S. No.	Name	Position	03/11/2022
1.	Shri Rajive Kumar	Chairman	<i>Present</i>
2.	Dr. Dipankar Shome	Vice Chairman	<i>Present</i>
3.	Dr. S. Ranganathan	Member	<i>Present</i>
4.	Dr. Ranjit Prasad	Member	<i>Present</i>
5.	Dr. S. K. Singh	Member	<i>Present</i>
6.	Dr. Tejaswini Ananthkumar	Member	<i>Present</i>
7.	Dr. Hemant Sahasrabudhe	Member	<i>Present</i>
8.	Dr. Jai Krishna Pandey	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. S. Raghavan, Scientist 'D' (Representative of National Institute of Occupational Health (NIOH))	Member	<i>Present</i>
13.	Dr. Sanjay Bist, Scientist 'E' (Representative of Indian Meteorological Department)	Member	<i>Present</i>
14.	Dr. R.B. Lal, Scientist E, MoEFCC	Member Secretary	<i>Present</i>
MoEF&CC			
1.	Dr R P Rastogi	Scientist C	<i>Present</i>
2.	Dr. Sandeepan B.S	Scientist B	<i>Present</i>

Approval of EAC Chairman

Email

Additional Director MoEFCC Dr R B LAL

Fwd: Re: Compiled Draft minutes of the 16th EAC Meeting held on 3rd November 2022 for approval of Chairman-Regarding

2 messages

From: chairman.eac.ind.1@gmail.com

Date: Nov 11, 2022 07:50

Subject: Re: Compiled Draft minutes of the 16th EAC Meeting held on 3rd November 2022 for approval of Chairman-Regarding

To: Additional Director MoEFCC Dr R B LAL <rb.lal@nic.in>

Cc: rajivekumar1983@gmail.com, ranganathan.metals@gmail.com, ranjitnitj@gmail.com, rajuevr60@gmail.com, sksinghdce@gmail.com, dshome61@gmail.com, tejaswini.acf@gmail.com, sshemant_801@rediffmail.com, NCCBM DIRECTOR GENERAL <dg@ncbindia.com>, Nazimuddin <nazim.cpcb@nic.in>, Raghavan S <raghuharihar@gov.in>, raghuharihar@yahoo.co.in, Sanjay Bist <sanjay.bist@imd.gov.in>, drjkpandey.eac.industry1@gmail.com

Dear Dr Lal,

The minutes of the meeting are approved. Kindly do the needful.

Best wishes

Rajive Kumar

Chairman-EAC Industry-1
