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

*****

Dated: 27.09.2022

Date of Zero Draft MoM sent to EAC: 21.09.2022
Approval by EAC Chairman: 26.09.2022
Uploading on PARIVESH: 27.09.2022

MINUTES OF THE 13th EXPERT APPRAISAL COMMITTEE (INDUSTRY-1 SECTOR) MEETING HELD ON SEPTEMBER 14-15, 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**

SEPTEMBER 14, 2022 [WEDNESDAY]

(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 12th Meeting of the EAC (Industry-1 Sector) held during August 30-31, 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 **12th Meeting of the EAC (Industry-1 Sector) held during August 30-31, 2022** conducted through Video Conferencing (VC), and noted that no request has been received for modifications/factual correction, in the

minutes of the 12th EAC meeting for the project/activities except for the Agenda number 12.11, and confirmed the same.

Regarding agenda number (12.11) of 12th EAC Meeting held on August 30-31, 2022:

Proposal No. IA/OR/IND/124925/2019; File No. IAJ-11011/112/2013-IA-II(I)] Expansion of Iron Ore Pelletizing plant (0.85 MTPA to 1.7 MTPA) by addition of Iron Ore Beneficiation Plant (3.0 MTPA), Pig Iron Blast Furnace (0.60 MTPA), DRI Plant (0.36 MTPA), Sinter Plant (0.60 MTPA), SMS/Arc Furnace (ZPF) (0.72 MTPA), Rolling/Hot Strip Mill (0.7 MTPA) & CPP (WHRB-35 MW & AFBC-35 MW) by M/s. Ardent Steel Limited located at Village Phuljhar, Block Banspal, Tehsil Telkoi and District Keonjhar, Odisha – Correction in the Minutes of 12th EAC Meeting held in August 30-31, 2022.

The PP has requested that financial years in para number 12.11.14 PH action plan (2019-20, 2020-21, 2021-22) is purely a typo graphical error and would like to correct to (1st year, 2nd year, 3rd year) respectively. The EAC deliberated and noted that these are the factual correction and accepted the same.

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. 13.1

13.1 Proposed installation of the Ferro Alloy Plant through setting up of 2x9 MVA Submerged Arc Furnaces for production of Ferro Manganese (18000 TPA) and Silico Manganese (12000 TPA) & Sinter Plant (9000TPA) by M/s Shyam Business Solution Pvt. Ltd., located at C.S. Plot No.: 6-7(P), 11(P), 14-25(P), 28(P), 63(P), 68(P), 70(P), 72- 73(P), Raturia, Angadpur Industrial Area, Tehsil – Durgapur, District – Paschim Bardhaman, West Bengal – Consideration of Environmental Clearance.

[Proposal No. IA/WB/IND/166397/2020; File No. J-11011/198/2020-IA.II(I)]
[Consultant: ULTRA TECH ; valid upto 09.03.2023]

13.1.1 M/s Shyam Business Solutions Private Limited (SBSPL) has made an online application vide proposal no IA/WB/IND/166397/2020 dated 22.08.2022 along with copy of EIA/EMP report, Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical Industries under Category "A" of the schedule of the EIA Notification, 2006 and attracts general condition due to project falling in Severely Polluted Area and appraised at central level.

13.1.2 Name of the EIA consultant: M/s. ULTRA TECH [Sl. No. 89, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/RA 0194; valid upto 09.03.2023, Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

13.1.3 The details of the ToR are furnished as below:

Date of Application	Consideration	Details	Date of Accord	ToR Validity
10.08.2020	25th meeting of Re-Constituted EAC held on 26/11/2020	Terms of Reference	14.12.2020	13.12.2024

13.1.4 The project of M/s Shyam Business Solutions Private Limited (SBSPL) located in Plot No 6-7(P), 11(P), 14-25(P), 28(P), 63(P), 68 (P), 70(P), 72-73(P), Raturia, Angadpur Industrial Area, Tehsil Durgapur, District- Paschim Bardhaman, West Bengal is for setting up of a new 2x9 MVA Submerged Arc Furnaces for production of Ferro Manganese (18000 TPA) and Silico Manganese (12000 TPA) & Sinter Plant (9000 TPA). At proposed project site, earlier a unit of Induction furnace with re-rolling Mill was being operated by M/s. Shyam Sel & Power Limited. Shyam Sel & Power Limited was established in the year 2002 and was involved in the production of Billet, Ingot & TMT Bar. In the year 2016-17, the land of Shyam Sel & Power Ltd. is transferred under a Scheme of Arrangement u/s 391 to 394 of the Companies Act, 1956 by the Order of Hon'le Kolkata High Court on dated 21/08/2016. SSPL has dismantled the Plant & Machinery and shifted to their other manufacturing Unit. So, after dismantling some civil structures, Office and labor quarters are still there. SBSPL will demolish the rest of the structures present on the land and the demolition waste to be used in civil work for the proposed project and steel scrap, if any will be sold out.

13.1.5 Environmental Site Settings:

S. No.	Particulars	Details	Remarks
i.	Total land	2.2639 ha	Land use: Industrial land
ii.	Land acquisition Details as per MoEF&CC O.M. dated 7/10/2014	In the proposed project location, there was a secondary metallurgical industry with Steel Rolling Mill and Induction Furnace which was being operated by Shyam Sel & Power Limited (SSPL). In the year 2016-2017, the land of Shyam Sel & Power Ltd. has been transferred in the name of Shyam Business Solutions Pvt. Ltd under a Scheme of Arrangement u/s 391 to 394 of the Companies Act, 1956 by the Order of Hon'ble Kolkata High Court on dated 21-08-2016.	

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td>Currently Shyam Business Solutions Pvt. Ltd. (SBSPL) is the actual owner of the land.</td><td></td></tr>
<tr><td>iii.</td><td>Existence of Habitation & Involvement of R&R, if any.</td><td>R&R issue is not involved.

<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Angadpur</td><td>0.75 km</td><td>West</td></tr><tr><td>Raturia</td><td>0.65 km</td><td>South</td></tr></table></td><td></td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>23°30'49.57"N</td><td>87°16'51.95"E</td></tr><tr><td>B</td><td>23°30'44.91"N</td><td>87°16'50.36"E</td></tr><tr><td>C</td><td>23°30'46.26"N</td><td>87°16'45.69"E</td></tr><tr><td>D</td><td>23°30'51.81"N</td><td>87°16'47.90"E</td></tr><tr><td>E</td><td>23°30'50.58"N</td><td>87°16'50.07"E</td></tr><tr><td>F</td><td>23°30'50.21"N</td><td>87°16'49.91"E</td></tr></table></td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>79 m MSL</td><td></td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No forest land is involved</td><td></td></tr>
<tr><td>vii.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>Project site – None

Study area:
Damodar River -1.5 km -South</td><td></td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>Nil</td><td></td></tr>
</table>

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

S. No.	Name	Proposed Units	
		Configuration	Production TPA
1	Ferro Alloys Plant	2 x 9 MVA Submerged	Silico-Manganese – 12000

		Arc Furnace	Ferro-Manganese – 18000
2	Sinter Plant capacity	-	Sinter – 9000

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

Raw Materials	Qty Required per month	Source	Distance from site (Kms)	Mode of Transport
Manganese Ore	76,320	Import from South Africa, Australia, Odissa, Nagpur etc.	Variable	Sea for Import and Road/Rake for Indigenous
Dolomite	3,600	Indigenous from Bhutan	1000	By Road
Coke	18,000	Indigenous from Assam, Vizag and Import from Australia, Vietnam	Variable	Sea for Import and Road/By Road for Indigenous
Quartz	7,200	Indigenous from Bankura, Purulia	50-120	By Road
Ferro Manganese Slag (For Silico Manganese Production)	12,9960	Captive Generation or Indigenous Purchase from Durgapur, Barjora	Local	By Road
Electrode paste	612	Bihar & West Bengal	Local	By Road

13.1.8 The one-time water requirement for the project is estimated as 129 KLD, out of which 33 KLD of fresh water requirement will be obtained from the surface water (Damodar River) through DMC and the remaining of 96 KLD will be recycled and reused. The permission for drawl of surface water is obtained from Durgapur Municipal Corporation (DMC) vide Lr. No. DMC/W3/1062 dated 29/05/2019 in the name of Shyam Sel & Power Limited. The name change in water supply permission has been applied to DMC.

13.1.9 The power requirement for the proposed project is estimated as 26 MVA, which will be obtained from the WBSEDCL.

13.1.10 Baseline Environmental Studies:

Period	1st October 2020 to 31st December 2020
AAQ parameters at 8 Locations	• $PM_{2.5}$ = 20 to 49 μg/m^3 • PM_{10} = 62 to 99 μg/m^3 • SO_2 = 5 to 21 μg/m^3 • NO_2 = 11 to 36 μg/m^3 • CO = 0.7 to 1.6 mg/m^3
Additional one month	• $PM_{2.5}$ = 21 to 49 μg/m^3

<table>
<tr><td>Monitoring of AAQ (Feb 2022)</td><td>• PM_{10} = 66 to 97 µg/m^3
• SO_2 = 10 to 23 µg/m^3
• NO_2 = 13 to 47 µg/m^3
• CO = 0.8 to 1.5 mg/m^3</td></tr>
<tr><td>AAQ Modelling (Incremental GLC level)</td><td>• PM_{10} = 0.62 µg/m^3- 2.0 km-SW
• $PM_{2.5}$ =0.41 µg/m^3- 2.0 km-SW
• SO_2 = 5.4 µg/m^3- 2.0 km-SW
• NOx = 1.95 µg/m^3- 0.5 km-SW</td></tr>
<tr><td>Ground water quality at 8 locations</td><td>pH: 7.3 to 7.9, Total Hardness: 228 to 286 mg/l, Chlorides: 59 to 101 mg/l, Sulphates: 49 to 72 mg/l. The Total Dissolved Solids: 388 to 522 mg/l. Phosphate: 0.21mg/l to 0.34 mg/l, Potassium: 1.7 mg/l to 4.1 mg/l, Sodium: 35 mg/l to 61 mg/l, Calcium: 48 mg/l to 62 mg/l, Magnesium: 26 mg/l to32 mg/l, Fluoride: 0.4 mg/l to 0.9 mg/l, Arsenic: 0.01 mg/l to 0.03 mg/l,</td></tr>
<tr><td>Surface water quality at 5 locations</td><td>pH: 7.2 to 7.6; DO: 5.3 to 5.8 mg/l TDS: 238 to 288 mg/l Chlorides: 51 to 62 mg/l, BOD (270C, 3Days): 2.3 mg/l to 5.4 mg/l, COD: 24 mg/l to 44 mg/l, Sodium: 31 mg/l to 37 mg/l, Total hardness : 124 to 150 mg/l Calcium: 27 to 33 mg/l, and Magnesium: 14 to 17 mg/l, Potassium: 2.2 mg/l to 3.9 mg/l, Phosphate: 0.24 mg/l to 0.41 mg/l, Fluoride: 0.5 mg/l to 0.6 mg/l.</td></tr>
<tr><td>Noise levels</td><td>47.3 to 69.3 dB (A) for the day time and 39.0 to 60.4 dB (A) for the Night time.</td></tr>
<tr><td>Traffic assessment study findings</td><td>Traffic study has been conducted at NH-19, which is approximately 2.9 km away from the plant site.
• Transportation of raw material, fuel & finished product will be done 100% by road.
• Existing PCU is 652.7 PCU/hr on NH-19 and existing level of service (LOS) is: Good (C)
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>NH-19</td><td>652.7</td><td>1500</td><td>0.43</td><td>C (Good)</td></tr>
</table>
• PCU load after proposed project will be 652.7 (Existing) + 33 (Additional) = 685.7 PCU/hr and level of service (LOS) will be: Good (C)
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Proposed V/C Ratio</th><th>LOS</th></tr>
<tr><td>NH-19</td><td>685.7</td><td>1500</td><td>0.45</td><td>C (Good)</td></tr>
</table>
**Note: Capacity as per IRC-106-1990 Guideline for capacity*</td></tr>
</table>

	for roads. **Conclusion:** The level of service will remain Good (C) after including additional traffic due to proposed project.
Flora and fauna	No species in the study area belongs to Schedule I of Wildlife Protection Act, 1972 and there are no endangered, threatened wild animal species in study area.

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

S.N.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment / Disposal
Solid Waste Generation and its Management				
1	Si-Mn Slag	Ferro alloy plant	34	To be sold to Cement Plant
2	Fe-Mn Slag	Ferro alloy plant	36	Will be used for production of Si-Mn alloys.
3	Mn Ore dust	Mn Ore stockyard	118.1	Will be agglomerated by Sinter Plant of 9000 TPA capacity.
4	Bag filter dust	APC device	5.6	
5	Municipal Solid Waste	Office buildings	25.6 kg/day	To be disposed off as per MSW rules
Hazardous waste generation its Management				
1	used oil	Machineries	0.5 KL/Annum	Stored in covered HDPE drums in a designated area and will be given to SPCB authorized recyclers & re-processors.

13.1.12 Public Consultation:

Details of advertisement given	06/08/2021
Date of public consultation	16/09/2021
Venue	P.T. Ground beside Barrack Math, Raturia Angadpur Industrial Area, Raturia Gram, Durgapur, Dist. – Paschim Bardhaman, West Bengal
Presiding Officer	Additional District Magistrate (L & LR), Dist- Paschim Bardhaman
Major issues raised	i. Employment ii. Plantation iii. Social Development

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

Sr No	Major Activity heads	YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lakhs)
		1st Year	2nd Year	3rd Year	
A	**Based on Public Consultation / Hearing**				

Sr No	Major Activity heads		YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lakhs)
			1st Year	2nd Year	3rd Year	
1	Jobs & Sustainable employment					
	Construction of a 3 – room building with infrastructure development like installation of 8 sewing machines, 8 computer systems & 10 machines for making hand craft items along with necessary raw materials for training purpose.	Physical Nos. & village	50 nos. in Raturia & 30 nos. in Angadpur village	30 nos. in Pingrui village & 50 nos. in Jalanpur village	30 nos. in Pratappur & 50 nos. in Kishoripur village	
		Budget in lakhs	Rs 12 Lakhs	Rs .9 lakhs	Rs .9 lakhs	30
2	Greenbelt Development/plantation					
	Development of Parks and Tree Plantation Programme (800 nos) in the nearby villages will be done and distribution of saplings will be done to the nearby villagers and school students in consultation with forest department	Physical Nos. & village	Development of 1 no. park along with 400 nos. tree plantation & distribution of saplings in Angadpur & Raturia.	400 nos. tree plantation & distribution of saplings in Pingrui village & Pratappur.	400 nos. tree plantation & distribution of saplings in Netaji colony and Durgapur.	
		Budget in lakhs	Rs 9 Lakhs	Rs 4.5Lkahs	Rs 4.5Lkahs	18
B	**Based on Need Based & SIA Study**					
3	Arrangement of health camp, distribution of medicines etc. at nearby villages	Physical Nos. & village	Health checkup camps shall be organized on yearly basis, in 2 (Raturia, Angadpur) villages for general body, eyes, blood test along with mass vaccination for polio, dengue, typhoid, malaria, etc. For this purpose, one doctor along with 2 assistants shall be deputed.	Health checkup camps shall be organized on yearly basis, in Pingrui & Pratappur villages for general body, eyes, blood test along with mass vaccination for polio, dengue, typhoid, malaria, etc. For this purpose, one doctor along with 2 assistants	Health checkup camps shall be organized on yearly basis, in 2(Pratappur & Kishoripur) villages for general body, eyes, blood test along with mass vaccination for polio, dengue, typhoid, malaria, etc. For this purpose, one doctor along with 2 assistants shall be deputed.	

Sr No	Major Activity heads		YEAR OF IMPLEMENTATION			TOTAL EXPENDITURE (Rs. in Lakhs)
			1st Year	2nd Year	3rd Year	
				shall be deputed.		
		Budgets in lakhs	Rs 4 Lakhs	Rs 3 Lakhs	Rs 3 Lakhs	10
4	Infrastructure development	Development & maintenance of approach road in adjacent villages	Development & maintenance of road in Pratappur village	Development & maintenance of road in Pingrui village	Development & maintenance of road in Pratappur village	
			Rs 5 Lakhs	Rs 5 Lakhs	Rs 5 Lakhs	15
		Construction of Toilets in nearby Village Schools	Construction of toilet in Ghutgoria&Hidurdanga Primary School&Primary school	Construction of toilet in Amrai More&Raturia Primary school	-	
			Rs 4 Lakhs	Rs 4 Lakhs	-	8
		Street Solar Lighting in nearby areas	Street Solar Lighting in Banjora&Srirampur village	Street Solar Lighting in Raturia and Angadpur village	Street Solar Lighting in Jalanpur&Maliyara village	
			Rs 3 Lakhs	Rs 3 Lakhs	Rs 3 Lakhs	9
		Grand Total (A+B)				**90**

13.1.13 The capital cost of the project is Rs 45 Crores and the capital cost for environmental protection measures is proposed as Rs 245 lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 20.5. The employment generation from the proposed project is 128. The details of cost for environmental protection measures are as follows:

S. No.	Particulars	Capital Cost (In Lacs)	Annual Recurring Cost (In Lacs)
1	Pollution Control during construction stage (Dust suppression, wastewater disposal, roads, monitoring etc.).	15	-
2	Air Pollution Control System (4th Hole extraction & cleaning system with Bag filters, stacks, water sprinklers etc)	90	8.5
3	Wastewater Management and Rain Water Harvesting System	20	3
4	Environment Monitoring and Management	15	5
5	Occupational Health & safety Management	10	3
6	Greenbelt Development	5	1
7	Addressal of Public Consultation concerns	90	--

S. No.	Particulars	Capital Cost (In Lacs)	Annual Recurring Cost (In Lacs)
Total		**245**	**20.5**

13.1.14 Greenbelt will be developed in 0.9076 ha which is about 40.9% of the total project area. A 15m (Minimum) wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 1500 trees per hectare. Total no. of saplings will be planted 1365 and nurtured in 0.9076 hectares in 1 years.

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

13.1.16 M/s. Shyam Business Solution Pvt. Ltd. had earlier made an online application vide proposal no. IA/WB/IND/166397/2020 dated 03/01/2022. The proposal was considered during 52nd meeting of Re-constituted EAC (Industry-1) held on 27th and 28th January, 2022 wherein after detailed deliberations, the Committee recommended the proposal to be returned in its present form due to technical shortcomings.

13.1.17 The project proponent has again applied for EC vide proposal no IA/WB/IND/166397/2020 dated 22.08.2022 after addressing the points raised by EAC during its 52nd meeting as below:

S No	Point raised by EAC	Reply/response of PP
1.	Action plan to address the issues raised during public hearing is not in conformity to the MoEF&CC O.M. dated 30/09/2020.	Action Plan to address the issues raised during public hearing is revised as per the MoEF&CC O.M. dated 30/09/2020.
2.	Area of Sinter plant is not mentioned and same shall be indicated in the EIA report.	The area of Sinter plant is 156.5 Sq.M which is given in the Layout Plan.
3.	On perusal of the KML file, some building structures are visible within the project site. PP responded that the building structures are pertaining to erstwhile M/s. ShyamSel and Power Limited. In this regard, PP shall submit an undertaking in a non-judicial stamp paper stating that no construction has been undertaken at the site	An undertaking in a non-judicial stamp paper stating that no construction has been undertaken at the site related to this project is given by the PP. The copy of the undertaking is submitted.

S No	Point raised by EAC	Reply/response of PP
	with respect to the project under consideration.	
4.	A valid memorandum of understanding (MOU) shall be provided for slag disposal to the cement plant.	Memorandum of understanding (MOU) has been signed and uploaded. The copy of the MOU is submitted.
5.	PM_{10} in the ambient air is reported to be 99 $\mu g/m^3$. Control measures to be adopted by the proponent in this regard shall be furnished.	Control measures to be adopted by the proponent to mitigate the impacts on Air environment will be as follows: • 4^{th} hole Extraction system with bag filters will be provided to bring down the PM to 30 mg/Nm^3 • Dust extraction system with Bag filters to sinter plant • Fine dust collected in the bag filters to be collected and agglomerated by Sinter Plant of 30 MT/day capacity. • Periodic maintenance of bag filter system to be carried out in order to ensure efficient operation; • Regular monitoring system in stack emission will be in place; • All internal roads will be made pucca. • Avenue plantation on both sides of village roads and internal roads • Unloading of materials from trucks shall be carried out with proper care avoiding dropping of the materials from height & the material will be moistened by sprinkling water while unloading; • Raw material ground hopper and bins shall be provided with dry fog system; • Enclosures shall be provided for conveyors and transfer points of conveyors; and • Sprinklers shall be provided for dust suppression at dust generation points • Trucks will be covered through tarpaulin
6.	33 KLD make up water is required for proposed project. Ultimate water withdrawal source is not provided. PP has obtained water withdrawal permission from Durgapur Municipal Corporation (DMC). In this regards PP shall be provided the ultimate source of water and a	As per the West Bengal Municipal Corporation Act, 2006 under section 181, DMC has Power to supply water for non-domestic purpose. The ultimate source of the water is surface water as the water will be supplied from Damodar river. The permission for water supply has been obtained from DMC in the name of Shyam Sel & Power Limited. The name change in water supply permission has been applied to DMC. The copy of the letter is submitted.

<table>
<tr><th>S No</th><th>Point raised by EAC</th><th>Reply/response of PP</th></tr>
<tr><td></td><td>submitted letter from DMC to clarify that the MDC is the competent authority to give the permission for water withdrawal.</td><td></td></tr>
<tr><td>7.</td><td>SOx values are very low as the project site is located in severally polluted area. One-month additional baseline data for Ambient Air Quality shall be conducted and data interpretation shall be done accordingly.</td><td>One-month additional baseline monitoring for Ambient Air Quality has been conducted during the month of February 2022. A comparative of baseline AAQ data (October 2022 to December 2022) and additional one-month monitoring data (February 2022) is given.
<table>
<tr><th>Name of the Location</th><th>-</th><th>October, 2020 to December,2020</th><th>February, 2022</th></tr>
<tr><td rowspan="3">Project Site</td><td>Min</td><td>12</td><td>17</td></tr>
<tr><td>Max</td><td>21</td><td>23</td></tr>
<tr><td>98%tile</td><td>17</td><td>23</td></tr>
<tr><td rowspan="3">Housing Colony</td><td>Min</td><td>12</td><td>10</td></tr>
<tr><td>Max</td><td>16</td><td>20</td></tr>
<tr><td>98%tile</td><td>14</td><td>20</td></tr>
<tr><td rowspan="3">Durgapur Rail Colony</td><td>Min</td><td>10</td><td>18</td></tr>
<tr><td>Max</td><td>14</td><td>21</td></tr>
<tr><td>98%tile</td><td>12</td><td>21</td></tr>
<tr><td rowspan="3">Nutangram Yuba Kalyan Samiti</td><td>Min</td><td>11</td><td>14</td></tr>
<tr><td>Max</td><td>16</td><td>18</td></tr>
<tr><td>98% tile</td><td>14</td><td>18</td></tr>
<tr><td rowspan="3">Welfare Club Sports Ground</td><td>Min</td><td>11</td><td>12</td></tr>
<tr><td>Max</td><td>15</td><td>18</td></tr>
<tr><td>98%tile</td><td>13</td><td>18</td></tr>
<tr><td rowspan="3">NadihaBirbhanpur High School</td><td>Min</td><td>6</td><td>10</td></tr>
<tr><td>Max</td><td>12</td><td>13</td></tr>
<tr><td>98%tile</td><td>10</td><td>13</td></tr>
<tr><td rowspan="3">Near Bengal Greenfield Residency</td><td>Min</td><td>7</td><td>11</td></tr>
<tr><td>Max</td><td>13</td><td>16</td></tr>
<tr><td>98% tile</td><td>10</td><td>16</td></tr>
<tr><td rowspan="3">Pingrui village</td><td>Min</td><td>5</td><td>10</td></tr>
<tr><td>Max</td><td>10</td><td>13</td></tr>
<tr><td>98%tile</td><td>8</td><td>13</td></tr>
</table></td></tr>
<tr><td>8.</td><td>ToR point #9 pertaining to corporate environment policy has not been addressed.</td><td>The PP has a well-defined Corporate Environment Policy. The copy of the same is submitted.</td></tr>
<tr><td>9.</td><td>The project site is located in</td><td>Additional measures will be taken by the PP to mitigate the</td></tr>
</table>

<table>
<tr><th>S No</th><th>Point raised by EAC</th><th>Reply/response of PP</th></tr>
<tr><td></td><td>Severely Polluted Area, PP shall provide the details of the additional measures to mitigate the environmental impacts due to proposed project.</td><td>environmental impacts as the proposed project is located in Severely Polluted area.</td></tr>
<tr><td></td><td colspan="2">
<table>
<tr><th>Environment</th><th>Stipulation of conditions</th><th>Mitigation measures</th></tr>
<tr><td rowspan="5">Air</td><td>i. Stack emission levels should be stringent than the existing standards in terms of the identified critical pollutants.</td><td>4th hole Extraction system with bag filters based dedusting system will be installed to control the air pollution which will keep the emission from chimney below the permissible limit of statutory norms for dust. Ensure the ambient air quality. Gaseous emissions will be released through stacks of required height i.e 35 m.</td></tr>
<tr><td>ii. CEMS may be installed in all large/medium red category industries (air polluting) and connected to SPCB and CPCB server.</td><td>Continuous Emission monitoring system (CEMS) is proposed to be installed for continuous emission monitoring which may be connected to SPCB / CPCB server.</td></tr>
<tr><td>iii. Effective fugitive emission control measures should be imposed in the process, transportation, packing etc.</td><td>Dry fog dust suppression system for junction house, bin building and Sprinkler System for ground hopper: For air pollution control in raw material handling system, it is proposed to provide Dual Fluid based dust suppression system for all material transfer points. The system shall comprise of spray bar assemblies fitted with dual-fluid air driven acoustic oscillator atomizing nozzles, pressure regulating units, flow activation stations, necessary instrumentation and electrics along with auxiliary equipment like water supply system, compressed air system, enclosures, modification of hoods and skirts, etc. The moisture addition for dual fluid based dust suppression system will be limited to 0.1% by weight</td></tr>
<tr><td>iv. Transportation of materials by rail/conveyor belt, wherever feasible.</td><td>Transportation of materials will be conducted by road and vehicles will be covered by tarpaulin to minimizing the emission from material transportation.</td></tr>
<tr><td>v. Encourage use of cleaner fuels (pet</td><td>Electricity will be used as major fuel. So, pollution from Fuel is not being envisaged</td></tr>
</table>
</td></tr>
</table>

S No	Point raised by EAC		Reply/response of PP
		coke/furnace oil/LSHS may be avoided).	
		vi. Best Available Technology may be used. For example, usage of EAF/SAF/IF in place of Cupola furnace. Usage of Supercritical technology in place of sub-critical technology.	Submerged Arc Furnace is being proposed for the project which is one of the best available technologies.
		vii. Increase of green belt cover by 40% of the total land area beyond the permissible requirement of 33%, wherever feasible.	40.09% Green belt area is being proposed as an additional emission control measure. The green area along with the area statement is mentioned in the Layout plan
		viii. Stipulation of greenbelt outside the project premises such as avenue plantation, plantation in vacant area, social forestry etc.	Additional Green belt development outside the project area will be done under the Social Environment Development as a part of EMP.
		ix. Assessment of carrying capacity of transportation load on roads inside the industrial premises. If the roads required to be widened, shall be prescribed as a condition.	Sufficient road width as shown in the layout plan will be maintained for smooth flow of transportation
	Water	i. Reuse/recycle of treated wastewater, wherever feasible.	The total daily fresh water requirement for the entire project will be 33 KLD. As the process being thermal, generation of process effluent from Ferro/Silico-manganese plant is negligible. Maximum 2KLD and 4KLD waste water are envisaged from Softener Back wash and blow down from Cooling respectively. These waste

S No	Point raised by EAC		Reply/response of PP
			waters will be collected in ground pond which will be reused for gardening and dust suppression after neutralizing.
		ii. Continuous monitoring of effluent quality/quantity in large and medium Red Category Industries (water polluting).	In the proposed project, wastewater generated from the proposed unit will be sent to guard pond and neutralized tank after it will be recycled again as closed-circuit cooling system will be provided. Sanitary waste water generation due to proposed project will be 4.0 KLD and will be disposed into Septic tank and soak pit. Hence Zero discharge will be implemented in the proposed project.
		iii. A details water harvesting plan may be submitted by the project proponent.	Rain water harvesting is proposed. Rainwater from the catchment area of the buildings and hardscape / paved area will be harvested and stored in the underground 3 nos. of storage tank of capacity 160KL capacity each. Hence utilizing this rain water in dry season, the plant can minimize the fresh water requirement.
		iv. Zero liquid discharge wherever techno-economically feasible.	No waste water will be discharged. Hence the ZLD technology will be practiced in the proposed project.
		v. In case, domestic waste water generation is more than 10 KLD, the industry may install STP.	The Domestic Waste Water (4KLD) will be sent to Septic tank followed by Soak Pit as the domestic waste water generation is less than 10 KLD
	Land	i. Increase of green belt cover by 40% of the total land area beyond the permissible requirement of 33%, wherever, feasible for new projects.	40.09% Green belt area is being proposed as an additional emission control measure. The green area along with the area statement is mentioned in the Layout plan
		ii. Stipulation of greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry etc.	Additional Green belt development outside the project area will be done under the Social Environment Development Programme as a part of EMP.

<table>
<tr><th>S No</th><th colspan="2">Point raised by EAC</th><th>Reply/response of PP</th></tr>
<tr><td></td><td></td><td>iii. Dumping of waste (fly ash, slag, red mud etc.) may be permitted only at designated locations approved by SPCBs/PCCs.</td><td>The solid waste generation and their management will be done as follows:
<table>
<tr><th>Sr. No</th><th>Description</th><th>Quantity (MT/Day)</th><th>Treatment/ disposal</th></tr>
<tr><td>1</td><td>Si-Mn Slag</td><td>34</td><td>To be sold to Cement Plant. MOU is prepared and given in Annexure-X.</td></tr>
<tr><td>2</td><td>Fe-Mn Slag</td><td>36</td><td>Will be used for production of Si-Mn alloys.</td></tr>
<tr><td>3</td><td>Mn Ore dust</td><td>118.1</td><td rowspan="2">Will be agglomerated by Sinter Plant of 9000 TPA capacity.</td></tr>
<tr><td>4</td><td>Bag filter dust</td><td>5.6</td></tr>
<tr><td>5</td><td>Municipal Solid Waste</td><td>25.6 kg/day</td><td>To be disposed off as per MSW rules</td></tr>
<tr><td colspan="4">Hazardous waste generation its Management</td></tr>
<tr><td></td><td>Used oil</td><td>0.5 KL/A</td><td>Stored in covered HDPE drums in a designated area and will be given to SPCB authorized recyclers & re-processors.</td></tr>
</table></td></tr>
<tr><td></td><td></td><td>iv. More stringent norms for management of hazardous waste. The waste generated</td><td>0.5 KL/annum Used oil will be generated. This will be stored in covered HDPE drums in a designated area and will be given to SPCB authorized recyclers & re-processors.</td></tr>
</table>

S No	Point raised by EAC		Reply/response of PP
		should be preferably utilized in co-processing.	
	Other Condition (Additional)	i. Monitoring of compliance of EC conditions may be submitted with third party audit every year.	After obtaining EC, submission of third party audited compliance report will be done every year.
		ii. The % of the CER may be at least 1.5 times the slab given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of Environmental Clearance.	As an additional part of EMP, a budget of 90 Lakhs has been allotted for Social Environment Development which will be utilized over a period of 3 years. The proposed head of the Social Environment Development will be Jobs & Employment, Financial aid to village schools, free health camp, Nearby road & infrastructure development, Plantation in nearby area, Street Solar lighting etc. The heads have been selected as per demand analysis during the Public Hearing or as per recommendation of honorable members, keeping the amount constant.
10.	Revised layout indicating green belt development all along the periphery of the project site shall be submitted.		Green belt development will be done along the periphery of the project site and the same is indicated in the Layout Plan. Layout Plan is given in Figure 2.1 of chapter 2 of the EIA/EMP Report.
11.	Details of briquetting and jigging plant shall be provided.		No briquetting plant is proposed as there will be no production of Fe-Cr. Jigging of Fe-Mn slag will be done after manual crushing.

13.1.18 The proposal is considered during 13th meeting of the EAC for Industry-I sector held on 14-15th September, 2022. The deliberations and recommendations of EAC are as follows:

Deliberations by the Committee

13.1.19 The Committee noted the following:

1. On perusal of kml file, it is observed that the proposed project is a brownfield project due to presence of some structures at the project site. However, the project proponent has claimed that the instant proposal is a greenfield project as submitted online on Parivesh Portal.
2. The EAC noted that as per the declaration of project proponent, earlier a unit of Induction furnace with re-rolling Mill was being operated by M/s. Shyam Sel & Power Limited (SSPL) at proposed project site. SSPL was established in the year 2002 and was involved in the production of Billet, Ingot & TMT Bar. In the year 2016-17, the land of Shyam Sel & Power Ltd. is transferred under a Scheme of Arrangement u/s 391 to 394 of the Companies

Act, 1956 by the Order of Hon'le Kolkata High Court on dated 21/08/2016. SSPL has dismantled the Plant & Machinery and shifted to their other manufacturing Unit. So, after dismantling some civil structures, Office and labor quarters are still there. M/s. Shyam Business Solutions Private Limited (SBSPL) will demolish the rest of the structures present on the land and the demolition waste to be used in civil work for the proposed project and steel scrap, if any will be sold out. The project proponent has submitted an undertaking dated 08.03.2022 in a non-judicial stamp paper stating that no construction has been undertaken at the site related to this project. However, during the deliberation project proponent was asked to submit the records pertaining to CTE/CTO of M/s. Shyam Sel & Power Limited based on which the earlier project was established and operational to verify the factual status. SBSPL was unable to provide the requisite data and reported that they do not have the records of SSPL. In view of the same, the EAC is of the opinion that there is a need to verify whether there was a secondary metallurgical industry established by SSPL at project site. Therefore, factual status of earlier project at the instant project site in terms of CTE/CTO and its compliance shall be obtained from concerned State Pollution Control Board for verification.

3. The project site is located in Severely Polluted Area. The EAC deliberated on the additional measures to mitigate the environmental impacts due to proposed project submitted by the Project Proponent. The EAC advised the project proponent to ensure whether the compliance of all the conditions applicable to CEPI has been followed or not 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.

4. Angadpur (0.75 Km, W) and Raturia (0.65 Km, S) villages are in the vicinity of the project site. Project Proponent shall submit environmental safeguard measures to minimise the impact on the habitation of the locals.

5. The permission for water supply has been obtained from DMC in the name of Shyam Sel & Power Limited. Project Proponent reported that they have applied to DMC for the name change in water supply permission. The EAC is of the opinion that name change in the water supply permission shall be obtained from Competent Authority and the same shall be submitted to the Ministry.

6. Damodar River is at a distance of approximately 1.5 km to the project site. The EAC is of the opinion that it 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.

Recommendations of the Committee:

13.1.20 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. 13.1.19 above. The proposal shall be considered after submission of requisite information.

***

Agenda No. 13.2

13.2 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]

13.2.1 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.

13.2.2 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

13.2.3 The detail of the ToR is furnished as below:

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

13.2.4 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.

13.2.5 Environmental site settings

Sl.	Particulars	Details	Remarks
i.	Total land	Total land – 26.93 Ha (Private land)	

<table>
<tr><th>Sl.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>ii.</td><td>Land acquisition details asper MoEF&CC O.M. dated 7/10/2014</td><td>Total 26.93 Ha land has been acquired by M/s. Gauri Ganesh Ispat Private Limited for the proposed project</td><td>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.</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of
R&R, if any.</td><td>Project Site: Nil
Study Area:
<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Madhi</td><td>1.0 km</td><td>S</td></tr><tr><td>Khapri</td><td>1.5 km</td><td>E</td></tr><tr><td>Janjgira</td><td>1.0 km</td><td>SW</td></tr></table>
No R&R is involved.</td><td>-</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site.</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>BP1</td><td>21°27'18.12"N</td><td>81°48'0.59"E</td></tr><tr><td>BP2</td><td>21°27'43.59"N</td><td>81°48'3.93"E</td></tr><tr><td>BP3</td><td>21°27'41.39"N</td><td>81°48'16.77"E</td></tr><tr><td>BP4</td><td>21°27'28.86"N</td><td>81°48'26.95"E</td></tr><tr><td>BP5</td><td>21°27'27.77"N</td><td>81°48'19.18"E</td></tr><tr><td>BP6</td><td>21°27'18.79"N</td><td>81°48'13.04"E</td></tr><tr><td>BP7</td><td>21°27'27.81"N</td><td>81°48'6.69"E</td></tr><tr><td>BP8</td><td>21°27'31.83"N</td><td>81°48'7.13"E</td></tr></table></td><td>-</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>291 m - 297 m above mean sea level</td><td>The entire area is almost flat with moderate gradient</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No involvement of Forest Land</td><td>-</td></tr>
<tr><td>vii.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>Study area:
<table><tr><th>S. No.</th><th>Name of the Water Body</th><th>Distance (KM)</th><th>Direction</th></tr><tr><td>1</td><td>Kirna Tank / Jalso dam</td><td>1.0</td><td>W</td></tr><tr><td>2</td><td>Dhumma Nala</td><td>1.4</td><td>NW</td></tr><tr><td>3</td><td>Kirna Irrigation Canal</td><td>2.6</td><td>W</td></tr><tr><td>4</td><td>Kulhan Nala</td><td>2.2</td><td>WSW</td></tr><tr><td>5</td><td>Rindergaon Main Irrigation Canal</td><td>7.4</td><td>SSE</td></tr><tr><td>6</td><td>Siliari Distributary</td><td>1.7</td><td>S</td></tr></table></td><td></td></tr>
</table>

Sl.	Particulars	Details				Remarks
		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				-

13.2.6 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 Furnace	Reheating Furnace based Rolling Mill about 507 TPD	Rerolled Steel products (Sheets, Strips and Rerolled Structural Steel etc.)	167,508
4	Sub-Merged Arc Furnace	Electrically operated Sub-Merged Arc Furnace 9 MVA x 2 nos	Ferro Alloys (FeSi, FeMn, SiMn) [*FeSi – 22600 TPA/	35,000

S. No.	Process plant	Proposed configuration of the plant	Product Name	Capacity (in TPA)
			FeMn-70000 TPA/ SiMn -35000 TPA either of combination of the above]	
			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

13.2.7 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	
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**

Sl. No.	Units	Raw Material	Qty. (TPA)	Source	Distance from site	Mode of transportation	Total qty. (TPA)
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 Laddle 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**
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	

Sl. No.	Units	Raw Material	Qty. (TPA)	Source	Distance from site	Mode of transportation	Total qty. (TPA)
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	
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	

Sl. No.	Units	Raw Material	Qty. (TPA)	Source	Distance from site	Mode of transportation	Total qty. (TPA)
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	

13.2.8 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.

13.2.9 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.

13.2.10 Baseline Environmental Studies

Period	**Post monsoon season (15st October 2021 – 15th January 2022)**
AAQ parameters at 8 Locations (min. and max)	• PM_{10} = 48.9 – 77.6 µg/m^3 • $PM_{2.5}$ = 19.2 – 36.4 µg/m^3 • SO_2 = 5.8 – 12.2 µg/m^3 • NO_2 = 12.6 – 22.5 µg/m^3 • CO = 273 – 500 µg/m^3
	○ **15th Jan to 15th Feb – 2022**
	• PM_{10} = 49.7 – 78.4 µg/m^3 • $PM_{2.5}$ = 19.7 – 34.8 µg/m^3 • SO_2 = 6.5 – 11.9 µg/m^3 • NO_2 = 13.9 – 20.9 µg/m^3 • CO = 222 – 463 µg/m^3

<table>
<tr><td>Incremental GLC level</td><td>

PM_{10} = 1.0 µg/m^3 (Level at 1.0 km SW and SSW Direction)
$PM_{2.5}$ = 0.04 µg/m^3 (Level at 1.0 km SW and SSW Direction)
SO_2 = 4.8 µg/m^3 (Level at 1.4 km SW and WSW Direction)
NOx = 3.6 µg/m^3 (Level at 1.2 km SW and WSW Direction)
CO (DG Set) = 3.19 µg/m^3 (0.5 km in SW direction)
CO Due to Traffic Movement CO is 23.0 µg/m^3

</td></tr>
<tr><td>Ground water quality at 8 locations</td><td>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</td></tr>
<tr><td>Surface water quality at 8 locations</td><td>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 $CaCO_3$</td></tr>
<tr><td>Noise levels Leq. (Day and Night)</td><td>Noise levels at every station were within CPCB standards.
Residential Area – 50.8 to 54.1dBA for day time and 38.9 to 42.7 dBA for night time.
Commercial Area – 59.2 to 57.7 dBA for day time and 43.8 to 44.5 dBA for night time.
Silence Zone – 46.5dBA to 48.2dBA for day time and 37.4 dBA to 38.3dBA for night time.
Industrial area - 53.1dBA for day time and 40.6 dBA for night time.</td></tr>
<tr><td>Traffic assessment study findings</td><td>

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

<table>
<tr><th>Description</th><th>No. of Trucks and Buses</th><th>No. of Passenger car</th><th>Two /three Wheeler</th></tr>
<tr><td>Approach road</td><td>36</td><td>65</td><td>142</td></tr>
</table>

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:

<table>
<tr><th>ROAD</th><th>INCREASED PCU'S-STATE/ NATIONAL HIGHWAY</th><th>V (VOLUME IN PCU/DAY)</th><th>C (CAPACITY IN PCU/DAY)</th><th>MODIFIED V/C RATIO</th><th>LOS</th></tr>
<tr><td>Approach road</td><td>1134+1481= 2615</td><td>2615</td><td>6000</td><td>0.44</td><td>C</td></tr>
</table>
* Note: Capacity as per IRC: 64-1990 Guideline for capacity for roads.
<table>
<tr><th>Sl. No.</th><th>Mode of Transportation</th><th>Total Trips /day</th><th>Passenger Car Unit (PCU)</th><th>PCU</th></tr>
</table>
</td></tr>
</table>

	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).				

13.2.11 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
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

13.2.12 Public Consultation:

Details of advertisement given	• 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	• 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

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)
			1st Year	2nd Year	3rd 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 2nd year i.e. December 2025	-	35.00
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 Machine etc/. Quality: RCC Roof and Floor, Fly Ash Brick Wall.	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	35.00
3	Rural Infrastructure like strengthening of Road/ Rain Water Harvesting Structures / Solar Streetlight at village Road	Location: Village Madhi Work: • Strengthening of internal Road of village Madhi approx-2 KM • Providing Street light with poles in the village Road Khapari village to Madhi village	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	30.00

Sr. No.	Particulars	Physical Status	Target of Implementation of Action Plan (Timeline)			Rs. (in lakhs)
			1st Year	2nd Year	3rd Year	
		• Rain Water Harvesting at Community land of Madhi – 4 Nos.				
4	Drinking Water facility at Village	Location – Village Madhi Work: 4 Nos. of Borewell for drinking water and storage facility as per Village Panchayat demand	2 Nos. Borewell and storage facility and water supply system	2 Nos. Borewell and storage facility and water supply system	Completion of work	5.00
5	Construction of Cow shed at Gothan (Community Cow grazing area)	Construction of 2000 Square feet Cow Shed at Gouthan At Village Madhi	Construction of 2000 Square feet Cow Shed April 2024 to December 2024	--	--	5.00
6	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) 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"	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 December 2026	25.00
Total Rs. One hundred thirty five lakhs only						**135.00**

13.2.13 The capital cost of the proposed project is Rs. 278.75 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 Alloys	0.7	0.004
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

Sl.	Particulars	Amount (in Crores Rs.)	Operation and Maintenance cost 5% (in Crores Rs.)
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**
35	CER works for improvement of Social Infrastructure and surrounding Environment (CAPEX)	1.35	-
	Total Expenses in Crores Rs.	**36.00**	**0.650**

13.2.14 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.

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

Deliberations by the Committee

13.2.16 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 if 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, Janjgira 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:

13.2.17 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. 13.2.16 above. The proposal shall be considered after submission of requisite information on Parivesh Portal.

***

Agenda No. 13.3

13.3 Expansion of Ferro alloys Plant High Carbon Ferro Chrome production from 75,000 TPA (from 1 X 45 MVA SAF) and 6300 TPA from MRP up to 1,45,000 TPA (from 1 X 45 MVA & 1 X 33 MVA SAF) and 11,800 TPA from MRP by M/s Ferro Alloys Corporation Ltd., located at Village-Randia, District-Bhadrak, Odisha - Consideration of Environmental Clearance.

[Proposal No.: IA/OR/IND/5802/2009; File No. J-11011/594/2008.-IA.II(I)]
[Consultant: Ardra Consulting Services Pvt. Ltd; valid upto: 29.12.2022]

13.3.1 M/s. Ferro Alloys Corporation Limited has made an online application vide proposal no. IA/OR/IND/5802/2009, dated 11.08.2022 along with copy of EIA/EMP report, Form – 2 and certified EC compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical Industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central level.

13.3.2 Name of the EIA consultant: M/s. Ardra Consulting Services Pvt. Ltd [Sl. No. 99, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/IA0055; valid upto 29.12.2022, Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

13.3.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	ToR Validity
19.02.2022	Standard Terms of Reference issued	Terms of Reference	22.02.2022	21.02.2025

13.3.4 The project of M/s Ferro alloys Corporation Limited located in Randia Village, Bhadrak District, Odisha is for Expansion of Ferro Alloys Plant for production of High Carbon Ferro Chrome from 75,000 TPA through 1X 45 MVA Furnace and 6,300 TPA from MRP up to 1,45,000 TPA from 1X45 MVA & 1X 33 MVA Furnaces and 11,800 TPA from MRP within the existing premises.

13.3.5 Environmental Site Settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Total land</td><td>83.16 ha [Private Land]</td><td>-</td></tr>
<tr><td>2.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>Total land is in possession of FACL</td><td>Land has been acquired and allocated to the Industry by IDCO, Bhubaneswar</td></tr>
<tr><td>3.</td><td>Existence ofhabitation & involvement of R&R, if any.</td><td><u>Project site:</u> Nil

<u>Study Area:</u><table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Randia Village</td><td>0.53</td><td>NE</td></tr><tr><td>Baghurai Village</td><td>0.65</td><td>SSE</td></tr><tr><td>Sahapur Village</td><td>3.05</td><td>NNE</td></tr><tr><td>Amargadia Village</td><td>1.05</td><td>SW</td></tr><tr><td>Tentuligariha Village</td><td>1.11</td><td>W</td></tr><tr><td>Kalahandia Village</td><td>3.74</td><td>SW</td></tr><tr><td>Bishnupur Village</td><td>3.12</td><td>SSW</td></tr></table></td><td>No R&R is envisaged</td></tr>
<tr><td>4.</td><td>Latitude and Longitude of all corners of the project site.</td><td><table><tr><th>SL NO</th><th>LATITUDE</th><th>LONGITUDE</th></tr><tr><td>1</td><td>21°4’7.15’’N</td><td>86°27’0.44’’E</td></tr><tr><td>2</td><td>21° 4'7.35"N</td><td>86°27'0.41"E</td></tr><tr><td>3</td><td>21° 4'17.02"N</td><td>86°27'26.47"E</td></tr><tr><td>4</td><td>21° 4'1.13"N</td><td>86°27'59.38"E</td></tr><tr><td>5</td><td>21° 3'49.87"N</td><td>86°27'49.98"E</td></tr><tr><td>6</td><td>21° 3'48.36"N</td><td>86°27'50.33"E</td></tr><tr><td>7</td><td>21° 3'40.44"N</td><td>86°27'30.94"E</td></tr><tr><td>8</td><td>21° 3'40.20"N</td><td>86°27'26.81"E</td></tr><tr><td>9</td><td>21° 3'40.91"N</td><td>86°27'24.15"E</td></tr><tr><td>10</td><td>21° 3'57.62"N</td><td>86°27'14.47"E</td></tr><tr><td>11</td><td>21° 3'56.16"N</td><td>86°27'11.33"E</td></tr><tr><td>12</td><td>21° 3'58.55"N</td><td>86°27'9.63"E</td></tr><tr><td>13</td><td>21° 3'57.03"N</td><td>86°27'6.50"E</td></tr><tr><td>14</td><td>21° 4'1.38"N</td><td>86°27'2.66"E</td></tr></table></td><td>Based on Toposheet No-F45008.</td></tr>
<tr><td>5.</td><td>Elevation of the project site</td><td>23m above mean sea level</td><td>Variation of elevation: 21m-23m AMSL</td></tr>
<tr><td>6.</td><td>Involvement of Forest land if any.</td><td>No forest land is involved</td><td>-</td></tr>
<tr><td>7.</td><td>Water body (Rivers, Lakes,</td><td><u>Project site:</u> Randia</td><td>Authenticated HFL data of</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td>Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td><u>Study area</u><table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Salandi River</td><td>500 m</td><td>E</td></tr><tr><td>Akhaupada High Level Main canal</td><td>500 m</td><td>S</td></tr></table></td><td>Salandi River-17.02 m
Akhaupada High Level Main canal-17.96 m</td></tr>
<tr><td>8.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>Nil</td><td>Kuldiha Wild life Sanctuary-40 km</td></tr>
</table>

13.3.6 The existing project was initially granted Environment Clearance vide letter No. J-11011/594/2008- IA II (I) dated 04.05.2009 for expansion of existing 1x45MVA furnace to add another 1x45 MVA new furnace (High Carbon Ferro Chrome, 65,000 TPA to 1,30,000 TPA). Amendment in EC was obtained vide letter dated 21.11.2012 to reduce the new furnace capacity from 45MVA to 27MVA (High Carbon Ferro Chrome from 1,30,000 TPA to 1,15,000 TPA). EC validity extension was obtained vide letter dated 13.01.2017 and thus EC was valid till 03.05.2019. PP has further clarified that the construction work of 27MVA furnace foundation was started after obtaining CTE vide lr.no. 2066/IND-II-NOC-6051 dated 13.02.2017 within the validity of EC up to 03.05.2019. However, the total construction was not completed and left as it is and taken over by the new proponent. The production quantity has always been maintained within the permissible limit as per CTO in line with accorded EC. Latest Consent to Operate for the existing unit was accorded by Odisha State Pollution Control Board vide lr. No.4949/IND-I-CON-5461 dated 29.03.2022. The validity of CTO is up to 31.03.2026.

13.3.7 Implementation status of existing CTE:

S. No.	Facilities	Units	As per EC	Implementation Status as on date	Production as per CTO
1	Ferro alloys Plant	2 X 45 MVA SAF	EC - 4th May 2009	1 X 45 MVA SAF	65,000 TPA
2	Ferro alloys Plant	1 x 45 MVA & 1 x 27 MVA	EC Amendment - 21/11/2012 & EC validity	Amendment of Environment Clearance due to non-implementation of the additional 1 x 45 MVA Furnace due to financial	75,000 TPA

S. No.	Facilities	Units	As per EC	Implementation Status as on date	Production as per CTO
			extension – 13.01.2017 (EC valid up to 20/11/2019)	reasons and reduced the furnace size. Based on this the foundation work for 1 x 27 MVA furnace setup started with CTE, with in the validity period, but could not complete and in the meanwhile the company went into Bankruptcy and Vedanta acquired the company through NCRLT in 2020	

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

S. No	Plant Equip Ment / Facility	Existing facilities as per EC dated 04.05.2009 and amendment dated 21.11.2012								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	2 X 45 MVA	130000 TPA	1 X 45 MVA	65000 TPA	1 X 45 MVA	65000 TPA	1 X 45 MVA	75000 TPA	1 X 33 MVA	70000	1 X 45 MVA + 1 X 33 MVA	1,45,000 Ton /Annum
2	Metal Recovery Plant	-	6,300 TPA	-	6,300 TPA	-	6,300 TPA	-	6,300 TPA	-	5500	-	11,800 TPA

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

S. No	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
1	Coke	46400	45700	92100	Neelanchal , Krishna Coke & Mother & Son Agency	25-65	By Road
2	Chrome Ore Fines	162500	137500	300000	Ostapal & Kalarangita Mines	60	By Road
3	Chrome Ore Concentrate	60000	40000	100,000	Ostapal & Kalarangita	60	By Road

S. No	Raw Material	Quantity required per annum			Source	Distance from site (Kms)	Mode of Transportation
		Existing	Expansion	Total			
					Mines		
4	Quartzite	2400	-	2400	Balasore & Mayurbhanj K.m.& S.P. Enterprises Andhra Pradesh	72-75 1000	By Road
5	Bauxite	1000	1400	2400	Chhattisgarh & Jharkhanda	180-220	By Road
6	Hydrated Lime	4760	4690	9450	Rajasthan & Katni (MP)	400	By Road
7	Electrode Paste	1000	985	1985	Norway & imported through Vizag Port	480	By Sea and Road
8	Molasses	11420	11260	22680	Shakti Sugar Dhenkanal & Sri Jagannath, Jatani	80	By Road

13.3.10 The existing water requirement is 1370 KLD which is obtained from ground water and permission for the same has been obtained from CGWA, vide letter no. 21-4(74)/SER/CGWA/2008-1655 dated 19.09.2017. The water requirement for the proposed project is estimated as 2521 KLD, out of which 1750 KLD of fresh water requirement will be obtained from Ground water. The application for drawl of groundwater has been submitted vide Application Number : 21-4/74/OR/IND/2008 dated 14.09.2022 and approval is awaited.

13.3.11 Existing power requirement of 35 MW is obtained from FACOR CPP plant. The power requirement for the proposed project is estimated as 68 MW which will be obtained from the FACOR CPP plant.

13.3.12 Baseline Environmental Studies:

Period	01.12.2019 to 29.02.2020
AAQ parameters at 8 Locations (min and max	• $PM_{2.5}$ = 8.2 to 39.1 μg/m^3 • PM_{10} = 23.3 to 68.9 μg/m^3 • SO_2 = 6.0 to 9.18μg/m^3 • NOx = 9.07 to 12.42 μg/m^3 • CO = Less than 1.14 mg/m^3
Incremental GLC level	• PM_{10} = 0.5 to 5.0 μg/m^3 • $PM_{2.5}$ = 0 to 1.0 μg/m^3 • SO_2 = 0.01 to 0.5 μg/m^3 • NOx = 0.4 to 4.0 μg/m^3
Ground water quality at 5 locations	pH: 6.59.to 6.72, Total Hardness: 180.48 to 263.04 mg/l, TDS: 317 to 596 mg/l, Chlorides: 17.74 to 76.87 mg/l.
Surface water quality at 6	pH: 6.06 to 7.22, Total Hardness: 9.6 to 178.56 mg/l, TDS: 16.7 to 350 mg/l, Chlorides: 11.83 to 36.46 mg/l, BOD: 3.8 to 5.9 mg/l, COD: 16-20

<table>
<tr><td>locations</td><td>mg/l, DO: 7.5 to 8.1 mg/l.</td></tr>
<tr><td>Noise levels Leq (Day and Night)</td><td>50.9 to 69.6 for the day time and 43.1 to 51.9 For the Night time.</td></tr>
<tr><td>Traffic assessment study findings</td><td>

<u>Traffic Location at SH-53</u>

- Traffic study has been conducted at SH-53 which is approximately 200 m (distance) from the plant site.
- Transportation of raw material, fuel & finished product will be done 100 % by road.
- Existing PCU is 306 PCU/day on (**SH 53** and existing level of service (LOS) is:

Road	V (Volume in PCU/Day)	C (Capacity in PCU/Day)	Existing V/C Ratio	LOS
Two-Lane-Two-Way Concrete Road	7356	15000	0.49	B

- PCU load after proposed project will be 349 PCU/day and level of service (LOS) will be:

Road	V (Volume in PCU/hr.)	C (Capacity in PCU/hr.)	Existing V/C Ratio	LOS
Two-Lane-Two-Way Concrete Road	7705	15000	0.51	B

** Note: Capacity as per IRC-64:1990 Guide line for capacity for roads.*

<u>Traffic Location at NH-16</u>

- Traffic study has been conducted at NH-16 which is approximately 3 Km (distance) from the plant site.
- Transportation of raw material, fuel & finished product will be done 100 % by road.
- Existing PCU is 7812 PCU/day on (**NH 16** and existing level of service (LOS) is:

Road	V (Volume in PCU/hr.)	C (Capacity in PCU/hr.)	Existing V/C Ratio	LOS
Two-Lane-Two-Way Concrete Road	7812	30000	0.26	A

- PCU load after proposed project will be 349 PCU/day and level of service (LOS) will be:

Road	V (Volume in PCU/hr.)	C (Capacity in PCU/hr.)	Existing V/C Ratio	LOS
Two-Lane-	8161	30000	0.27	A

</td></tr>
</table>

	Two-Way Concrete Road | | | | | ** Note: Capacity as per IRC-64:1990 Guide line for capacity for roads.* **Conclusion:** The level of service will not change after including additional traffic due to proposed project.
Flora and fauna	There is no Schedule- I fauna or any endangered Flora within the study area.

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

S. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment	Disposal
1	Flue Dust	SAF	3680	Stored in a separate Silo to be transported to Briquette Manufacturing. Unit.	Flue dust is 100% reused in Briquette Manufacturing.
2	Slag	Zigging Plant	295000	Zigging for metal recovery and removal of metal	Slag generated from the Metal Recovery Plant is used for filling low lying areas inside /outside the plant area after TCLP Test and approval from OSPCB.
3	Sludge	STP	6.75	Treated in Bio-composting unit	Used in Greenbelt Development
4	Sludge	WTP	2.6	After dried in the sludge pit	Used in Landfill

13.3.14 Public Consultation:

Details of advertisement given	Dharitri (Regional) and Times of India (English) on 27.04.2022.
Date of public consultation	31.05.2022
Venue	Randia Village
Presiding Officer	District Magistrate
Major issues raised	Environmental Protection, Plantation, Employment Health and Education, CSR activity, Skill Development

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

S.No.	Issues raised during Public Hearing	Commitment by Project Proponent	Action plan with time frame and budget				
			Budget allocated in Rs. Lakhs	Time bound budget provision (Rs. In Lakh)			
				1st Year	2nd Year	3rd Year	4th Year
1	**Environment Protection**	**1.** Surface Run-off Treatment Plant (SRTP),	183.69	171.69	3	5	4

S.No.	Issues raised during Public Hearing	Commitment by Project Proponent	Action plan with time frame and budget				
			Budget allocated in Rs. Lakhs	Time bound budget provision (Rs. In Lakh)			
				1st Year	2nd Year	3rd Year	4th Year
		2. Sewage Treatment Plant (STP),	51	35	4	7	5
		3. Rainwater harvesting	30	7	6	5	12
		4. Upgradation of existing Gas Cleaning Plant (GCP) & Installation of new Gas Cleaning Plant (GCP)	1863	1823	12	12	16
		5. Water Channels for ETP & RWH	24	12	4	4	4
		6. Dust Extraction System (DES) will be installed control of air pollution. Installation of Online CEMS & CAAQMS	212	175	20	5	12
2	Local people demanded for regular health check-ups at village level	200 health Camps in Six Gram Panchayats will be conducted on yearly basis.	120	30	30	30	30
3	Local Dispensaries are in bad shape without manpower and equipments and hence needs support by the Industry	Basic equipments for two dispensaries will be supplied in Barpada village and Baghuria Village	52	-	26	26	-
4	Adequate greenbelt should be developed	1. Material Handling Area, Waste dump, Internal Road Sides & Boundary Areas; 9000 trees of Neem, Chakunda, Akasia, Amla, Debadaru types	18.66	12.18	2.16	2.16	2.16
		2. Within Randia Village; 420 trees of Bela & Debdaru Plants etc. Within Koronta Village; 450 trees of Karanja & Mango trees etc Within Saramanga Village; 400 trees of Chakunda & Mango trees etc Additional 4000 fruit bearing trees will be distributed to local individuals of five Panchayats under social forestry program	42.63	12.63	6	4.00	20
5	Promoting Primary /Secondary educations for nearby villages	100 Numbers of Anganwadi centres for improving Pre-school facility for Children in nearby Gram Panchayats.	800	200	200	200	200
6	Some assistance to local SHGs	Each year PP would be partnering with local SHGs for their skill enhancement.	80	20	20	20	20

S.No.	Issues raised during Public Hearing	Commitment by Project Proponent	Action plan with time frame and budget				
			Budget allocated in Rs. Lakhs	Time bound budget provision (Rs. In Lakh)			
				1st Year	2nd Year	3rd Year	4th Year
	for livelihood Support	250 women entreprenuers would be supported. **SMEs with market linkage:** Promotion of Local Craft like, Bamboo Craft Making, Pisciculture, Small Trades such as Chappal Making, Agarwati etc. Agri Based Interventions					
7	Local Youths need to enhance their skill level	120 Local Youths will be given basic Skill Training every year for four years based on their basic educational qualification chosen from surrounding six number of Panchayats	120	30	30	30	30
Total			**3,596.98**	**2,528.50**	**363.16**	**350.16**	**355.16**

13.3.15 The existing capital cost of project was 151 Crores. The capital cost of the proposed project is Rs 185 Corers and the capital cost for environmental protection measures is proposed as Rs 33.74 Corers. The annual recurring cost towards the environmental protection measures is proposed as Rs 3.25 Crores. The employment generation from the proposed expansion project is 500 direct employment & 1000 indirect employment. The details of cost for environmental protection measures is as follows:

S. No.	Description of Item	Existing (Rs. In Crores)		Proposed (Rs. In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
(i).	Air Pollution Control/ Noise Management	10.62	0.95	19.50	1.05
(ii).	Water Pollution Control	1.77	0.20	32.5	0.51
(iii).	Environmental Monitoring and Management	0.76	0.60	1.40	0.70
(iv).	Green Belt Development	0.14	0.14	0.25	0.25
(v).	Addressal of Public Consultation concerns	-	-	7.40	0.21

13.3.16 Existing green belt has been developed in 27.49 Ha area which is about 33.05 % of the total project area of 83.16 Ha with total sapling of 37730 Trees. Proposed greenbelt will be developed in additional 1.5 ha which is about 1.8% of the total project area. Thus, total of 28.99 ha area (34.84 % of total project area) will be developed as greenbelt. A 7.5 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 30000 saplings will be planted in this season and nurtured in 28.99 hectares.

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

Certified Compliance Report from Regional Office:

13.3.18 The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar *vide* letter no. F.No.101-499/EPE/1079 dated 08.08.2022 in the name of M/s. Ferro Alloys Corporation Limited. The Action taken report regarding the partially/ complied condition was submitted to Regional officer MoEF&CC, vide letter no. FACOR/HSE/EC/ZZ/02 dated 29.08.2022. The details of the observations made by IRO in the report dated 08.08.2022. along with its re-assessment / present status as furnished by the PP is given as below:

S. No.	Observations	Action Taken Status	Commitments with Timeline
1	Continuous stack emission monitoring system has not been provided. During visit emission was also observed from one of the four emergency stack. Fume extraction system during tapping was found to beinadequate	Continuous stack emission monitoring system is been ordered for installation along with AAQMS as on 06.08.2022. The copies of which are submitted. During the visit a schedule outage was taken for the furnace rebuild. After completion of rebuild job, the emission from emergency stack and tapping points are controlled.	31.12.2022
2	During visit metal recovery plant was not in operation. Dry fog dust suppression system yet to be provided at the metal recovery plant. Dust extraction system yet to be provided at the material unloading area.	PP has installed 18 water sprinkling system for dust suppression in MRP area, which has been controlling our fugitive emission to remain within the stipulated standard. However PP will install Dry Fog system in MRP and material unloading areaby December 2022.	31.12.2022
3	Raw materials were found to be stored in covered shed as well as in open.	PP has constructed one additional raw material covered shed of 85m x 15m size which can accommodate around 15420MT raw material and all the raw material storage area are concreted to act as a impervious layer. Photograph is submitted.	Already Complied
4	Maximum water use was in the month of July, 2021 for 38567KL, higher than the stipulated in the condition.	With reference to the permission accorded by CGWA vide letter no. 21- 4(74)/SER/CGWA/2008-1281, dated 24th October' 2008, the project proponent had obtained NOC for **withdrawal** of 1422 m^3/day ground water, based on which the EC was granted on 2009 and subsequently on 15th April'2014 and 19th September'2017 respectively. The observed quantity for the month of July'21 translate to 1244 m^3/day of water consumption which is within the permissible limit of 1422 m^3/day.	Justified as given
5	Secured landfills have not been constructed as per the condition of EC	After recovery of the metal slag tailings are being stored in the slag storage yard. After due TCLP test 100% of the slag is been utilized in various construction, road making & low lying area development inside & outside the premises as per the authorization from OSPCB. Copy submitted. Therefore there is no need of a SLF for the slag to be stored as hazardous material.	Justified as given
6	As per the report submitted by the PP total 37,730 seedlings have been planted in an area of 21.3 Ha. (52.63 acre). PP furnished an undertaking to	During filing of application for Environment Clearance, the earlier submitted data regarding Green Belt area of our Charge Chrome Plant of M/s. Ferro Alloys Corporation Ltd. located at Randia of Bhadrak District was collected from the old records maintained and available with the ex-	Complied

S. No.	Observations	Action Taken Status	Commitments with Timeline
	achieve 33% greenbelt by 31st July, 2023	promoters of FACOR. After completion of CIRP process and approval of Resolution Plan vide order dtd. 30.01.2020 of Hon'ble Court of NCLT Cuttack Bench, the new Board has been constituted on 21.09.2020. To implement the provision of the approved Resolution Plan and to comply all statutory requirements, the present management has recently conducted the Drone DGPS Survey of the total plant area from the authorized and empanelled agency of Orissa Space Application Centre (ORSAC). Now according to the latest Drone DGPS Survey report, the total Green belt area of the plant is around 67.918 Acre which is 33.05 % out of the total plant area of 205.50 Acre. Latest DGPS Survey Map is submitted for reference and records. Apart from the above, we have started regular plantation drive in our plant site and also have targeted to plant around 30,000 saplings by the end of September 2022 to intensify the plantation program as well as to fill out the Gaps. GAPs have been covered with greenbelt in admin building, canteen, agglomeration plant, MRP area, boundary side, colony area, internal roadside etc. Photograph of which is submitted.	
7	Utilization of solid waste, installation of continuous stack monitoring and setting up of online ambient air quality monitoring station, to study the possibility of slag transportation back to the abandoned mines, etc. are yet to be implemented satisfactorily	PP is utilizing 100% of the slag as alternative construction material as well as land filling for which authorization has been obtained from OSPCB. As per clause no.1 above, we are committing to complete the installation of online CEMS by 31st December '2022, for which PO has already been placed as on 6-08-2022.	31.12.2022
8	During visit some construction work has been observed in the premises. It has been reported that the date of land development work for expansion as 29th April, 2017. As per the document furnished piling work at the location of furnace has been initiated during 2017. On perusal of the accorded Environmental clearance and amendment issued to the project it was observed that the validity of the environmental clearance dated 04.05.2009 was extended till 03.05.2019 vide letter dated 13.01.2017. As per the EC accorded production capacity of one furnace is 65,000 TPA. Production detail reported for the year 2019-20, 2020- 21 and 2021-22 as 72766 MT, 68331.01 MT and 74995.58 MT respectively.	The observations and respective document verifications during RO visit indicates that the observed constructions were done during the validity of EC period i.e, as on 03/05/2019. For the then proposed expansion project. The production quantity has always been maintained within the permissible limit as per CTO in line with accorded EC.	Justified as given

S. No.	Observations	Action Taken Status	Commitments with Timeline
	PP furnished no increase pollution load certificate from NIT Rourkela for change in production from 65000TPA to 75000TPA. PP also furnished a copy of the acknowledgement slip for Expansion of Production of HC Ferro Chrome from 75000 TPA to 80000 TPA plus 6300 TPA from Metal Recovery Plant for which certificate has not been issued by SPCB with a direction to submit the copy of acknowledgement in support of no increase in pollution load certificate application in Paribesh portal for 65000TPA to 75000TPA. CTO has been accorded by OSPCB vide letter No.4949 dated 29.03.2022 for Charge chrome/High Carbon Ferro Chrome of 750000 metric tonne/annum (Arc furnace of 45 MVA) and charge chrome (metal recovery plant of 6300 metric tonne/annum). The specification/direction issued by SPCB in this matter should be strictly adhered to.		
9	Copy of EIA/EMP of the project to be submitted to the Regional Office	Copy of EIA/EMP of the project is already submitted for kind reference.	17.08.2022
10	The date of financial closure and final approval of the project may be communicated to this office.	M/s. Ferro Alloys Corporation Limited (FACOR) was under Corporate Insolvency Resolution Process (CIRP) under the Insolvency and Bankruptcy Code, 2016. Hon'ble National Company Law Tribunal, Cuttack Bench, vide its order dated 30.01.2020 has approved the Resolution Plan of Vedanta Group. Pursuant to the said order of NCLT Cuttack, the Board of Directors of the Company has been newly constituted on dt.21.09.2020 to implement the approved Resolution Plan. Hence the date of financial closure and final approval of the project by the authority of the Project Proponent was on 21.09.2020. The closure document is attached for your perusal. This board resolution is submitted.	The Financial closure of the proposed expansion shall be submitted after due implementation of the project.

Written representations:

13.3.19 During the meeting, based on the deliberations made by the EAC, the project proponent vide email dated 15.09.2022 submitted the following information:

Sl. No.	Points raised	Submission by PP
1	Photo-affidavit of Director regarding correction of employee name	PP has submitted photo-affidavit in an India non judicial stamp certificate dated 15.09.2022, with a request that the name of "Mr. Ajit Parida" as given on page 235 (fig. 10.1) of EIA report in Organizational structure shall be read hereafter as "Mr. Manoj Kumar Shaw".
2	Affidavit for Installation of AAQMS & OCEMS by 30th Sept. 2022	PP has submitted affidavit in an India non judicial stamp certificate dated 14.09.2022, with undertaking to install AAQMS and OCEMS by 30th September 2022
3	Updation in Stack Emission Permissible Limit	In line with the stack emission standards, the PP has submitted that the PM_{10} emission standard mentioned in the EIA report as "50 mg/Nm^3" shall be hereafter read as "30 mg/Nm^3". PP has agreed to adhere to the permissible emission standard of PM_{10} as 30mg/NM^3.
4	CGWA Application for NOC for 1750 KLD water drawal	PP has submitted the acknowledgement copy received from CGWA on 14.09.2022 for obtaining NOC (vide Application Number : 21-4/74/OR/IND/2008) for withdrawal of 1750 KLD water.
5	Revised Action plan for CER as per MOEF guidelines	Revised Action plan for CER as per MOEF guidelines is submitted and incorporated at para 13.3.14 above.
6	Water Balance	PP has submitted revised water balance diagram incorporating the clarifications, as suggested by the EAC.
7	Material Balance	PP has submitted revised material balance diagram incorporating the clarifications, as suggested by the EAC.
8	Clarification of ATR points	PP clarified that in 2009, EC was granted for expansion of existing 1x45MVA furnace to add another 1x45 MVA new furnace. In 2012, this EC was modified to reduce the new furnace capacity from 45MVA to 27MVA, which was valid till 03.05.2019. PP has clarified that the construction work of 27MVA furnace foundation was started after obtaining CTE on dated 13.02.2017 within the validity of EC up to 03.05.2019. However, the total construction was not completed and left as it is and taken over by the new proponent. The production quantity has always been maintained within the permissible limit as per CTO in line with accorded EC.
9	Salandi river flood protection measures	PP has submitted details of elevation of Salandi river bed, river bank, observed high flood level and base elevation of the plant boundary. It is noted that the elevation difference between high flood level and plant boundary is approximately 1.8m-2.0m. In addition, the plant has erected 2m high concrete boundary wall, along with thick greenbelt adjacent

Sl. No.	Points raised	Submission by PP
		to the boundary. PP was advised to reinforce the existing boundary wall for better flood protection.

Deliberations by the Committee

13.3.20 The Committee noted the following:

1. The instant proposal is for expansion of Ferro Alloys Plant for production of High Carbon Ferro Chrome from 75,000 TPA through 1X 45 MVA Furnace and 6,300 TPA from MRP up to 1,45,000 TPA from 1X45 MVA & 1X 33 MVA Furnaces and 11,800 TPA from MRP within the existing premises.
2. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.
3. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.
4. The existing project was initially granted Environment Clearance vide letter No. J-11011/594/2008- IA II (I) dated 04.05.2009 for expansion of existing 1x45MVA furnace to add another 1x45 MVA new furnace (High Carbon Ferro Chrome, 65,000 TPA to 1,30,000 TPA). Amendment in EC was obtained vide letter dated 21.11.2012 to reduce the new furnace capacity from 45MVA to 27MVA (High Carbon Ferro Chrome from 1,30,000 TPA to 1,15,000 TPA). EC validity extension was obtained vide letter dated 13.01.2017 and thus EC was valid till 03.05.2019. PP has further clarified that the construction work of 27MVA furnace foundation was started after obtaining CTE vide lr.no. 2066/IND-II-NOC-6051 dated 13.02.2017 within the validity of EC up to 03.05.2019. However, the total construction was not completed and left as it is and taken over by the new proponent. The production quantity has always been maintained within the permissible limit as per CTO in line with accorded EC. Latest Consent to Operate for the existing unit was accorded by Odisha State Pollution Control Board vide lr. No.4949/IND-I-CON-5461 dated 29.03.2022. The validity of CTO is up to 31.03.2026.
5. 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.

6. The total project area is 83.16 ha which is in possession of FACL. Land has been acquired and allocated to the Industry by IDCO, Bhubaneswar.

7. The water requirement for the proposed project is estimated as 2521 KLD, out of which 1750 KLD of fresh water requirement will be obtained from Ground water.

8. Salandi River (0.5 km, E) and Akhaupada High Level Main canal (0.5 km, S) exists within the study area of 10 km around the project site. The EAC is of the opinion that water bodies shall not be disturbed. Mitigation measures w.r.t. safeguarding the water bodies shall be implemented.

9. The EAC deliberated on elevation of Salandi river bed, river bank, observed high flood level and base elevation of the plant boundary. PP has reported that the elevation difference between high flood level and plant boundary is approximately 1.8m-2.0m. In addition, the plant has erected 2m high concrete boundary wall, along with thick greenbelt adjacent to the boundary. PP was advised to reinforce the existing boundary wall for better flood protection, PP has committed to do so.

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

11. The EAC noted that the existing green belt has been developed in 27.49 Ha area which is about 33.05 % of the total project area of 83.16 Ha with total sapling of 37730 Trees. Proposed greenbelt will be developed in additional 1.5 ha which is about 1.8% of the total project area. Thus a total of 28.99 ha area (34.84 % of total project area) will be developed as greenbelt. Total no. of 30000 saplings will be planted in this season and nurtured in 28.99 hectares. The Committee deliberated on the action plan and budget allocation for green belt development and found it satisfactory.

12. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found them to be satisfactory.

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

14. The Committee deliberated upon the certified compliance report of IRO and the Action taken report of PP and found it satisfactory. The EAC also took into account the revised timeline for installation of AAQMS and OCEMS by 30th September 2022 submitted by PP through an affidavit in an India non judicial stamp certificate dated 14.09.2022.

15. The Committee deliberated upon the written submission of the Project Proponent and found it satisfactory.

16. 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.

17. 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:

13.3.21 In view of the foregoing and after detailed deliberations, the committee **recommended** the instant proposal for grant of Environment Clearance **subject to uploading the written submission on 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 project proponent shall strictly comply with the timelines as per submitted ATR on the partially/non-complied conditions of previous EC(s) observed by IRO. The revised timeline for installation of AAQMS and OCEMS shall be complied. The status of the same shall be submitted to IRO, MoEF&CC.

iv. The Salandi River (0.5 km, E) and Akhaupada High Level Main canal (0.5 km, S) exists within the study area of 10 km around 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.

v. The PP shall undertake flood protection measures due to presence of Salandi river as committed.

vi. 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.

vii. 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.

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/Nm^3.

x. PP shall carry out periodically occupational health survey as per the applicable norms.

xi. The 4^{th} hole extraction system shall be provided in the Sub Merged Arc Furnaces.

xii. 100% of the slag generated through the process shall be utilised.

xiii. The water requirement for the proposed project is estimated as 2521 KLD, out of which 1750 KLD of fresh water requirement shall be obtained from Ground water. Necessary permission shall be obtained from the Competent Authority in this regard. PP shall explore the possibility of shifting to alternate source of water to reduce dependency on groundwater.

xiv. 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. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.

xv. The company 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.

xvi. PP shall adopt nearby villages and prepare and implement a robust plan to develop them into model villages in next 10 years.

xvii. Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.

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

xix. Three tier Green Belt shall be developed in at least 33% 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. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.

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

xxi. The PP shall minimize the evaporation losses in jigging operation to less than 10% using suitable advanced process.

xxii. The PP shall install CO sensors at the furnace top level and the monitoring report shall be submitted to the IRO, MoEFCC in this regard.

xxiii. 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.

xxiv. The PP shall strengthen the social entrepreneurship opportunities; strengthen Self Help Groups into SMEs; strengthen Health infrastructure in the surrounding nearby villages and the compliance report in this regard needs to be submitted to IRO, MoEFCC.

xxv. 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.

xxvi. 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); 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.

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

X. Miscellaneous

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

***

Re-Consideration of Environmental Clearance

Agenda No. 13.4

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

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

13.4.1 M/s. Essar Minmet Limited (EML) has made an online application vide proposal no. IA/OR/IND/198977/2021 dated 27.07.2022 along with copy of EIA/EMP report, Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category 'A' of the schedule of the EIA Notification, 2006) and appraised at Central Level.

13.4.2 Name of the EIA consultant: M/s. M N Dastur & Co (P) Ltd. [Certificate no. NABET/EIA/1821/RA0131; NABET Extension Letter no. QCI/NABET/ENV/ACO/22/2417 dated 11.07.2022; Valid up to 10.10.2022].

Details submitted by Project proponent

13.4.3 The details of the ToR are furnished as below:

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

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

13.4.5 Environmental Site Settings:

S.No.	Particulars	Details	Remarks

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

Study area :<table><tr><th>Waterbody</th><th>Direction</th><th>Distance</th></tr><tr><td>Mahanadi</td><td>North</td><td>3.9 km</td></tr><tr><td>Santra</td><td>South West</td><td>3.9 km</td></tr><tr><td>PPT Reservoir</td><td>North</td><td>Adjacent</td></tr><tr><td>Taladanda Canal</td><td>North East</td><td>300 m</td></tr></table></td><td>Distance of HFL from Project Site : 3.9 km</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger</td><td>Bhitarkanika Wildlife Sanctuary
Paradeep Severely Polluted Area (SPA)</td><td>7.8 km, NE
Project is located within Paradeep SPA</td></tr>
</table>

	reserve/ elephant reserve etc. if any within the study area		

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

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

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

Sl No.	Raw Material	Total Annual requirements, tons	Source	Distance from site (km)	Mode of Transportation
1	Iron ore concentrate	14,294,000	Proposed captive beneficiation plant at Keonjhar district, Odisha, through slurry pipe line.	250	Slurry Pipeline
2	Bentonite	80,000	Procured from Gujarat	4	Sea (by road from Paradeep Port to plant site)
3	Limestone	320,000	Imported from Middle East Countries (UAE, Oman)	4	Sea (by road from Paradeep Port to plant site)
4	Dolomite	156,000			
5	Anthracite coal	202,000	Imported (Russia/ Vietnam/ Indonesia/Australia)	4	Sea (by road from Paradeep Port to plant site)
6	Natural Gas	30,000 Nm3/hr	IOCL/Gail	0	By pipeline
7	Furnace Oil	210,000 KL (Only in the event of non-	IOCL Paradeep	2	By road

Sl No.	Raw Material	Total Annual requirements, tons	Source	Distance from site (km)	Mode of Transportation
		availability of NG)			
8	LDO	440 KL	IOCL Paradeep	2	By road

13.4.8 The water requirement for the proposed project is estimated as 9,000 m^3 /day, which will be obtained by recovered water after dewatering/filtration of iron ore concentrate slurry and partly by recycling of treated water from ETP and treated water of STP. The specific water consumption is about 0.23 m^3/ton of product pellet.

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

13.4.10 Baseline Environmental Studies:

Period	Parameters
AAQ parameters at 8 Locations	• $PM_{2.5}$ = 43.2 to 70.0 μg/m^3 • PM_{10} = 80.6 to 130.3 μg/m^3 • SO_2 = 4.0 to 24.4 μg/m^3 • NOx = 25.6 to 37.3 μg/m^3 • CO = 0.1 to 0.6 mg/m^3
Incremental GLC level	• PM_{10} = 5.7 μg/m3 (Level at 2.17 km in NNW Direction) • SO_2 = 2.2 μg/m3 (Level at 2.17 km in NNW Direction) • NOx = 4.3 μg/m3 (Level at 2.17 km in NNW Direction) • CO = 32.4 μg/m3 (Level at 6.5 km in SSE Direction)
Ground water quality at 8 locations	pH: 7.51 to 7.80 Total Hardness: 505.63 to 605.59 mg/l, Chlorides: 288.99 to 503.33 mg/l, Fluoride: < 0.1 mg/l Heavy metals (Cr 6+) : <0.02 mg/l
Surface water quality at 8 locations	pH: 4.85 to 7.91 DO: 5.2 to 6.8 mg/l BOD: 5.33 to 20.67mg/l COD: 20.63 to 67.12 mg/l
Noise levels Leq (Day and Night)	60.67 to 67.87 dBA for the day time and 57.33 to 65.43 dBA for the Night time
Traffic assessment study findings	• Traffic study has been conducted on Athar Banki on NH-53 which is approximately 250 m from the plant site. • Transportation of raw material, fuel & finished product will be done 5% by road (from Paradip port and IOCL to plant). The finished product would be transported to Paradip Port by covered conveyor.

<table>
<tr><td></td><td>

Existing PCU is 1145.79 PCU/hr at Athar Banki on NH 53 and existing level of service (LOS) is: C

<table>
<tr><th>Road</th><th>Location</th><th>V (Vol in PCU/hr)</th><th>C (Capacity in PCU/hr)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>NH53</td><td>Athar Banki</td><td>1145.79</td><td>3600</td><td>0.32</td><td>C</td></tr>
</table>

PCU load after proposed project will be 1145.79 (Existing) + 26.21 (Additional) PCU/hr and level of service (LOS) will be: C

* Note: Capacity as per IRC-106-1990 Guide line for capacity for roads.

Conclusion: The level of service will remain C after including additional traffic due to proposed project.
</td></tr>
<tr><td>Flora and fauna</td><td>Since Bhitarkanika Wildlife Sanctuary falls in the study area, there is presence of Schedule 1 species like Olive Ridley Turtle, Dolphins, Indian Python, Crocodiles etc. A wildlife conservation plan approved by PCCF, Odisha has been prepared and INR 357.781 lakhs has been allocated for the said plan.</td></tr>
</table>

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

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

13.4.12 Public Consultation:

Details of advertisement given	Advertisement dated 03.12.2021 published in The Times of India (English) and Prameya (Odia)
Date of public consultation	05.01.2022
Venue	Land in front of Kalyan Mandap, Paradeep in Jagatsinghpur District.
Presiding Officer	Additional District Magistrate

Major issues raised	i. Plantation Activities ii. Skill development to provide local employment. iii. Utilizing CSR fund for peripheral development. iv. Establishment of superspeciality hospital v. Pollution control and prevention measures vi. Storm water drainage issue at adjacent bastis

Action Plan as per Ministry's O.M. dated 30/09/2020

Description	Year 1	Year 2	Total (in Rs. Lakhs)
Area Development			
Development of village roads	Balijhara village - 2 km in length. Paradipgarh village - 2 km Bijaychandrapur village - 2 km Udaybhat village - 2 km Allocation of fund to Paradip Municipality for repairing of damaged road. The agreement with Paradip Municipality will be intimated to MoEFCC during six (6) monthly compliance	Maintenance works	550
Improvement of drainage condition of Bauriapalanda & Balijhara villages - total 8 km	Construction of drain (total 8 km length) in Bauriapalanda & Balijhara villages and connection to existing drainage network of Paradip Municipality	Maintenance works	205
Health care facilities	Strengthening of primary health care unit in Nuagarh & Biswali villages. The need will be assessed in consultation with local administration and will be informed to MoEFCC during 6 monthly compliance. The EML will provide funds to local administration for development of hospital and the scheme will be informed to MoEFCC through six (6) monthly compliance	Procurement of mobile health care unit for conducting medical campaign in Bhutmundai, Paradipgarh, Nuagarh & Biswali villages and maintenance works	750
Establishment of library infrastructure facilities with 500 books, 10 bookshelves and 4 numbers of computers with internet facilities in villages	Bijaychandrapur & Bhutmundai	Nuagarh, Balidia, Chakradharpur & Paradipgarh	200
Skill development training on welding, electrician course, machinery, carpentry etc. and livelihood program	200 persons	400 persons	300
Local students training through ITI list - 2 ITIs in Paradipgarh, 1 ITI in Nuagarh, and 1 ITI in Mangrajpur.	40 students	20 students	60
Strengthening of school library & up gradation of existing village schools by providing Chair, table &	Three schools 1. Pipal UP School 2. Govindchandra High school Nuagarh	Five schools 1. Paradip Port High school Bhutmundai 2. Nabjyoti Girls' High	240

Description	Year 1	Year 2	Total (in Rs. Lakhs)
books & 4 Nos of computers with internet to each library	3. Balidia Nodal UP School	school Biswali 3. Chakradharpur High School 4. Bijaychandrapur School UP School 5. Srimaa Aurobindo School Paradipgarh	
Infrastructure improvement of Bauriapalanda Basti	Rehabilitation of Basti will be taken up with District Administration and Paradip Port Trust & the development plan will be intimated to MoEFCC	Continued in 2nd year and maintenance works	600
Provision of drinking water through pipelines & installation of portable RO in peripheral villages or contribution to government fund for the same	Six villages 1. Balijhara 2 Musadia 3. Bauriapalanda 4. Bijaychandrapur 5. Bhutmundai 6. Nuagarh	Two villages 1. Balidiha 2. Chakradharpur	500
Vocational training on tailoring, farming, poultry for skill development of women. Selection of villages will be decided in discussion with Local administration	300 women	600 women	300
Total (in INR lakhs)	**2185**	**1520**	**3705**
Note: EML commit to adopt two villages, Nuagarh (population: 2561 as per 2011 census) and Balidia (population: 1972 as per 2011 census) for development.			

13.4.13 The capital cost of the proposed project is Rs 3,347 Crores and the capital cost for environmental protection measures is proposed as Rs 236.95 Crores (including technological mitigation cost). The annual recurring cost towards the environmental protection measures is proposed as Rs 1.0 Crores. The employment generation from the proposed project is 1,349 (both direct and indirect). The details of cost for environmental protection measures is as follows:

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

Technological Pollution mitigation Cost

Sl. No.	Mitigation measures	Budget in INR crore
1	ESP - 2 Nos. (Induration furnace)	90
2	ESP - 2 Nos. (Discharge end)	**20**
3	ESP - 2 Nos. (Hearth layer discharge)	20
4	Additive grinding building - Bag filters	5
5	Pneumatic conveying - Bag fiters	2
6	Product stockpile - Garland drain	2
7	Covered storage for additives (Bentonite, limestone, coal) and filter cake with garland drain	10
8	RCC roads in place of bitumen roads (inside plant)	4
9	NG and FO dual firing boilers in induration furnace (Differential cost with respect to FO fired boilers)	20
Total		**173 (B)**
Total (A + B)		**236.95**

13.4.14 Proposed greenbelt will be developed in 16.19 ha which is about 40% of the total project area. A 10-100m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees/Ha. Total no. of 40,475 saplings will be planted and nurtured in 16.19 hectares in 3 years.

13.4.15 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.

13.4.16 The proposal was initially considered in the 11th meeting of the EAC for Industry-I sector held on 16th August, 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 16th August, 2022)

13.4.17 The Committee noted the following:

1. The EAC deliberated on the baseline data and observed that the baseline values of parameters such as PM10, PM2.5, total hardness, Noise levels etc. are too high or beyond the NAAQS standards. Since the proposed project falls under Paradeep Severely Polluted Area (SPA), the EAC is of view that the Project Proponent shall comply to the Ministry's OM vide F.No. 22-23/2018-IA.III (Pt) dated 31st October, 2019 in relation to compliance of Hon'ble NGT order dated 19.08.2019 (published on 23.08.2019) in O.A. No. 1038 /2018 pertaining to formulation of a mechanism for environmental management of critically and severely polluted areas and consideration of activities/projects in such areas. The EAC observed that the proposed project is located in SPA and having PM10, & PM2.5 and other data of AAQ, however the Consultant has not prepared adequate the mitigation plan as per Ministry's Guidelines. The Plan is very qualitatively and not found in order. The Committee advised the Consultant to rework on the Plan. Project proponent shall submit a detailed mitigation measures plan with respect to the conditions stipulated for projects falling in CPA/SPA as per the OM.

2. The EAC noted that the SPCB has made the Action Plan in Year 2020 and still the baseline data is very high. The EAC also suggested that a meeting can be conducted by Project Proponent with the State Government to discuss on the preparation and implementation on the action plan to mitigate the pollution in SPA areas.

3. The EAC observed that the baseline modelling shall be reworked / re-verified for the data submitted in the EIA/EMP Report.

4. The EAC observed that the EMP cost is very less. PP shall rework on the issues.

5. The EAC deliberated on the action plan submitted to address the issues raised during the public consultation and found it unsatisfactory. PP shall explore the possibility to implement some of the activities in the 1st year itself which are committed in the subsequent years. Project Proponent is required to submit revised action plan to address the PH issues as per Ministry's OM F.No. 22-65/2017-IA.III dated 30/09/2020. The Consultant has to read the various provisions of the OM and accordingly rework the action plan.

6. The water balance diagram submitted in the EIA Report do not include the water required for greenbelt development. The EAC is of the opinion that the water balance diagram shall be revisited and the optimized water balance shall be updated in the EIA/EMP Report. The Consultant has to revise the water balance including all the water requirement.

7. The EAC observed that the instant proposal is a part of inter-linked project and a separate ToR has been obtained for a Beneficiation Plant from the MoEF&CC. The EAC advised PP to expedite the submission of EC application for obtaining desired EC for Beneficiation Plant. Without beneficiation plant, how PP will implement this instant project?

8. The project proponent shall undertake village adoption and develop a robust action plan to develop the villages in model villages.

9. The project proponent reported that the land is in possession of Paradip Port Trust Authority and would be taken on long term lease basis for sixty (60) years. The project proponent is required to submit the acquisition status of the same.

10. Mahanadi River, Santra, PPT Reservoir and Taladanda canal are in the vicinity of the project site within the study area. A robust Conservation scheme to protect these water bodies; along with Soil conservation scheme and multiple Erosion control measures shall be prepared.

11. The PP is going to use 2,02,000 Anthracite coal. During operational phase PP shall submit the Action Plan to monitor the coal dust exposures at coal handling areas, ball mills, furnace charging areas through personal/area monitoring; and compare with permissible exposure limit for PM2.5 dust (coal dust 2 mg/m3) in respirable dust containing less than 5% silica/quartz.

12. Based on the above observations, the EAC is of the view that the EIA/EMP Report shall be revised with the requisite changes and shall be uploaded on PARIVESH Portal. The

EAC advised the Consultant to rework and prepare good quality of Report including all the mitigation measures for further deliberations by the EAC.

Recommendations of the Committee (EAC during 16th August, 2022)

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

13.4.19 The proponent submitted the ADS reply vide letter dated 2nd September 2022 uploaded on PARIVESH on 2nd September 2022. Point-wise reply of ADS is given as below.

1. The EAC deliberated on the baseline data and observed that the baseline values of parameters such as PM10, PM2.5, total hardness, Noise levels etc. are too high or beyond the NAAQS standards. Since the proposed project falls under Paradeep Severely Polluted Area (SPA), the EAC is of view that the Project Proponent shall comply to the Ministry's OM vide F. No. 22-23/2018-IA.III (Pt) dated 31st October, 2019 in relation to compliance of Hon'ble NGT order dated 19.08.2019 (published on 23.08.2019) in O.A. No. 1038/2018 pertaining to formulation of a mechanism for environmental management of critically and severely polluted areas and consideration of activities/ projects in such areas. The EAC observed that the proposed project is located in SPA and having PM10, & PM2.5 and other data of AAQ, however the Consultant has not prepared adequate the mitigation plan as per Ministry's Guidelines. The Plan is very qualitatively and not found in order. The Committee advised the Consultant to rework on the Plan. Project proponent shall submit a detailed mitigation measures plan with respect to the conditions stipulated for projects falling in CPA/SPA as per the OM.

Reply: The compliance to the conditions for SPA/CPA as per Ministry's OM vide F. No. 22-23/2018-IA.III (Pt) dated 31st October, 2019 in relation to compliance of Hon'ble NGT order dated 19.08.2019 (published on 23.08.2019) in O.A. No. 1038 /2018 pertaining to formulation of a mechanism for environmental management of critically and severely polluted areas and consideration of activities/projects in such areas is shown below:

Environment	Condition Stipulated	Compliance	Impact	Budget allocated [INR - CR]
Air	i) Stack Emission levels should be stringent than the existing standards in terms of the identified critical pollutants	1. The first generation Pellet plants installed in India were with Multi Clones and stack emission levels were 100 mg/Nm^3 maximum. The second generation Pellet plants were installed with ESPs with stack emission limits 50 mg/NM^3 maximum. The third generation Pellet plant has enough data for processing	With 20 mg/NM^3 emission from Stack, PM_{10} increase will be max 2.92 $\mu g/m^3$ at A4 located about 2.17 km NNE of the plant boundary. These emissions will be far below the permissible standard. With	130

Environment	Condition Stipulated	Compliance	Impact	Budget allocated [INR - CR]
		fragile iron ore of Odisha region. The dust collection system have under-gone a major change to operate under challenging conditions. The Customized ESP technologies such as AIRTECH Compact Clean TM ESP with digitalized control known as PIAC DC 4 developed by established ESP manufacturer is installed in LKAB Sweden Pellet plant. Essar Minmet Ltd is planning to install similar ESP which will maintain stack emission level within 20 mg/ NM^3 with N-1 fields. The ESP technology suppliers are committing to this emission standards. Hence, all our calculations are made with maximum emission level of 20 mg/NM^3 only from the outlet of ESP.	50 mg/NM^3 emission from Stack, PM_{10} increase will be 9.6 $\mu g/m^3$ at the same location.	
	ii) CEMS may be installed in all large/medium red category industries(Air Polluting) and connected to SPCB and CPCB server	The main induration stacks will have online monitoring instrument which will be connected through IP to OSPCB and CPCB on continuous basis	Online stack monitoring data will be made available to OSPCB and CPCB.	2
	iii)Effective Fugitive emission control measures should be imposed in the process/ transportation/packing etc.	PP is committed to prepare and implement a project specific AQMP (Air quality Management Plan) with Best practices; shall determine priority pollutants. Pollution prevention approaches to reduce, eliminate, prevent pollution at its source, like to use less toxic raw materials or fuels, use a less-polluting industrial process, and to improve the efficiency of the process. Develop a control strategy and plan that incorporates the pollution control measures. The Clean Air practices shall be adopted like mechanical collectors, wet scrubbers, fabric filters (Bag houses), electrostatic precipitators, combustion	1. Online CAAQMS with connectivity to OSPCB and CPCB will be provided	1

Environment	Condition Stipulated	Compliance	Impact	Budget allocated [INR - CR]
		systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation, which ever are relevant to the project. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Tyre washing systems shall be put in place wherever necessary. Additionally truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding area, beyond the project premises to arrest suspended dust in the atmosphere. 1. Process : Online monitoring and control through CCR will ensure all time performance to keep the fugitive emission under control.		
		2. Transportation:	Better Ambient Air Quality for Control Fugitive Dust Emissions. Adopting and implementing best practices of Housekeeping shall significantly keep the check on fugitive emissions and other pollution causing activities.	
		2.a) All the trucks bringing other materials like Bentonite, Anthracite, Lime stone from port plot to plant (6 trucks/ hr) will be properly covered with Tarpaulin.		
		2.b) The trucks tyre washing system is incorporated in the plant layout to avoid fugitive dust emission.		0.75
		2.c) Water sprinkling at regular intervals will be done on all the roads.		0.30/annum
		2.d) Road Sweeper will be engaged		3.00
		2.e) Both sides of the Road will have green coverage		0.30
		2.f) Provision of modular metal cloth type wind curtain to reduce fugitive emissions 2.e) Housekeeping: House-keeping measures (like enclosing and Green Belt barrier of Raw		3.00

Environment	Condition Stipulated	Compliance	Impact	Budget allocated [INR - CR]
		material yard; fugitive Dust control measures; Routine cleaning mechanism, land based industrial vacuum cleaning facility; Adequate internal drainage to avoid water logging; Awareness notices/ displays – beautification like paints, drawings etc; Internal Roads – paved and wide enough, Internal & connecting roads to the Highway are black topped; Facilities for spillage collection; Provision of high capacity sprinkler system at raw material handling, loading and unloading stations) shall be installed.		
	iv) Transportation of materials by Rail/conveyor Belt, wherever feasible	1. Major Input Raw Material "Iron Ore Concentrate" 14.30 mtpy is transported through a 250 km long slurry pipe line which is buried under ground	Zero Impact on Environment	Rs.800 Cr Included in project Capex
		2. 14 mtpy product pellet is shipped through a mechanized loading system from plant to port through a closed conveyor.	Impact on Environment will be insignificant	Rs.350 Cr Included in Project capex
	v) Encourage Use of cleaner fuels(Pet coke/furnace oil/LSHS may be avoided)	Natural gas is the prime fuel. System will be designed to use Low Sulphur FO only during non-availability of Natural Gas. No Pet coke/high sulphur fuel oils are planned to be used	Low SOx compared to FO	Rs.20 Cr for additional for dual burners Included in Project Capex
	vi) Best Available Technology may be used. For example usage of EAF/SAF/ IF in place of cupola furnace. Usage of super critical technology in place of sub critical technology.	EAF/SAF/IF/Critical Technology are not part of our plant process. Hence Not applicable.		
	vii) Increase of green belt cover by 40% of the total land area beyond the permissible require-ment of 33%, wherever feasible	The plant layout is developed for covering 40% of land as green belt.(40 acres ie., 16.19 hectares. A 3-tier plantation green belt with native species @ 2500 trees/hectare shall be undertaken in the initial years	Better green coverage and natural wind barrier as well as arresting fugitive dust generated within the plant.	3.3

Environment	Condition Stipulated	Compliance	Impact	Budget allocated [INR - CR]
		itself and the survival maintenance shall be done in the following years)	This will also enable carbon sequestration to the tune of about 1000 tons of CO2/year.	
	viii) Stipulation of green belt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry etc.	Avenue plantation and plantation in vacant areas, social forestry will be undertaken with due approvals from local authorities and Gram Panchayats.	Increase in green coverage and providing livelihoods to villagers through social forestry. This will also enable to carbon sequestration to a significant level.	1.00
	ix) Assessment of carrying capacity of transportation load on roads inside the industrial premises. If the roads to be widened, shall be prescribed as condition.	All the plant inside roads (4km) are considered to be concrete and included in the project capex. The roads will be designed as per relevant Standard Code.	Effective control of fugitive emissions and soil erosion	12
Water	i) Reuse/Recycle of treated waste water, wherever feasible	1. The water received through slurry transportation after meeting the requirement of pellet plant is returned through return water pipe line of 250 km in length to Beneficiation Plant for Reuse.	Saving of 34.5% of fresh water intake (380 cum/ hr) equivalent to 3.63 cusecs	Additional 800 Cr in Capex for return water pipeline
		2. Rain Water during monsoon is planned to transfer through return water pipe line to Beneficiation plant to the max extent possible. Clarifloculator of suitable capacity (150 cum) to be installed.	Further Reduction to the tune of 3600 KLD in fresh water intake during monsoon from River Baitarani	2
		3. CETP for treating blow down water and reuse in dust suppression and greenbelt	80 cum/hr of water saving by recycling	1.3
		4. STP - Sewage Treatment Plant	6 cum/hr is used for green belt	0.7
	ii) Continuous monitoring of effluent quality, quantity in large and medium Red Category industries (water polluting)	Periodical monitoring as part of Environmental Management Programme, the sample collection, testing and monitoring as per schedules both by in-house as well as reputed NABL accredited third party agencies would be implemented	Ensures no impact on ground water quality in the near by areas	0.5 Cr / annum
	iii) A detailed water harvesting plan may be submitted by the project proponent	The storm water will be captured and utilized to send back through return water	Conservation of Rain water and Reduction in fresh	Rs.800 Cr for return water pipelineCapex

Environment	Condition Stipulated	Compliance	Impact	Budget allocated [INR - CR]
		pipe line. A clarifloculator of 150 cum capacity included in the process to treat the rain water before leaving the plant boundary.	water intake	included in (i.2)
	iv) Zero liquid discharge wherever techno-economically feasible	1. Process water is recycled through return water pipe line to Beneficiation plant	The scheme ensures zero discharge in the pellet complex	Rs.800 Included in Project Cost for return water pipeline.
		2. Rain water is also planned to be used through the return water pipe line		
	v) In case, domestic waste water generation is more than 10 KLD, the industry may install STP.	STP is incorporated in the plant layout	Recycle and Reuse of water	Included in Water (i.4)
Land	i) Increase of green belt cover by 40% of the total land area beyond the permissible requirement of 33% where feasible for new projects	Plant Layout has been prepared with 40% plant area reserved for green belt over 16.19 hectares. A 3-tier plantation green belt with native species @ 2500 trees/hectare shall be undertaken in the initial years itself and the survival maintenance shall be done in the following years)	Better green coverage and natural wind barrier. This will also enable carbon sequestration to the tune of about 1000 tons of CO2/year.	Included at Air (vii)
	ii) Stipulation of green belt outside the project premises such as avenue plantation, plantation in vacant areas and social forestry etc.,	Avenue plantation and plantation in vacant areas, social forestry will be undertaken with due approvals from local authorities and Gram Panchayats.	Increase in green coverage and providing livelihoods to villagers through social forestry. This will also enable to carbon sequestration to a significant level.	Covered in Air Sl. No. viii)
	iii) Dumping of waste (fly ash/slag/red mud etc.) may be permitted at designated locations approved by SPCBs/PCCs	No solid waste such as fly ash/slag/red mud is generated in pellet making. Hence Not applicable		
	iv) More stringent norms for management of Hazardous waste. The waste generated should preferably b e utilised in co-processing	1. Used Lubricants will be handed over to authorized recycler for further processing	Effective solid waste management	0.1
		2. STP sludge will be used as manure for green belt		Included in Water (i.4)
Other Conditions (Addnl)	1. Monitoring of compliance of EC conditions may be submitted with third party audit every year	Annual Audit by reputed agencies will be carried out and the compliance will be submitted to OSPCB/CPCB/MOEFCC	-	-
	2. The % of CER at at least 1.50 times the slabs given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of	The project location is coming under SPA, the CER amount is 1.50 times as compared Non SPA locations	Better Social Governance	37.05

Environment	Condition Stipulated	Compliance	Impact	Budget allocated [INR - CR]
	Environmental Clearance	which amounts to Rs. 37.05 crores as against of Rs. 24.70 Crores		

2. The EAC noted that the SPCB has made the Action Plan in Year 2020 and still the baseline data is very high. The EAC also suggested that a meeting can be conducted by Project Proponent with the State Government to discuss on the preparation and implementation on the action plan to mitigate the pollution in SPA areas.

Reply: A meeting took place on 29/08/2022 in the office of Member Secretary, OSPCB where CEO & MD and other senior officers of EML were present. Member Secretary informed that implementation on "Action Plan for Abatement of Pollution in Industrial Areas of Paradip published in July 2020" is being monitored. It was informed by Member Secretary that High Level Monitoring Committee chaired by Chief Secretary - Odisha and Chairman OSPCB reviewed the status of the implementation on 13th July 2022 where all the stake holders were present.

Member Secretary also appreciated for taking up the discussion on issue of SPA with State Pollution Control Board. He also informed to give a letter to OSPCB on status of implementation of action plan for Paradip. They will give their reply on this matter.

Accordingly, a letter was written to Member Secretary on 30/08/2022 to share the status of Implementation of Action Plan for Abatement of Pollution in Industrial areas of Paradip. The reply is expected shortly.

3. The EAC observed that the baseline modelling shall be reworked / re-verified for the data submitted in the EIA/EMP Report.

Reply: The air dispersion modelling based on BREEZE ISC-ST3 developed by Trinity Consultants, USA has been re-verified and the model output is given below:

AAQ Station (Distance and direction w.r.t. project site)	Pollutant	Baseline (P_{98}) µg/m^3 (A)	Contribution from vehicular movement (for PM only) & point source emission, µg/m^3 (B)	Post project Ambient Air Quality, µg/m^3 (A + B)	NAAQ Standard, µg/m^3
A1 (6.6 km SW)	PM_{10}	118.3	0.53	118.83	100
	$PM_{2.5}$	64.4	0.26	64.66	60
	SO_2	12.1	0.7	12.8	80
	NO_X	36.5	1.3	37.8	80
	CO (8 hrs)	300	4.78	304.78	2000
A2 (7.19 km WSW)	PM_{10}	83.0	0.05	83.05	100
	$PM_{2.5}$	42.7	0.03	42.73	60
	SO_2	<4.0	0.4	4.4	80
	NO_X	25.6	0.7	26.3	80
	CO (8 hrs)	<100	4.78	104.78	2000
A3 (1.35 km SSW)	PM_{10}	120.5	1.01	121.51	100
	$PM_{2.5}$	69.3	0.5	69.8	60
	SO_2	11.8	1.9	13.7	80
	NO_X	33.9	3.7	37.6	80
	CO (8 hrs)	400	20.56	420.56	2000
A4 (2.17 km NNW)	PM_{10}	124.9	2.92	127.82	100
	$PM_{2.5}$	69.7	1.46	71.16	60
	SO_2	20.7	2.2	22.9	80

AAQ Station (Distance and direction w.r.t. project site)	Pollutant	Baseline (P_{98}) µg/m^3 (A)	Contribution from vehicular movement (for PM only) & point source emission, µg/m^3 (B)	Post project Ambient Air Quality, µg/m^3 (A + B)	NAAQ Standard, µg/m^3
	NO_X	34.0	4.3	38.3	80
	CO (8 hrs)	500	28.45	528.45	2000
A5 (7.19 km NW)	**PM_{10}**	88.4	0.05	88.45	100
	$PM_{2.5}$	51.4	0.03	51.43	60
	SO_2	7.0	0.7	7.7	80
	NO_X	28.5	1.3	29.8	80
	CO (8 hrs)	<100	0.83	100.83	2000
A6 (7 km N)	**PM_{10}**	80.6	0.53	81.13	100
	$PM_{2.5}$	43.2	0.26	43.46	60
	SO_2	<4.0	2.2	6.2	80
	NO_X	25.7	4.3	30	80
	CO (8 hrs)	<100	20.56	120.56	2000
A7 (1.69 km WNW)	**PM_{10}**	130.3	1.48	131.78	100
	$PM_{2.5}$	70.0	0.74	70.74	60
	SO_2	24.4	1.3	25.7	80
	NO_X	37.3	2.5	39.8	80
	CO (8 hrs)	600	12.67	612.67	2000
A8 (4.38 km NE)	**PM_{10}**	118.3	0.53	118.83	100
	$PM_{2.5}$	64.9	0.50	65.4	60
	SO_2	13.7	1.6	15.3	80
	NO_X	36.3	3.1	39.4	80
	CO (8 hrs)	400	16.62	416.62	2000

NOTE: This area is highly industrialised zone and consists of various other industries. It may be noted that as this project has not yet been commissioned, the measured AAQ emission values are not contributed by this project and are essentially from the background activities, either natural or contributed from other industries.
As per the predicted GLC, the contribution of EML for PM_{10} and $PM_{2.5}$ will be below 2.92 µg/m^3 and 1.46 µg/m^3 respectively which is much below the predicted GLC considering present emission norms. The other parameters would be well within the permissible limits.

4. The EAC observed that the EMP cost is very less. PP shall rework on the issues.

Reply: The EMP cost included in the EIA report earlier did not include the costs pertaining to the technological measures for mitigation of pollution. The same is now included in the EMP cost and the total EMP cost is now INR 236.95 crore i.e. about 7.1 % of the project cost as shown below.

EMP COST

	INR in crore CAPEX	INR in crore OPEX
Water Conservation and Wastewater Treatment	2	0.1
Air Pollution Control Measure	10	0.2
Solid Waste management	0.1	0.1
Energy Conservation	0.5	-
Greenbelt Development	3.3	0.1
On-line Monitoring & Environmental Laboratory	11	0.5

Socio economic development activities	37.05	-
Total	**63.95 (A)**	**1.0**

Technological Pollution mitigation Cost

Sl. No.	Mitigation measures	Budget in INR crore
1	ESP - 2 Nos. (Induration furnace)	90
2	ESP - 2 Nos. (Discharge end)	**20**
3	ESP - 2 Nos. (Hearth layer discharge)	20
4	Additive grinding building - Bag filters	5
5	Pneumatic conveying - Bag fiters	2
6	Product stockpile - Garland drain	2
7	Covered storage for additives (Bentonite, limestone, coal) and filter cake with garland drain	10
8	RCC roads in place of bitumen roads (inside plant)	4
9	NG and FO dual firing boilers in induration furnace (Differential cost with respect to FO fired boilers)	20
Total		173 (B)
Total (A + B)		**236.95**

5. The EAC deliberated on the action plan submitted to address the issues raised during the public consultation and found it unsatisfactory. PP shall explore the possibility to implement some of the activities in the 1st year itself which are committed in the subsequent years. Project Proponent is required to submit revised action plan to address the PH issues as per Ministry's OM F.No. 22-65/2017-IA.III dated 30/09/2020. The Consultant has to read the various provisions of the OM and accordingly rework the action plan.

Reply: The socio economic development activities have been reworked and the major activities like roads and drainage have been planned to be implemented in the first year itself. The remaining activities along with the maintenance works would be implemented within 2 years and following years. The same is furnished below:

Description	Year 1	Year 2	Total (in Rs. Lakhs)
Area Development			
Development of village roads	Balijhara village - 2 km in length. Paradipgarh village - 2 km Bijaychandrapur village - 2 km Udaybhat village - 2 km Allocation of fund to Paradip Municipality for repairing of damaged road. The agreement with Paradip Municipality will be intimated to MoEFCC during six (6) monthly compliance	Maintenance works	550
Improvement of drainage condition of Bauriapalanda & Balijhara villages - total 8 km	Construction of drain (total 8 km length) in Bauriapalanda & Balijhara villages and connection to existing drainage network of Paradip Municipality	Maintenance works	205

Description	Year 1	Year 2	Total (in Rs. Lakhs)
Health care facilities	Strengthening of primary health care unit in Nuagarh & Biswali villages. The need will be assessed in consultation with local administration and will be informed to MoEFCC during 6 monthly compliance. The EML will provide funds to local administration for development of hospital and the scheme will be informed to MoEFCC through six (6) monthly compliance	Procurement of mobile health care unit for conducting medical campaign in Bhutmundai, Paradipgarh, Nuagarh & Biswali villages and maintenance works	750
Establishment of library infrastructure facilities with 500 books, 10 bookshelves and 4 numbers of computers with internet facilities in villages	Bijaychandrapur & Bhutmundai	Nuagarh, Balidia, Chakradharpur & Paradipgarh	200
Skill development training on welding, electrician course, machinery, carpentry etc. and livelihood program	200 persons	400 persons	300
Local students training through ITI list - 2 ITIs in Paradipgarh, 1 ITI in Nuagarh, and 1 ITI in Mangrajpur.	40 students	20 students	60
Strengthening of school library & up gradation of existing village schools by providing Chair, table & books & 4 Nos of computers with internet to each library	Three schools 1. Pipal UP School 2. Govindchandra High school Nuagarh 3. Balidia Nodal UP School	Five schools 1. Paradip Port High school Bhutmundai 2. Nabjyoti Girls' High school Biswali 3. Chakradharpur High School 4. Bijaychandrapur School UP School 5. Srimaa Aurobindo School Paradipgarh	240
Infrastructure improvement of Bauriapalanda Basti	Rehabilitation of Basti will be taken up with District Administration and Paradip Port Trust & the development plan will be intimated to MoEFCC	Continued in 2nd year and maintenance works	600
Provision of drinking water through pipelines & installation of portable RO in peripheral villages or contribution to government fund for the same	Six villages 1. Balijhara 2 Musadia 3. Bauriapalanda 4. Bijaychandrapur 5. Bhutmundai 6. Nuagarh	Two villages 1. Balidiha 2. Chakradharpur	500
Vocational training on tailoring, farming, poultry for skill development of women. Selection of villages will be decided in discussion with Local administration	300 women	600 women	300
Total (in INR lakhs)	**2185**	**1520**	**3705**

6. The water balance diagram submitted in the EIA Report do not include the water required for greenbelt development. The EAC is of the opinion that the water balance diagram shall be revisited and the optimized water balance shall be updated in the EIA/EMP Report. The Consultant has to revise the water balance including all the water requirement.

Reply: Revised water balance is submitted. The water allocated for greenery development is about 12.45 litres per tree per day and the specific water consumption is about 0.23 m^3/ton of product pellet.

7. The EAC observed that the instant proposal is a part of inter-linked project and a separate ToR has been obtained for a Beneficiation Plant from the MoEF&CC. The EAC advised PP to expedite the submission of EC application for obtaining desired EC for Beneficiation Plant. Without beneficiation plant, how PP will implement this instant project?

Reply: The interlinked project is Iron Ore Beneficiation plant of 14.3 MTPA at Tikarpada - Keonjhar district. TOR was obtained on 12/04/2021. The EIA study completed in March-May 2021 and Draft EIA report submitted to OSPCB on 27th Sep -2021.

The Public Hearing was announced for 10th Jan 2022. Due to COVID surge in Keonjhar during this period it was postponed as per State Govt. order. Then Panchayat Election in April 2022 and due to Code of Conduct the date of Public Hearing was not declared. Same is being pursued and we expect the date of Public Hearing by end of October 2022. The final EIA-EMP shall be submitted to MoEFCC for consideration by November 2022.

Being a smaller unit compared to Pellet Plant it can be completed in 24 months and 30 months required to construct Pellet plant. Hence both the units will be commissioned simultaneously along with completion of underground slurry pipeline of 250 km in 2 years' duration.

8. The project proponent shall undertake village adoption and develop a robust action plan to develop the villages in model villages.

Reply: EML would adopt two villages, Nuagarh (population: 2561 as per 2011 census) and Balidia (population: 1972 as per 2011 census) for development under their CSR plan.

The model villages will be developed within a span of 10 years with special emphasis on the following activities/facilities:

- Health - Community health centres will be established in each village with emphasis on maternal & child care (including provision of neonatal care unit) and registration of child births

- Drinking water - The villagers will be provided with clean drinking water through tankers/pipeline or contribution to Govt. drinking water scheme (if already under planning & execution)

- Sanitation - Common toilet blocks will be constructed and financial aid would be provided for construction of toilets in economically backward households to achieve 100% open defecation free village

- Education - School with library and computers with internet facility will be established to provide better access to educational resources. Computer literacy programs for the local youth will be conducted.

- Aid for farmers - Education pertaining to agricultural sciences for the local farmers will be sponsored by EML. Pumps will be provided to farmers for better access to irrigation facility.

- Telecom connectivity - EML will collaborate with telecom companies for improvement of mobile and internet connectivity in the area.

- Road - Damaged village roads will be repaired and converted to pucca road which will be connected to the main arterial roads.

- Solar lighting - Solar powered LEDs will be installed on village roads and in front of every village house.

- Plantation - Social forestry program will be undertaken which will not only benefit the environment but also contribute to the aesthetics of the village.

- Parks - Community parks and playgrounds for various sports will also be developed. Parks will be landscaped for beautification.

- Women empowerment - Self-help groups will be established for women to enable them to achieve self-reliance

- Awareness will be created for providing primary education to children as the first step towards achieving 100% child-labour free village.

All the above mentioned activities will be carried out under CSR activities in coordination with the local Gram Panchayat.

9. The project proponent reported that the land is in possession of Paradip Port Trust Authority and would be taken on long term lease basis for sixty (60) years. The project proponent is required to submit the acquisition status of the same.

Reply: The land allocation letter was received from Paradip Port Authority vide letter no. AD/EST/LAND-I-30/2020/3047 dated 12th August 2022. The same is submitted.

10. Mahanadi River, Santra, PPT Reservoir and Taladanda canal are in the vicinity of the project site within the study area. A robust Conservation scheme to protect these water bodies; along with Soil conservation scheme and multiple Erosion control measures shall be prepared.

Reply: Mahanadi is 4.50 km away from the project site. No impact on Mahanadi will be there from the project side.

Taldanda canal is 300 mt away from project site. This canal is designed and maintained by Department of Water Resources GOO. The canal is built considering the water supply for industries in and around in Paradeep. The canal is also being funded by World Bank to carpet the channel to avoid water losses. In view of the regular and preventive maintenance schedules carried out by Department of Water Resources, we envisage there is no impact on this canal from our proposed 14 mtpy Pellet complex.

The water reservoir, which is nearby belongs to Paradip Port. This water reservoir meets the requirements of Paradip Port Trust operations as well as Town ship. This is being maintained and protected by Paradip Port Authority. As discussed with M/s. Paradip Port Trust, a joint study will be undertaken to study the soil conservation and soil erosion aspects on this water body and if required remedial measures will be undertaken.
The River Santra is 600 m away from the project site. During the rainy days the excess storm water after sending 420 cum/hr of rain water through the return water pipe line is released to the Nallah outside the plant boundary which ultimately joins this river. Considering the max rainfall of 253 mm per day during Peak monsoon season, the max discharge comes to 1.16 cum/sec. The same will be discharged to the Nallah outside the plant boundary which ultimately leads to Santra River. Other than rainy days there will be no discharge to the outside drain from the plant. The Nallah out side the plant will be cleaned from weeds and silt formation before monsoon. The Nallah maintenance will carried out before monsoon for free flow of rain water. The Nallah will have stone pitching at the bed and inner slopes. The detailed scheme will be prepared as part of plant engineering and will be implemented after approval from Paradip Municipality.

Storm Water Drain Design Criteria:

The plant will have garland drain all along the boundary and connected to main outlet collecting drain before joining the Nallah.

The inplant garland drain will have 1 m wide x 1 m depth covering the required slope. The individual drains will join the common main drain having a trapezoidal cross section of approx. 4m/3m wide and depth of 1,5 m. The in plant drains will be of concrete construction. The common drain will have stone pitching all along cross section. The final dimensions will be arrived at considering the level of Nallah where this common drain joins on the existing Nallah on the west side of the plant.

The basis for designing the common drain is based on the max. hourly rain fall of 40 mm/hr. The water discharge during this period will be 4.50 cum/sec considering min velocity requirement of 1.5 m/sec in the common drain. This will adequately handle the storm water.

The drains will be designed as per standard practices of engineering codes during basic and detail engineering. There will be silt pits located at 4 places. The water is either pumped back through the return water line or discharged after treatment in clarifloculator. The silt collected in the pits is manually removed after stoppage of rain and used as sweet soil for green belt and land scaping.

The process water drains along with all wash water (wheel, floor) will be separate and run through all along process units. The water and solids collected into sumps located at different location of the plant. The water is pumped from these sumps to thickener and

the solids collected will be manually removed and reused for pellet making. At no place the process water drains are connected with run off drains

Soil conservation scheme and erosion control measures would be carried out for Santra river located about 600 meters from the plant boundary and Taladanda canal located about 300 meters from the plant boundary. A 1 km stretch starting about 100 m upstream of the point nearest to the plant boundary and extending downstream would be taken up at each water body for conservation. The following measures are proposed for conservation of the water bodies:

1. Protection of embankment on the right bank of Taladanda canal and left bank of Santra river with installation of geomembrane and plantation of creepers.

2. Installation of wire mesh with geomembrane for slope protection at the embankments for both water bodies.
3. Plantation of tree species with deep roots along the banks for prevention of soil erosion. The spaces in between the tree plantations would be augmented with shrubs to further prevent erosion.

The proposed erosion prevention measures would be further detailed and implemented in consultation with local authorities and the action plan would be submitted to MoEFCC along with 6 monthly compliance report.

Besides, the storm water collected within the plant area would be returned to the beneficiation plant through return water pipeline. This would reduce the soil erosion due to discharge of storm water significantly.

11. The PP is going to use 2,02,000 Anthracite coal. During operational phase PP shall submit the Action Plan to monitor the coal dust exposures at coal handling areas, ball mills, furnace charging areas through personal/area monitoring; and compare with permissible exposure limit for $PM_{2.5}$ dust (coal dust 2 mg/m^3) in respirable dust containing less than 5% silica/quartz.

Reply: Anthracite coal is used as fuel additive. The raw material size is 0-10 mm 100% . This is ground along with limestone to maintain addition of fixed carbon at 1.1% in the Green Pellet. The specific consumption of Anthracite coal is 14-15 kgs / ton of Pellets, which comes to 2,02,000 ton per annum. The Anthracite coal along with limestone is loaded into bins mechanically (loader & conveyor) from the respective covered storage yards. The material together is ground in a close circuit Ball Mill. The ground product is collected in the Product Bin. The grinding process is Air Swept Type. The product is separated in the Bag filter, before the air is released to atmosphere. The entire grinding process is operated through a Level-2 automation system from control room.

The Anthracite coal is of high fixed carbon with low ash, low sulphur content and low VM content. The coal remains in the form coal only till the Green Pellet reaches pre-firing and firing temperature. The residual ash remains in the Pellet Matrix in the solid solution form. There is no release of free silica or $PM_{2.5}$ dust generated from the Raw material Receipt to Induration of Pellets.

We are committed to prepare and implement a project specific AQMP (Air quality Management Plan) with Best practices; shall determine priority pollutants, including

coal dust. Pollution prevention approaches to reduce, eliminate, prevent pollution at its source, like to use less toxic raw materials or fuels, use a less-polluting industrial process, and to improve the efficiency of the process.
Develop a control strategy and plan that incorporates the pollution control measures. The Clean Air practices shall be adopted like mechanical collectors, wet scrubbers, fabric filters (Bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation, which ever are relevant to the project.
Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Tyre washing systems shall be put in place wherever necessary.
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 area, beyond the project premises to arrest suspended dust in the atmosphere.

Action Plan for monitoring ambient air quality - One CAAQ Monitoring Station would be located at the Additive Storage Yard to Monitor PM_{10} & $PM_{2.5}$. The Additive grinding Bag filter stack sampling will be done once in a week to monitor the PM.

House-keeping measures (like enclosing and green belt barrier of Raw material yard; fugitive Dust control measures; Routine cleaning mechanism, land based industrial vacuum cleaning facility; Adequate internal drainage to avoid water logging; Awareness notices/ displays – beautification like paints, drawings etc; Internal Roads – paved and wide enough, Internal & connecting roads to the Highway are black topped; Facilities for spillage collection; Provision of high capacity sprinkler system at raw material handling, loading and unloading stations) shall be installed.

12. Based on the above observations, the EAC is of the view that the EIA/EMP Report shall be revised with the requisite changes and shall be uploaded on PARIVESH Portal. The EAC advised the Consultant to rework and prepare good quality of Report including all the mitigation measures for further deliberations by the EAC.

Reply: Complied and submitted. The EAC has deliberated the same.

13.4.20 Based on the above information, the proposal is considered in the 13th meeting of the EAC for Industry-I sector held on 14-15th September, 2022. The deliberations and recommendations made by the EAC are as follows:

Deliberations by the Committee

13.4.21 The Committee noted the following:

1. Instant proposal is for setting up of a new Pellet Plant for production of 14 MTPA iron ore pellets.
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. Total land is 40.49 ha which is under the possession of Paradip Port Trust Authority and would be taken on long term lease basis for sixty (60) years.

6. The Bhitarkanika Wildlife Sanctuary is 7.8 km from the project site and outside of the ESZ.

7. The project site is located in Severely Polluted Area within Paradeep. Project Proponent has submitted the details of the additional measures to mitigate the environmental impacts due to proposed project as detailed in para 13.4.19 above. The EAC deliberated the same and found in order.

8. The Mahanadi River, Santra, PPT reservoir and Taladanda Canal exists within the study area of 10 km from 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 revised water requirement for the project is estimated as 9,000 m^3/day, which will be obtained by recovered water after dewatering/filtration of iron ore concentrate slurry and partly by recycling of treated water from ETP and treated water of STP.

10. The project proponent submitted that Greenbelt will be developed in 16.19 ha which is about 40% of the total project area. Local and native species will be planted with a density of 2500 trees/Ha. Total no. of 40,475 saplings will be planted and nurtured in 16.19 hectares in 3 years. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP the green belt development shall be completed in a year. The Committee deliberated the Action plan and found in order.

11. There are four no. of Schedule - I species reported in study area, namely Olive Ridley Turtle, Dolphins, Indian Python, Crocodiles. A wildlife conservation plan approved by PCCF, Odisha has been prepared and INR 357.781 lakhs has been allocated for the said plan.

12. The Committee has found that the baseline data and incremental GLC due to the proposed project within NAAQ standards except particulate matter. The Committee

deliberated the Action plan/Mitigation measures for reduction of particulate matter and found in order.

13. The EAC deliberated on the ADS reply submitted by PP dated 02.09.2022 and found it satisfactory.

14. 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.

15. The project site is located in Severely Polluted Area. The Committee also deliberated the Action Plan on Severely Polluted Areas as per Ministry's 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 followed as committed and found in order.

16. 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.

17. 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

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

A. Specific Conditions:

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

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

iii. The project site is located in Severely Polluted Area. 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 followed as committed.

iv. Mahanadi River, Santra, PPT reservoir and Taladanda Canal exists within the study area of 10 km from the project site. The water bodies shall not be disturbed. As committed, a robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be implemented.

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

vi. Three tier Green Belt shall be developed in at least 40% of 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. Additional plantation shall be developed towards Bhitarkanika Wildlife Sanctuary to minimise the impact of the project activities. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.

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

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

ix. Dust emission from all the stacks shall be less than 30 mg/Nm^3. Action plan submitted to achieve particulate matter from stacks emissions less than 30 mg/Nm^3 shall be implemented.

x. The water requirement of 9,000 m^3/day shall be obtained by recovered water after dewatering/filtration of iron ore concentrate slurry and partly by recycling of treated water from ETP and treated water of STP. No ground water abstraction is permitted for the project.

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

xii. Plan for use LDO/LSHS as fuel for pellet plant shall be implemented as submitted in EIA/EMP Report. Producer Gas Plant is not permitted.

xiii. 100% solid waste generated shall be utilized within the plant process.

xiv. Action Plan to monitor the coal dust exposures at coal handling areas, ball mills, furnace charging areas through personal/area monitoring; and to take measures to keep it within permissible exposure limit for PM 2.5 dust (coal dust 2 mg/m^3) in respirable dust containing less than 5% silica/quartz shall be implemented.

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

xvi. As committed to adopt two villages namely, Nuagarh and Balidia, PP shall develop a robust action plan to develop the villages in model villages.

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

xviii. 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.

xix. 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.

xx. 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.

xxi. As the Project is close the Estuary ecosystem, the PP shall take necessary and suitable measures to conserve and protect the Estuary ecosystem. The PP shall adopt and execute best practices of Green belt implementation and especially suitable for estuary ecosystem with special attention to Mangrove plantation.

xxii. As the project area is in the vicinity of the breeding grounds of Olive Ridley Turtle, the PP shall strictly execute the measures recommended in the Wildlife conservation plan. PP shall take utmost importance in protecting the breeding grounds of Olive Ridley Turtle falling in his impact area

xxiii. The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report

shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.

B. <u>General conditions</u>

I. Statutory compliance:

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

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

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

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

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

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

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

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

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

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

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

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

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

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

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

III. Water quality monitoring and preservation

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

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

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

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

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

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

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

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

VI. Waste management

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

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

VII. Green Belt

i. Green belt shall be developed in an area equal to 33% of the plant area with native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

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

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

VIII. Public hearing and Human health issues

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

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

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

IX. Environment Management

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

ii. The company shall have a well laid down environmental policy duly 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. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

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

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

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

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

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

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

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Consideration of TOR Proposal

Agenda No. 13.5

13.5 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)]
[Consultant: ABC Techno Labs India Private Limited, Valid upto 05.07.2022]

13.5.1 M/s. Calcom Cement India Limited (CCIL), a Unit of Dalmia Cement (Bharat) Limited, has 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.

13.5.2 Name of the EIA consultant: M/s. ABC Techno Labs India Private Limited [S. No. 122, List of ACOs with their Certificate / Extension Letter No: QCI/NABET/ENV/ACO/22/2473 valid till 07.11.2022; Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

13.5.3 The project of M/s. Calcom Cement India Limited (CCIL) located in Village Kilo 19 Umrangso, Tehsil-Umrangso, District-Dima Hasao (earlier NC Hills), Assam is for setting up of a New Clinkerisation Plant for production of 3.63 Million TPA (@ 11000 TPD) clinker along with 16 MW power by Waste Heat Recovery Boiler (WHRB) and DG Set of 750 KVA for emergency back-up.

13.5.4 Environmental site settings:

Sl. No.	Particulars	Details	Remarks
i.	Total land	37.47 Ha [Govt. Council Waste (Khas) land] Plant Area: 32.12 Ha (240 Bighas) Approach Road: 5.35 Ha (40 Bighas)	Land use: The present land is Council Waste (Khas) land which will be converted into industrial use. The Revenue

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td>Total project area: 37.47 Ha (280 Bighas)

Dima Hasao Forest Division (West) has issued a certificate based on the joint verification report of Range Forest Officer, Garampani Range and Revenue Official, Umrangso stating 240 Bigha (32.12 Ha) Plant land and 40 Bigha (5.35 Ha) Approach Road is classified as “Revenue Waste (Khas) Land and Non-Forest Land” vide letter No. FRS/G/21/1(b)/PART/2019-20/840 dated 28.06.2022</td><td>and Settlement Department of North Cachar (NC) Hills Autonomous Council, Haflong has allowed the land for industrial use on Periodic Patta/lease.

Ownership: Land has been allotted to CCIL by Land & Revenue Deptt., N.C. Hills Autonomous Council, Haflong with renewable Periodic Patta No. 1007 till 31st March 2040.</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>On CCIL application for a suitable Site for the Greenfield Plant, the Revenue and Settlement Department of NC Hills Autonomous Council, Haflong, has allowed the land admeasuring 280 Bighas (37.47 Ha) for industrial use on periodic patta at 19 Kilo, Umrangso with a separate Approach Road connecting to NH-627 Lanka-Shillong Section) vide its Letter S. CASE No.160(USO)2021-2022 Issue No.9757-60 dated 30.04.2022. Subsequently, Rs. 2.8040 Cr. has been paid to Council vide UTR No. UTIBR52022080500328398 dated 5th August 2022. Land has been allotted to CCIL by Land & Revenue Deptt., N.C. Hills Autonomous Council, Haflong with renewable Periodic Patta No. 1007 till 31st March 2040.</td><td>Land has been allotted to CCIL with renewable Periodic Patta No. 1007 dated 10.08.2022.</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>No Rehabilitation & Resettlement (R&R) issue due to the proposal.

<u>Project site</u>: Nil
<u>Study Area</u>: Industrial establishment of AMDC Staff colony -1.7 km, W and CCIL Plant & Colony-2.3 km, WSW. Following Census villages exist in 10 km study area:
<table>
<tr><th>Sn.</th><th>Village Name</th><th colspan="2">Approx. Distance in km & Direction</th></tr>
<tr><td></td><td colspan="3">0-2 km</td></tr>
<tr><td></td><td>None</td><td>0</td><td>0</td></tr>
<tr><td></td><td colspan="3">2 - 5 km</td></tr>
<tr><td>1</td><td>Umrangso (Umrangso 19 Km.)</td><td>2</td><td>NW</td></tr>
<tr><td>2</td><td>Wari Diplai</td><td>2</td><td>S</td></tr>
<tr><td>3</td><td>Dithur</td><td>2.9</td><td>S</td></tr>
<tr><td>4</td><td>Dikrabi</td><td>3.3</td><td>NE</td></tr>
<tr><td>5</td><td>Dorbin</td><td>3.35</td><td>S</td></tr>
<tr><td>6</td><td>Choto Tungkrang</td><td>3.6</td><td>ENE</td></tr>
<tr><td>7</td><td>Longchirui (Lungcheirui)</td><td>3.8</td><td>SW</td></tr>
</table></td><td>Council Waste (Khas) land has been allotted on renewable Periodic Patta/lease by Land & Revenue Deptt., N.C. Hills Autonomous Council, Haflong.</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>8</td><td>Boro Larpheng</td><td>4.4</td><td>NNW</td></tr>
<tr><td>9</td><td>Boro Tungherang</td><td>4.4</td><td>ENE</td></tr>
<tr><td>10</td><td>Longrung</td><td>4.5</td><td>SW</td></tr>
<tr><td>11</td><td>Choto Larpheng</td><td>4.6</td><td>NNW</td></tr>
<tr><td>12</td><td>Nabdi Longukro</td><td>4.65</td><td>WNW</td></tr>
<tr><td>13</td><td>Miyungpur Raji</td><td>4.9</td><td>WSW</td></tr>
<tr><td></td><td colspan="3">5 - 10 km</td></tr>
<tr><td>14</td><td>Thaosenpur</td><td>5.2</td><td>S</td></tr>
<tr><td>15</td><td>Longkupur</td><td>5.5</td><td>WNW</td></tr>
<tr><td>16</td><td>Lurulangso</td><td>5.6</td><td>SE</td></tr>
<tr><td>17</td><td>Kekrangship</td><td>5.7</td><td>SE</td></tr>
<tr><td>18</td><td>Umrangso TC</td><td>6</td><td>SW</td></tr>
<tr><td>19</td><td>Longlaihansu (Langlai)</td><td>6.4</td><td>SW</td></tr>
<tr><td>20</td><td>Mungloi Phonglo</td><td>6.4</td><td>SW</td></tr>
<tr><td>21</td><td>Taralangso</td><td>6.5</td><td>SSE</td></tr>
<tr><td>22</td><td>Tuijonte</td><td>6.5</td><td>SW</td></tr>
<tr><td>23</td><td>Tortelangso</td><td>6.8</td><td>SSW</td></tr>
<tr><td>24</td><td>Disabra</td><td>6.9</td><td>W</td></tr>
<tr><td>25</td><td>Longplaidisa</td><td>7.5</td><td>SSW</td></tr>
<tr><td>26</td><td>Sainilangso</td><td>7.7</td><td>SSE</td></tr>
<tr><td>27</td><td>Didarbi</td><td>7.7</td><td>SW</td></tr>
<tr><td>28</td><td>Langlut (Ch)</td><td>7.9</td><td>S</td></tr>
<tr><td>29</td><td>Choto Langlai</td><td>8.1</td><td>SW</td></tr>
<tr><td>30</td><td>Tumbung</td><td>8.3</td><td>WSW</td></tr>
<tr><td>31</td><td>Krungthai</td><td>8.3</td><td>SW</td></tr>
<tr><td>32</td><td>Boro Langlai</td><td>8.4</td><td>SW</td></tr>
<tr><td>33</td><td>Nabdi Langayen</td><td>8.7</td><td>ENE</td></tr>
<tr><td>34</td><td>Longmaiklu (Longmaklu)</td><td>8.7</td><td>WSW</td></tr>
<tr><td>35</td><td>Bongphiri (Ch)</td><td>9</td><td>S</td></tr>
<tr><td>36</td><td>Kukrilangso</td><td>9.1</td><td>SW</td></tr>
<tr><td>37</td><td>Kharthongship</td><td>9.3</td><td>SSE</td></tr>
</table>
</td><td></td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site.</td><td>
Plant Area:
<table>
<tr><th>Point No</th><th>Latitude (North)</th><th>Longitude (East)</th></tr>
<tr><td>1</td><td>25°31'27.6500"</td><td>092°47'44.1699"</td></tr>
<tr><td>2</td><td>25°31'19.4637"</td><td>092°47'44.1228"</td></tr>
<tr><td>3</td><td>25°31'19.0799"</td><td>092°47'53.3801"</td></tr>
<tr><td>4</td><td>25°31'22.5400"</td><td>092°47'53.4499"</td></tr>
<tr><td>5</td><td>25°31'23.1200"</td><td>092°48'01.7801"</td></tr>
<tr><td>6</td><td>25°31'23.4101"</td><td>092°48'11.4701"</td></tr>
<tr><td>7</td><td>25°31'22.5699"</td><td>092°48'11.5901"</td></tr>
<tr><td>8</td><td>25°31'22.2802"</td><td>092°48'18.6101"</td></tr>
<tr><td>9</td><td>25°31'22.0401"</td><td>092°48'29.3601"</td></tr>
</table>
</td><td></td></tr>
</table>

Sl. No.	Particulars	Details			Remarks
		10	25°31'21.6801"	092°48'41.0601"	
		11	25°31'25.1801"	092°48'41.3301"	
		12	25°31'29.2399"	092°48'41.5599"	
		13	25°31'29.0301"	092°48'32.1601"	
		14	25°31'28.5701"	092°48'19.1101"	
		15	25°31'28.4801"	092°48'11.5801"	
		16	25°31'28.2900"	092°48'01.8300"	
		17	25°31'27.9699"	092°47'52.8299"	
		Approach Road:			
		Point No	**Latitude**	**Longitude**	
		1	25°31'23.6859"	092°46'58.6573"	
		2	25°31'23.3509"	092°47'03.2272"	
		3	25°31'20.8060"	092°47'07.7977"	
		4	25°31'19.7748"	092°47'12.4690"	
		5	25°31'21.9822"	092°47'23.1544"	
		6	25°31'23.5834"	092°47'29.0187"	
		7	25°31'27.5757"	092°47'43.5731"	
		8	25°31'27.7492"	092°47'44.8037"	
		9	25°31'28.2694"	092°47'44.7207"	
		10	25°31'28.0801"	092°47'43.3436"	
		11	25°31'24.2970"	092°47'28.8925"	
		12	25°31'22.7081"	092°47'22.9160"	
		13	25°31'20.5251"	092°47'12.5799"	
		14	25°31'21.4644"	092°47'08.1416"	
		15	25°31'24.0190"	092°47'03.5431"	
		16	25°31'24.4046"	092°46'58.5435"	
		17	25°31'22.0701"	092°46'53.4625"	
		18	25°31'19.2220"	092°46'46.3515"	
		19	25°31'19.2120"	092°46'38.6815"	
		20	25°31'18.5669"	092°46'33.1180"	
		21	25°31'16.8906"	092°46'30.6287"	
		22	25°31'16.1537"	092°46'27.9705"	
		23	25°31'15.2049"	092°46'25.8476"	
		24	25°31'16.1801"	092°46'23.4679"	
		25	25°31'17.3981"	092°46'20.7840"	
		26	25°31'16.8747"	092°46'20.1958"	
		27	25°31'15.6000"	092°46'23.0319"	
		28	25°31'14.4359"	092°46'25.7792"	
		29	25°31'15.4659"	092°46'28.2880"	
		30	25°31'16.2198"	092°46'30.9211"	
		31	25°31'17.8631"	092°46'33.4311"	
		32	25°31'18.4880"	092°46'38.6690"	

<table>
<tr><th>Sl. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td><table>
<tr><td>33</td><td>25°31'18.5183"</td><td>092°46'46.4184"</td></tr>
<tr><td>34</td><td>25°31'21.4897"</td><td>092°46'53.9275"</td></tr>
</table></td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>The general elevation of the plant site varies from Max Elevation 396 AMSL to Min. 256 AMSL.</td><td></td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No involvement of Forest land.

Dima Hasao Forest Division (West) has issued a certificate based on the joint verification report of Range Forest Officer, Garampani Range and Revenue Official, Umrangso stating 240 Bigha (32.12 Ha) Plant land and 40 Bigha (5.35 Ha) Approach Road is classified as “Revenue Waste (Khas) Land and Non-Forest Land” vide letter No. FRS/G/21/1(b)/PART/2019-20/840 dated 28.06.2022</td><td></td></tr>
<tr><td>vii.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td><u>Project site:</u> No water body exist within the plant site.

<u>Study area:</u><table>
<tr><th>Water body</th><th>Distance, km</th><th>Direction</th></tr>
<tr><td>Amrang Nalla</td><td>0.14</td><td>East</td></tr>
<tr><td>Langyen Nadi</td><td>0.25</td><td>SE</td></tr>
<tr><td>Mongle Nadi</td><td>3.8</td><td>NE</td></tr>
<tr><td>Langlai River</td><td>6.1</td><td>S</td></tr>
<tr><td>Kopili River</td><td>9.4</td><td>NW</td></tr>
<tr><td>Umrong Reservoir</td><td>7.1</td><td>West</td></tr>
</table></td><td>Seasonal Amrang Nalla flows in northern (360 m AMSL) and in Eastern Parts (250-190 m AMSL), with 36-66 m difference in elevation, there is no flood hazard to the Site due to the Nalla.
Perennial Kopili River flows at 9.4 km NW and there is no Flood Hazard to the Site as such. Other Nallas/Rivers flow in the downstream of the Site.</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve / Tiger reserve/ elephant reserve etc. if any within the study area</td><td><u>Study area</u>: Nil

List of Reserved and protected forests:
Krungming RF (2.3 km in W)
Langting Mupa RF (14.7 Km NE)</td><td>-</td></tr>
</table>

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

Sl. No.	Plant Equipment / Facility	Configuration	Capacity	Remarks
1	Clinkerisation Plant	Kiln: 11000 TPD	3.63 Million TPA	Greenfield Project
2	Waste Heat Recovery System	-	16 MW	Utilization of Waste heat from Pre-heater and cooler
3	D.G. Set	-	750 kVA	Emergency/ Back-up
4.	Limestone Crusher	-	2000 TPH	-

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

S. No.	Raw Material	Quantity (MTPA)	Source	Distance from site (Kms)	Mode of Transportation
1	Limestone	5.45	Captive Limestone mine (New Umarangsho)	Adjacent	Road: From Mine to crusher proposed in Plant
2	Hill Sand	0.3	Purchase from Kekrang	10 km	Road
3	Coarse Sand (Silica)	0.1	Purchase from Kopili River	45 km	Road

13.5.7 The water requirement for the proposed project is estimated as 1250 m^3/day, which will be sourced from surface water such as nearby flowing Longlai river, Amrang nalla, other rivers/ streams, Nallah, within a radius of 25 km from the Plant site. No ground water drawl is proposed. Necessary Permission from N.C. Hills Autonomous Council, Haflong will be taken.

13.5.8 The power requirement for the proposed project is estimated as 23 MW, which will be sourced from 132 kV sub-station of Assam Power Distribution Company Ltd (APDCL) & stepped down to 11kV at plant and proposed WHRS (16 MW). DG set of 750 kVA is proposed for emergency back-up.

13.5.9 The capital cost of the project is Rs. 2240 Crores and the capital cost for environmental protection measures is proposed as Rs. 120 Crores. The employment generation from the proposed project is 146 persons during Construction Phase and 206 persons during Operation Phase.

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

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

Attributes	Parameters	Sampling	
		No. of stations	Frequency
A. Air			
a. Meteorological parameters	Wind speed, wind direction (wind roses), temperature, humidity, cloud cover, atmospheric pressure, rainfall etc.	1	Hourly readings from the Site for a Season
b. AAQ parameters		10	24-hourly basis, continuously for 2 days in a week for 4 weeks in a month for a season
B. Noise	Leq, Lday and Lnight values	10	Once in the season

Attributes	Parameters	Sampling	
		No. of stations	Frequency
C. Water	Surface Waters (7 locations) & Ground Waters (2 Locations)	9	Once in the Season
Surface water/Ground waterquality parameters	Surface Waters as per CPCB Norms & Ground Waters as per IS:10500 Norms.	-	-
D. Land			
a. Soil quality b. Land use	Textural & Physical Parameters, Nutrients Based on Satellite Imagery	6	Once during the Study Period
E. Biological a. Aquatic b. Terrestrial	Flora & Fauna - Core & Buffer zones		Once during the Study Period
F. Socio-economic parameters	Total Population / Household Size / Age/ Gender Composition /S.C / S.T/ Literacy Level, Occupational Structure	As per Census & Household Surveys	Once in the study period

Deliberation by the Committee

13.5.12 The Committee noted the following:

i. Amrang Nalla (0.14 km) and Langyen Nadi (0.25 km) flows very near to the project site. Also other water bodies such as Mongle Nadi, Langlai River, Kopili River and Umrong Reservoir exists within the study area of 10 km of the project site.

ii. The EAC observed that there is huge variation in the terrain of the project site ranging from Min. 256 AMSL to Max. Elevation 396 AMSL.

iii. Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures is required.

iv. There is rich habitation within the study area of 10 km of the project site. 37 villages are reported in the study area. PP has reported that there is no Rehabilitation & Resettlement (R&R) involved in the proposal.

v. The EAC noted that Krungming Reserve Forest falls at a distance of 2.3 km in West direction of the project site.

vi. PP has reported that the water requirement of 1250 m^3/day will be sourced from surface water such as nearby flowing Longlai river, Amrang nalla, other rivers/ streams, Nallah, within a radius of 25 km from the Plant site. It is pertinent to understand whether appropriate water is available to serve the industrial purpose due to presence of other plant and mines unit.

vii. The project proponent has submitted that the major raw material i.e. limestone will be obtained from Captive Limestone mine (New Umarangsho) which is adjacent to the plant site. The mode of transportation will be through road. There is a need to explore the possibility of conveyor belt for transportation of the raw material.

viii. As reported, CCIL is already operating a Clinkerisation Plant at 16 Kilo (meter), Umrangso (1.52 MTPA Clinker) with Captive New Umarangsho Limestone Mine (Extent 417.50 Ha & 7.77 MTPA Limestone Production with Mineable Reserves of 162.56 Million Tonnes). With the Captive Mine in the close Proximity and operational, CCIL opted to have another Clinkerisation Plant at Umrangso.

ix. Thus, in view of the above observations the EAC is of the opinion that it is pertinent to undertake site visit to understand the ecological sensitivity of the area, overview of carrying capacity due to presence of other plant and mines unit and possible environmental/social impacts of the instant proposed project.

Recommendations of the Committee

13.5.13 In view of the foregoing and after deliberations, the Committee **recommended for site visit of the proposed project area by a subcommittee of EAC Industry-1 members**. The proposal shall be appraised based on the findings of the sub-committee and deliberation of EAC.

***

Agenda No. 13.6

13.6 Establishment of Greenfield steel plant comprising of DRI Kilns (2,31,000 TPA), Induction Furnace with matching LRF & CCM (Hot Billets / Billets / Ingots - 3,46,500 TPA), Rolling Mill (TMT Bars / Structural Steel – 3,30,000 TPA), Ferro Alloy Unit 2 x 9 MVA (FeSi – 14,000 TPA/ FeMn – 50,400 TPA/ SiMn – 28,800 TPA/FeCr – 30,000 TPA), Briquetting Plant (200 Kg/Hr),WHRB based Power Plant –16 MW, CFBC based Power Plant - 16 MW & Brick Manufacturing unit (18,000 Bricks / Day) by M/s Maa Beriwali Steel & Power Pvt. Ltd., located at Lakhna Village, Tilda Tehsil, Raipur District, Chhattisgarh– Consideration of TOR.

[Proposal No. IA/CG/IND/286374/2022; File No. IA-J-11011/294/2022-IA-II(IND-I)]
[Consultant: Pioneer Enviro Laboratories And Consultants Pvt. Ltd.; valid upto 21.09.2022]

13.6.1 M/s. Maa Beriwali Steel & Power Pvt. Ltd has made an application online vide proposal no. IA/CG/IND/286374/2022 dated 25th August 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.

13.6.2 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories And Consultants Pvt. Ltd. [S. No. 141, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/1922/SA0148 valid till 21.09.2022; Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

13.6.3 The project of M/s. Maa Beriwali Steel & Power Pvt. Ltd located at Lakhna Village, Tilda Tehsil, Raipur District, Chhattisgarh is for setting up of new Steel Plant for production of 0.33 MTPA of TMT bars / Structural Steels comprising of DRI Kilns (2,31,000 TPA), Induction Furnace with matching LRF & CCM (Hot Billets / Billets / Ingots - 3,46,500 TPA), Rolling Mill (TMT Bars / Structural Steel – 3,30,000 TPA), Ferro Alloy Unit 2 x 9 MVA (FeSi – 14,000 TPA/ FeMn – 50,400 TPA/ SiMn – 28,800 TPA/FeCr – 30,000 TPA), Briquetting Plant (200 Kg/Hr),WHRB based Power Plant –16 MW, CFBC based Power Plant - 16 MW & Brick Manufacturing unit (18,000 Bricks / Day).

13.6.4 Environmental site settings:

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total Land</td><td>31.526 Ha. (77.90 Acres)</td><td>Land Use: Agriculture land</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>15.78 Ha. (39.0 Acres) is in possession of management & agreement have been entered for remaining 15.746 Ha. (38.9 Acres).</td><td></td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R & R, if any</td><td>No habitation exists in project site; Hence no R & R is involved.</td><td>---</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td>Latitude and Longitude of the project site:
<table>
<tr><th>S.No.</th><th>Point</th><th>Coordinates</th></tr>
<tr><td>1.</td><td>Point # 1</td><td>21^{0}32’00.00’’ N
81^{o}40’21.45’’ E</td></tr>
<tr><td>2.</td><td>Point # 2</td><td>21^{0}31’58.16’’ N
81^{o}40’24.03’’ E</td></tr>
<tr><td>3.</td><td>Point # 3</td><td>21^{0}31’58.99’’ N
81^{o}40’33.99’’ E</td></tr>
<tr><td>4.</td><td>Point # 4</td><td>21^{0}32’02.58’’ N
81^{o}40’33.89’’ E</td></tr>
<tr><td>5.</td><td>Point # 5</td><td>21^{0}32’02.49’’ N
81^{o}40’36.75’’ E</td></tr>
<tr><td>6.</td><td>Point # 6</td><td>21^{0}31’58.07’’ N
81^{o}40’36.94’’ E</td></tr>
<tr><td>7.</td><td>Point # 7</td><td>21^{0}31’59.45’’ N
81^{o}40’39.70’’ E</td></tr>
<tr><td>8.</td><td>Point # 8</td><td>21^{0}31’57.33’’ N
81^{o}40’43.85’’ E</td></tr>
<tr><td>9.</td><td>Point # 9</td><td>21^{0}31’37.23’’ N
81^{o}40’42.93’’ E</td></tr>
<tr><td>10.</td><td>Point #10</td><td>21^{0}31’35.76’’ N
81^{o}40’32.14’’ E</td></tr>
<tr><td>11.</td><td>Point #11</td><td>21^{0}31’46.82’’ N</td></tr>
</table></td><td>---</td></tr>
</table>

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td><table><tr><td></td><td></td><td>81°40’32.69’’ E</td></tr><tr><td>12.</td><td>Point #12</td><td>21°31’48.11’’ N
81°40’25.97’’ E</td></tr></table></td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>MSL of the Project area – 258 m</td><td>---</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land, if any</td><td>No Forest land is involved in the project site.</td><td>---</td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td><u>Project site:</u>
Nil

<u>Study area:</u><table><tr><th>Water Body</th><th>Distance & Direction</th></tr><tr><td>Kulhan Nallah Seasonal</td><td>Adjacent – (West),</td></tr><tr><td>Deorani Jethani Nallah - Seasonal</td><td>Adjacent – (South)</td></tr><tr><td>Kharun river</td><td>1.6 Kms. – (NW)</td></tr><tr><td>Shivnath river</td><td>3.8 Kms. – (E)</td></tr></table></td><td>---</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ESA/National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. if any within the study area</td><td>Nil</td><td>---</td></tr>
</table>

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

S.No.	Units (Products)		Production Capacity (Plant Configuration)
1.	DRI Kilns (Sponge Iron)		2,31,000 TPA (2 x 350 TPD)
2.	Induction Furnaces with LRF & CCM (Hot Billets / MS Ingots / Ingots)		3,46,500 TPA (7 x 15 T)
3.	Rolling mills (TMT bars / Structural Steel) (85% Hot charging with Hot Billets and remaining 15% through RHF with gasifer as fuel)		3,30,000 TPA (2 x 500 TPD)
4.	Ferro Alloys Unit (FeSi / FeMn / SiMn / FeCr)		FeSi-14,000 TPA / FeMn-50,400 TPA / SiMn-28,800 TPA / FeCr-30,000 TPA (2 x 9 MVA)
5.	Briquetting Plant		200 Kg/Hr.
6.	Brick Manufacturing Unit		18,000 Bricks/ day
7.	Power Plant (32MW)	WHRB Power Plant (2 x 8 MW)	16 MW
		CFBC Power Plant (1 x 16 MW)	16 MW

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

S.No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
1.	Pellets	3,34,950	Chhattisgarh	~ 100 Kms.	Through covered conveyers & By road (through covered trucks)
2.	Iron ore	3,69,600	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Kms.	By rail & road (through covered trucks)
3.	Sponge Iron	3,50,000	Own generation & purchased from outside	--- ~ 100 Kms.	Through covered conveyers By road (through covered trucks)
4.	MS Scrap / Pig Iron	52,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
5.	Ferro alloys	17,000	Own generation	---	By road (through covered trucks)
6.	Billets (for Reheating furnace)	54,540	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
7.	LDO	1600 Kl/annum	Nearby IOCL Depot	~ 100 Kms.	By road (through Tankers)
8.	Manganese Ore	1,14,660	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
9.	LAM coke	18,396	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
10.	Quartz	21,280	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
11.	MS Scrap / Mill scales	7,560	Inhouse Generation	---	By road (through covered trucks)
12.	Electrode Paste	900	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
13.	Bagfilter dust	1,920	Own generation	---	---
14.	Magnetite / Bauxite	5,070	Chhattisgarh / Maharashtra	~ 500 Kms.	By road (through covered trucks)
15.	Dolomite	8,568	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
16.	Hot Billets (for Hot charging)	2,91,720	Own generation	---	----
17	Indian Coal	4,76,300	SECL Chhattisgarh /MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
18.	Imported Coal	2,96,892	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)

S.No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
19.	Chrome Ore	60,000	Sukinda, Odisha Import, South Africa	~ 500 Kms. ~ 600 Kms. (from Vizag Port)	By road (through covered trucks) From Port By Road (through covered Trucks)
20.	Briquetted Bag filter dust	2,520	Own generation	---	---
21.	FeMn Slag	30,472	In house generation	---	----

13.6.7 Water required for the proposed project will be 1570 KLD which will be sourced from Water Reservoir at the site and partly from Kharun river (which is at a distance of 1.70 Kms. from the project site). Water drawl permission Water Resource Department, Chhattisgarh will be obtained.

13.6.8 Power required for the proposed project will be 61.5 MW and same will be sourced from Captive Power Plant (32.0 MW) and remaining (29.5 MW) from State Grid.

13.6.9 The capital cost of the project is Rs. 375 Crores. Employment generation from proposed project will be 500 nos. through direct employment and 600 nos. through indirect employment.

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

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

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
A. Air			
a. Meteorological parameters	1	On hourly basis for one season	• Wind Speed • Wind Direction • Temperature • Relative Humidity • Rainfall
b. AAQ parameters	8	24 hourly Twice a week for 3 months (One Season)	Parameters Monitored: • $PM_{2.5}$ • PM_{10} • SO_2 • NOx • CO
B. Noise	8	On hourly basis for 24 Hrs. at each station	Parameters Monitored: • Day equivalent • Night equivalent

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
C. Water			
a. Ground Water	8	One sample at each of the locations	Parameters Monitored: as per IS: 10500
b. Surface Water	4	One sample at each of the locations	Parameters Monitored: as per BIS: 2296
D. Land			
a. Soil quality	8	One sample at each of the locations	Parameters Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn
b. Land use	--	--	LU map prepared by concerned FAE for study area
E. Biological			
a. Aquatic	--	Once in Season	---
b. Terrestrial	--	Once in Season	---
F. Socio economic parameters	--	Once in Season	Social Impact Assessment by concerned FAE for study area

Deliberation by the Committee

13.6.12 The Committee noted the following:

i. The instant proposal is for setting up of new Steel Plant for production of 0.33 MTPA of TMT bars / Structural Steels comprising of DRI Kilns (2,31,000 TPA), Induction Furnace with matching LRF & CCM (Hot Billets / Billets / Ingots - 3,46,500 TPA), Rolling Mill (TMT Bars / Structural Steel – 3,30,000 TPA), Ferro Alloy Unit 2 x 9 MVA (FeSi – 14,000 TPA/ FeMn – 50,400 TPA/ SiMn – 28,800 TPA/FeCr – 30,000 TPA), Briquetting Plant (200 Kg/Hr),WHRB based Power Plant –16 MW, CFBC based Power Plant - 16 MW & Brick Manufacturing unit (18,000 Bricks / Day).

ii. The EAC deliberated on the proposal. Based on the KML file presented by the PP, the proposed Unit is greenfield project.

iii. Total project area is 31.526 ha, out of which 15.78 Ha. (39.0 Acres) is in possession of management & agreement have been entered for remaining 15.746 Ha. (38.9 Acres), as reported.

iv. Kulhan Nallah (W) and Deorani Jethani Nallah (S) are adjacent to the project site, whereas Kharun River and Shivnath River exists within the study area of 10 km of the project site. The EAC is of the opinion that the water bodies shall not be disturbed.

v. The water requirement for the proposed project is estimated as 1570 KLD which will be sourced from Water Reservoir at the site and partly from Kharun river (which is at a distance of 1.70 Kms. from the project site).

Recommendations of the Committee

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

(i) Kulhan Nallah (W) and Deorani Jethani Nallah (S) are adjacent to the project site, whereas Kharun River and Shivnath River exists within the study area of 10 km of the project site. The PP shall submit the suitable steps /conservation plan along with contouring (close intervals), Run -off calculations, disposal etc. A robust and full proof Micro-Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.

(ii) Total project area is 31.526 ha which is an agricultural land. PP shall obtain conversion of land from agricultural to industrial purpose.

(iii) CO gas sensors shall be installed at all relevant locations (furnaces).

(iv) PP advised to submit the coal dust exposure concentrations at coal handling areas, ball mills, furnace charging areas through personal/area monitoring; whether they are within 2 mg/m^3 in respirable dust containing less than 5% silica/quartz.

(v) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.

(vi) Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(vii) The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.

(viii) PP shall submit action plan for rainwater harvesting system.

(ix) Action plan for 100 % solid waste utilization shall be submitted.

(x) PP shall explore the possibility of plastic waste utilization in the Plant/Unit process.

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

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

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

assessments should be measurable and monitorable with defined time frames", when PP comes for EC proposal. This study shall be formulated keeping in view of India's Net-zero commitment at the COP-26 Climate Summit.

(xiv) As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey (10 Kms radial coverage from the project site) and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.

(xv) Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by sea/rail/road with anticipated vessels/rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.

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

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

(xviii) Monitoring and control of NOx, SO_2 and CO gases from the furnace must be included in the pollution control scheme.

(xix) The total quantity of PM generated per annum and the percentage of this captured by the pollution control equipment must be reported regularly.

(xx) Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.

(xxi) A Plan of Action for disposal of e-waste must be drawn up and implemented.

(xxii) A Standard Operation Procedure for arresting emissions (PM as well as gas) when these approach critical values may be established.

***

Agenda No. 13.7

13.7 Expansion of Steel Plant – increase of Sponge Iron production through DRI kilns from 1,20,000 TPA to 4,33,500 TPA, increase of MS Ingots/Billets/Hot Billets production through Induction Furnaces along with CCM & LRF from 1,25,400 TPA to 3,89,400 TPA, increase of WHRB based Power Plant from 8 MW to 31 MW, establishment of new FBC based Power Plant of 27 MW, establishment of new 2 x 4.5 MVA submerged arc furnaces to produce Ferro Alloys (FeMn- 25,200 TPA / SiMn – 14,400 TPA) & New Brick Manufacturing unit of 50,000 Bricks/day by M/s Pushpit Steels Private limited, located at Merlapaka Village, Yerpedu Mandal, Chittoor District, Andhra Pradesh – Consideration of TOR.

[Proposal No. IA/AP/IND/272519/2022; File No. J-11011/461/2006-IA.II(I)]
[Consultant: Pioneer Enviro Laboratories And Consultants Pvt. Ltd.; valid upto 21.09.2022]

13.7.1 M/s. Pusphit Steels Pvt. Ltd. has made an application online vide proposal no. IA/AP/IND/272519/2022 dated 29th August 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.

13.7.2 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories And Consultants Pvt. Ltd. [S. No. 141, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/1922/SA0148 valid till 21.09.2022; Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

13.7.3 The project of M/s Pushpit Steels Private Limited located in Sy. Nos 223/3, 303/1, 303/4, 309 & 310/1 in Merlapaka Village, Yerpedu Mandal, Chittoor District, Andhra Pradesh is for expansion of Steel Plant through increase of Sponge Iron production through DRI kilns from 1,20,000 TPA to 4,33,500 TPA, increase of MS Ingots/Billets/Hot Billets production through Induction Furnaces along with CCM & LRF from 1,25,400 TPA to 3,89,400 TPA, increase of WHRB based Power Plant from 8 MW to 31 MW, establishment of new CFBC based Power Plant of 27 MW, Dismantling of existing 4 MW FBC power plant, establishment of new 2 x 4.5 MVA submerged arc furnaces to produce Ferro Alloys (FeMn- 25,200 TPA / SiMn – 14,400 TPA) & Brick Manufacturing unit 50,000 Bricks /day.

13.7.4 Environmental site settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>80.3 Acres [Govt. land (APIIC) – 64.24 Acres and Private land – 4.20 Acres]</td><td>Land use: Industrial Land</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>Total land available with Pushpit Steels Pvt. Ltd. is 80.3 Acres only. The proposed expansion will be taken up in existing 80.3 Acres only.</td><td></td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>No habitation exists in plant site. Hence no R & R is involved.</td><td>---</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td>Latitude and Longitude of the project site :
<table><tr><th>Point</th><th>Coordinates</th></tr><tr><td>Point # 1</td><td>13°42'18.47"N, 79°37'4.34"E</td></tr><tr><td>Point # 2</td><td>13°42'24.89"N, 79°37'4.66"E</td></tr><tr><td>Point # 3</td><td>13°42'26.52"N, 79°37'5.16"E</td></tr><tr><td>Point # 4</td><td>13°42'34.63"N, 79°37'2.12"E</td></tr><tr><td>Point # 5</td><td>13°42'34.20"N, 79°36'59.15"E</td></tr><tr><td>Point # 6</td><td>13°42'37.33"N, 79°36'58.38"E</td></tr></table></td><td>---</td></tr>
</table>

<table>
<tr><td></td><td></td><td><table>
<tr><td>Point # 7</td><td>13°42'40.68"N, 79°37'8.60"E</td></tr>
<tr><td>Point # 8</td><td>13°42'42.99"N, 79°37'18.22"E</td></tr>
<tr><td>Point # 9</td><td>13°42'42.32"N, 79°37'19.11"E</td></tr>
<tr><td>Point # 10</td><td>13°42'36.35"N, 79°37'21.82"E</td></tr>
<tr><td>Point # 11</td><td>13°42'27.68"N, 79°37'24.88"E</td></tr>
<tr><td>Point # 12</td><td>13°42'27.12"N, 79°37'23.08"E</td></tr>
<tr><td>Point # 13</td><td>13°42'24.00"N,79°37'16.31"E</td></tr>
<tr><td>Point # 14</td><td>13°42'20.26"N, 79°37'7.79"E</td></tr>
</table></td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>MSL of the plant area – 86 m to 78 m</td><td>---</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No Forest land is involved in the project site.</td><td>---</td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td>Project site: Nil

Study area:<table>
<tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Swarnamukhi river</td><td>3.9 Kms.</td><td>SE</td></tr>
<tr><td>Kona Kaluva</td><td>5.0 Kms.</td><td>SSE</td></tr>
<tr><td>Rallu Kaluvu</td><td>7.1 Kms</td><td>SSW</td></tr>
<tr><td>Idula Kalva</td><td>1.5 Kms</td><td>NE</td></tr>
<tr><td>Vudamalapadu Eru</td><td>5.5 Kms</td><td>NNE</td></tr>
</table></td><td>---</td></tr>
<tr><td>viii.</td><td>Existence of ESZ / ESA / National Park / Wildlife sanctuary / Biosphere reserve / Tiger reserve / Elephant reserve, etc. if any within the study area</td><td>Nil</td><td>---</td></tr>
</table>

13.7.5 The chronology of the statutory clearances obtained for the existing project is as follows:

S.No.	Date	ORDER NO. AND DATE
1	24.09.2003	APPCB issued a Consent For Establish in the name of Sri Venkateshwara Sponge & Power Pvt. Ltd. For Sponge iron unit (3 x 100 TPD) vide order No. APPCB/KNL/TPT/439/HO/2003/66- 1797 dated 24.09.2003. (**EC not was applicable as it is prior to EIA Notification 2006 & EC not applicable as per EIA Notification 1994 also as Capital cost is Rs 19.43 Crores which is less than Rs 100 Crores**.)
3	13.03.2006	APPCB issued a Consent For Establish in the name of Sri Venkateshwara Sponge & Power Pvt. Ltd. For Sponge Iron – 100 TPD, Mild steel ingots- 200 TPD, TMT Bars – 200 TPD, Ferro alloys – 12 MVA & Electricity – 15 MW vide order No. APPCB/KNL/TPT/439/CFE/2005-2803 dated 13/03/2006.
3	28.12.2006	APPCB issued a Consent For Operation in the name of Sri Venkateshwara Sponge & Power Pvt. Ltd. For Sponge iron unit (300 TPD) vide order

S.No.	Date	ORDER NO. AND DATE
		No.APPCB/KNL/TPT/439/HO/2006 dated 28-12-2006.
4	19.04.2007	MOEFF issued Environmental clearance in the name of Sri Venkateshwara Sponge & Power Pvt. Ltd. For Sponge Iron – 30,000 TPA, Mild steel ingots-60,000 TPA, TMT Bars – 60,000 TPA, Ferro alloys – 36,000 TPA &Electricity – 15 MW vide order F. No. J-11011/461/2006 IA-II(I) dated 19/04/2007.
5	25.05.2008	MOEFF issued another Environmental clearance in the name of Sri Venkateshwara Sponge & Power Pvt. Ltd. For Sponge Iron – 2,10,000 TPA, Electricity – 32 MW, Mild steel ingots- 1,62,000 TPA, TMT Bars – 3,00,000 TPA, Hot Metal – 4,36,425 TPA & Sinter – 3,60,000 TPA vide order F. No. J-11011/137/2008 IA-II(I) dated 28/05/2008.
6	09.08.2012	APPCB issued a Consent For Operation in the name of Pushpit Steels Private Limited For Induction Furnace unit (for manufacturing of Billets-200 TPD) vide order No.APPCB/KNL/KNL/444/ CFO/HO/2012-1907 dated 09-08-2012 valid till 31/03/2013.
7	27.05.2015	APPCB issued a Consent For Operation in the name of Pushpit Steels Private Limited For steel unit (Sponge iron – 400 TPD, Billets - 200 TPD & Power – 12 MW) vide order No.APPCB/KNL/TPT/444/11656/HO/2015-937 dated 27-05-2015 valid till 31/03/2016 (CFO issued after Name change from sri Venkateshwara sponge Pvt. Ltd. to Pushpit steels Pvt Ltd.).
8	10.02.2016	APPCB issued renewal of Consent For Operation in the name of Pushpit Steels Private Limited For steel unit (Sponge iron - 400 TPD, Billets - 200 TPD & Power – 12 MW) vide order No.APPCB/KNL/TPT/444/11656/HO/2016 dated 10-02-2016 valid till 31/03/2021.
9	27.04.2016	MOEFF issued a transfer of Environmental clearance from Sri Venkateshwara Sponge & Power Pvt. Ltd. to Pushpit Steels Private Limited and issued EC validity extension for another 3 years i.e. up to 27/05/2018 vide order F. No. J-11011/137/2008 IA-II(I) dated 27/04/2016
10	31.10.2017	APPCB issued a Consent For Operation in the name of Pushpit Steels Private Limited For (Billets - 180 TPD) vide order No.APPCB/KNL/TPT/444/11656/HO/2017 dated 31-10-2017 valid till 31/03/2021.
11	20.01.2018	APPCB issued a Consent For Operation in the name of Pushpit Steels Private Limited For (Rolled products – 3,00,000 TPA) vide order No.665782/APPCB/KNL/TPT/CFO&HWA/HO/2018 dated 20-01-2018 valid till 31/01/2023.
12	12.08.2021	APPCB issued renewal Consent For Operation in the name of Pushpit Steels Private Limited For steel unit (Sponge iron - 400 TPD, Billets - 380 TPD & Power – 12 MW) vide order No.APPCB/KNL/TPT/11656/HO/2021 dated 12-08-2021 valid till 31/03/2026.

13.7.6 Implementation status of the existing EC:

S. No	EC/ CTE / EC Extension Permissions	Units permitted	Date of permission	Units implemented / in operation (CTO)	Date of 1st CTO obtained from SPCB	Remarks
1	CTE	DRI – 3x100 TPD	24-09-2003 (validity – 23-09-2008)	DRI -3x100 TPD	28-12-2006	**EC not applicable** 1) Prior to as per EIA notification 2006 2) as per EIA notification 1994 capital cost is is less

						than Rs 100 Crores (Rs. 19.43 Crores)
2	CTE	**DRI – 1x100 TPD** Billets – 200 TPD TMT bars – 200 TPD Ferro Alloys – 12 MVA Power – 15 MW	11-03-2006 (validity 10-03-2011)	**DRI – 1x100 TPD (4th kiln)** **Billets- 200 TPD**	04-09-2008	As per EIA notification 1994 CTE has been obtained after completion of PH and subsequently submitted EC application for grant of EC along with Schedule-II & Questionnaire
3	EC -1 (Expansion)	**DRI-30,000 TPA** **Billets – 60,000 TPA** TMT Bars -60,000 TPA Ferro alloys-36,000 TPA Power – 15 MW	19-04-2007			
4	EC-2 (Further expansion)	DRI -2,20,000 TPA Billets -1,62,000 TPA TMT Bars -3,00,000 TPA BF hot metal-4,36,425 TPA Sinter – 3,65,000 TPA **Power – 32 MW**	28-05-2008 (validity 27-05-2015)	**Power – 12 MW**	27-05-2015	Power plant of 12 MW applied for CTO along with existing DRI-400 TPD, Billets- 200 TPD
5	EC Extension & Transfer of EC	DRI - 2,20,000 TPA **Billets-1,62,000 TPA** **TMT Bars -3,00,000 TPA** BF hot metal-4,36,425 TPA Sinter – 3,65,000 TPA Power – 32 MW	27-04-2016 (Validity 27-05-2018)	**Billets -180 TPD** **TMT bars-3,00,000 TPA**	31-10-2017 20-01-2018	EC validity has been expired for remaining unimplemented units. Hence these units could not be implemented

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

S.No.	Units (Products)	Existing units in operation as per latest CTO (Based on EC, CTE permissions)	Expansion production capacities	Total capacity after expansion
1.	DRI Kilns (Sponge Iron)	1,20,000 TPA (4 x 100 TPD)	3,13,500 TPA (1 x 600 TPD & 1 x 350 TPD)	4,33,500 TPA
2.	Induction Furnaces with LRF & CCM (Hot Billets / Billets / Ingots)	1,25,400 TPA (2 x 12 MT & 1 x 15 MT)	2,64,000 TPA (4 x 20 MT)	3,89,400 TPA
3.	Rolling mill (TMT bars / Structural Steel) (85% Hot charging and remaining 15% through RHF with LDO & Coal Gasifier as fuel)	3,00,000 TPA	---	3,00,000 TPA
4.	Ferro Alloys Unit (FeMn / SiMn)	---	FeMn- 25,200 TPA / SiMn- 14,400 TPA (2 x 4.5 MVA)	FeMn- 25,200 TPA / SiMn- 14,400 TPA (2 x 4.5 MVA)
5.	Brick Manufacturing Unit	---	50,000 Bricks / Day	50,000 Bricks / Day
6	Power plant WHRB	8.0 MW	23.0 MW	31.0 MW

S.No.	Units (Products)		Existing units in operation as per latest CTO (Based on EC, CTE permissions)	Expansion production capacities	Total capacity after expansion
		CFBC	4.0 MW Existing FBC power plant will be dismantled	27.0 MW	27.0 MW
Note: Briquetting Plant of 100 Kg/Hr. is proposed for effective Dust management from Ferro Alloys					

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

S.No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
1.	Pellets	4,54,575	Bellary/Orissa	~ 700-800	By rail & road (through covered trucks
2.	Iron ore	5,01,600	Bellary/Orissa	~ 700-800	By rail & road (through covered trucks
3.	Sponge Iron	2,67,000	Own generation	---	Through covered conveyers
4.	MS Scrap / Pig Iron	40,000	Andhra Pradesh/ Tamil Nadu	~ 200	By road (through covered trucks)
5.	Ferro alloys	13,000	Own generation	---	By road (through covered trucks)
8.	Manganese Ore	80,802	MOIL / OMC	~ 700	By Rail & Road (through covered trucks)
9.	LAM coke	14,598	Andhra Pradesh	~ 200	By road (through covered trucks)
10.	Dolomite	7,524	Andhra Pradesh	~ 200	By road (through covered trucks)
12.	Electrode Paste	616	Maharashtra / West Bengal	~ 700	By road (through covered trucks)
13.	Quartz	3,456	Andhra Pradesh	~ 200	By road (through covered trucks)
14.	Bagfilter dust	1,476	Own generation	---	---
18.	Indian Coal	5,67,930	Singareni Collieries (SCCL)	~ 600	By rail & road (through covered trucks
19.	Imported Coal	3,63,475	Indonesia / South Africa / Australia	~ 100 (from Krishnapatnam/ Ennur Port)	Through sea route, rail route & by road (through covered trucks)

13.7.9 Water required in the existing plant is 621 KLD and same being sourced from Ground water. Water permission for existing plant is obtained from Ground Water and Water Audit Department, Govt. of Andhra Pradesh vide order dated 16-02-2022 and is valid till 15-02-

2025. Water required for the proposed expansion project will be 1,822 KLD and same will be sourced from treated sewage of Tirupati Municipal Corporation. Air cooled condensers have been provided in existing power plant. In expansion also air cooled condensers will be provided. This reduces the water consumption significantly. Total water requirement after the proposed expansion will be 2,443 KLD. Water drawl permission from Tirupati Municipal Corporation will be obtained after receipt of TOR letter for proposed expansion.

13.7.10 Power requirement for the existing plant is 19 MW and same is being met partly from Captive Power plant & remaining from the state grid. Power required for proposed expansion will be 43 MW. Total Power requirement after the proposed expansion will be 62 MW. Out of this 58 MW will be sourced from Captive Power Plant and remaining 4.0 MW from State grid.

13.7.11 The capital cost of the project is Rs. 455 Crores. Employment generation from proposed project will be 350 nos. through direct employment and 500 nos. through indirect employment.

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

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

Attributes	**Sampling**		**Remarks**
	No. of Stations	**Frequency**	
G. Air			
c. Meteorological parameters	1	On hourly basis for one season	• Wind Speed • Wind Direction • Temperature • Relative Humidity • Rainfall
d. AAQ parameters	8	24 hourly Twice a week for 3 months (One Season)	Parameters Monitored: • $PM_{2.5}$ • PM_{10} • SO_2 • NOx • CO
H. Noise	8	On hourly basis for 24 Hrs. at each station	Parameters Monitored: • Day equivalent • Night equivalent
I. Water			
c. Ground Water	8	One sample at each of the locations	Parameters Monitored: as per IS: 10500
d. Surface Water	8	One sample at each of the locations	Parameters Monitored: as per BIS: 2296
J. Land			
c. Soil quality	8	One sample at each of the locations	Parameters Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
d. Land use	--	--	LU map prepared by concerned FAE for study area
K. Biological			
c. Aquatic	--	Once in Season	---
d. Terrestrial	--	Once in Season	---
L. Socio economic parameters	--	Once in Season	Social Impact Assessment by concerned FAE for study area

Deliberation by the Committee

13.7.14 The Committee noted the following:

i. The instant proposal is for expansion of Steel Plant through increase of Sponge Iron production through DRI kilns from 1,20,000 TPA to 4,33,500 TPA, increase of MS Ingots/Billets/Hot Billets production through Induction Furnaces along with CCM & LRF from 1,25,400 TPA to 3,89,400 TPA, increase of WHRB based Power Plant from 8 MW to 31 MW, establishment of new CFBC based Power Plant of 27 MW, Dismantling of existing 4 MW FBC power plant, establishment of new 2 x 4.5 MVA submerged arc furnaces to produce Ferro Alloys (FeMn- 25,200 TPA / SiMn – 14,400 TPA) & Brick Manufacturing unit 50,000 Bricks /day.

ii. The EAC deliberated on the proposal. Based on the KML file presented by the PP, the proposed Unit is brownfield project.

iii. The existing plant is in operation based on EC and CTE as detailed in para 13.7.5 and 13.7.6 above.

iv. Total land available with Pushpit steels Pvt. Ltd. is 80.3 Acres only. The proposed expansion will be taken up in existing land only.

v. Swarnamukhi river, Kona Kaluva, Rallu Kaluvu, Idula Kalva and Vudamalapadu Eru exists within the study area of 10 km of the project site. The EAC is of the opinion that the water bodies shall not be disturbed.

vi. The existing water requirement of 621 KLD is met from Ground water. Water required for the proposed expansion project will be 1,822 KLD and same will be sourced from treated sewage of Tirupati Municipal Corporation.

Recommendations of the Committee

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

(i) Air cooled condensers shall be provided in the power plant.

(ii) Swarnamukhi river, Kona Kaluva, Rallu Kaluvu, Idula Kalva and Vudamalapadu Eru exists within the study area of 10 km of the project site. The PP shall submit the suitable steps /conservation plan along with contouring (close intervals), Run -off calculations, disposal etc. A robust and full proof Micro-Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.

(iii) CO gas sensors shall be installed at all relevant locations (furnaces).

(iv) PP advised to submit the coal dust exposure concentrations at coal handling areas, ball mills, furnace charging areas through personal/area monitoring; whether they are within 2 mg/m^3 in respirable dust containing less than 5% silica/quartz.

(v) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.

(vi) Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(vii) The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.

(viii) PP shall submit action plan for rainwater harvesting system.

(ix) Action plan for 100 % solid waste utilization shall be submitted.

(x) PP shall explore the possibility of plastic waste utilization in the Plant/Unit process.

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

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

(xiii) Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames", when PP comes for EC proposal. This study shall be formulated keeping in view of India's Net-zero commitment at the COP-26 Climate Summit.

(xiv) As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey (10 Kms radial coverage from the project site) and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.

(xv) Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by sea/rail/road with anticipated vessels/rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.

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

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

(xviii) Monitoring and control of NOx, SO_2 and CO gases from the furnace must be included in the pollution control scheme.

(xix) The total quantity of PM generated per annum and the percentage of this captured by the pollution control equipment must be reported regularly.

(xx) Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.

(xxi) A Plan of Action for disposal of e-waste must be drawn up and implemented.

(xxii) A Standard Operation Procedure for arresting emissions (PM as well as gas) when these approach critical values may be established.

***

SEPTEMBER 15, 2022 [THURSDAY]

Consideration of Environmental Clearance Proposals

Agenda No. 13.8

13.8 Capacity expansion project of ferro manganese and silico -manganese production (Existing: 54 TPD – 2 X6 MVA SAF, Proposed: 102 TPD -3X 7.5 MVA SAF) by M/s Ramnik Power & Alloys Pvt. Limited, located at Sarandi Industrial Growth Centre Tehsil – Waraseoni District Balaghat, Madhya Pradesh– Consideration of Environmental Clearance.

[Proposal No. IA/MP/IND/265696/2021; File No. J-11011/161/2011-IA.II(I)]
[Consultant: Creative Environ Services; valid upto 22.10.2022]

13.8.1 M/s. Ramnik Power & Alloys Private Limited has made an online application vide proposal number IA/MP/IND/265696/2021 dated 01.09.2022 along with copy of EIA/EMP report and Form – 2 and certified compliance report 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) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

13.8.2 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [Sl. No. 63, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/SA 0162; valid upto 22.03.2023, Rev. 25, Sept 05, 2022].

Details submitted by the project proponent

13.8.3 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord	ToR Validity
20.04.2021	Standard TOR issued	Terms of Reference	23rd April 2021	22nd April 2025

13.8.4 The project of M/s Ramnik Power & Alloys Private Limited located at Plot NO.-1, 2, 3, 4A, 4B, 6,7,8, 9A, 9B,10 Sarandi Industrial Area, Village Sarandi, Tehsil Waraseoni District Balagat Madhya Pradesh is for capacity expansion in existing Ferro- Alloy (Fe-Mn & Si-Mn) production from 54 TPD (Existing 2x6 MVA submerged arc furnace) to 156 TPD (Additional 3x7.5 MVA submerged arc furnaces).

13.8.5 Environmental site settings

<table>
<tr><th>S No</th><th>Particular</th><th>Details</th><th>Remarks</th></tr>
<tr><td>1</td><td>Total Land</td><td>12.286 Acres/ 4.9718ha
Allotted by DIC, Govt of MP in Designated Industrial Area. No additional land is required</td><td>Land use- Industrial</td></tr>
<tr><td>2</td><td>Land Acquisition details as per MoEF&CC Om dated 2014</td><td>The land is located with Industrial area and allotted by DIC of Govt of MP on dated 18.02.2008. The expansion project will be implemented within the existing plant boundary.</td><td>Initially the land was allotted for 30 years and letter on vide letter no 65 dated 17.09.2020 it was increased for 99 years and lease deed is valid till 17.02.2107.</td></tr>
<tr><td>3</td><td>Existence of habitation & involvement of R&R if any</td><td>R&R is not applicable</td><td>Industry is already in operation within the designated industrial area</td></tr>
<tr><td>4</td><td>Latitude and longitude of all corners of the project site</td><td>
<table>
<tr><th>S. no.</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1</td><td>21°47'38.20"N</td><td>80° 1'2.25"E</td></tr>
<tr><td>2</td><td>21°47'36.58"N</td><td>80° 1'1.55"E</td></tr>
<tr><td>3</td><td>21°47'33.51"N</td><td>80° 1'0.37"E</td></tr>
<tr><td>4</td><td>21°47'32.37"N</td><td>80° 0'59.80"E</td></tr>
<tr><td>5</td><td>21°47'31.54"N</td><td>80° 0'58.57"E</td></tr>
<tr><td>6</td><td>21°47'28.57"N</td><td>80° 0'57.27"E</td></tr>
<tr><td>7</td><td>21°47'27.00"N</td><td>80° 0'56.97"E</td></tr>
<tr><td>8</td><td>21°47'26.29"N</td><td>80° 0'58.25"E</td></tr>
<tr><td>9</td><td>21°47'26.16"N</td><td>80° 0'59.53"E</td></tr>
<tr><td>10</td><td>21°47'26.14"N</td><td>80° 0'60.00"E</td></tr>
<tr><td>11</td><td>21°47'26.83"N</td><td>80° 1'6.23"E</td></tr>
<tr><td>12</td><td>21°47'31.91"N</td><td>80° 1'6.69"E</td></tr>
<tr><td>13</td><td>21°47'32.01"N</td><td>80° 1'4.72"E</td></tr>
<tr><td>14</td><td>21°47'33.08"N</td><td>80° 1'4.88"E</td></tr>
<tr><td>15</td><td>21°47'32.96"N</td><td>80° 1'6.65"E</td></tr>
<tr><td>16</td><td>21°47'40.07"N</td><td>80° 1'7.17"E</td></tr>
</table>
</td><td></td></tr>
</table>

<table>
<tr><th>S No</th><th>Particular</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td><table><tr><td>17</td><td>21°47'39.21"N</td><td>80° 1'4.89"E</td></tr><tr><td>18</td><td>21°47'38.89"N</td><td>80° 1'4.37"E</td></tr></table></td><td></td></tr>
<tr><td>5</td><td>Elevation of Project Site</td><td>305 M above mean sea level</td><td></td></tr>
<tr><td>6</td><td>Involvement of forest land</td><td>No involvement of Forest land.</td><td>The site is located within designated industrial area</td></tr>
<tr><td>7</td><td>Water Body (River, lakes, Pond, nalla, Natural Drainage, Canal Etc) exist within the project site as well as study area</td><td>Project Site
Nil.

Study Area<table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Chandan River</td><td>0.20 km</td><td>S</td></tr><tr><td>Katngajhari Canal</td><td>0.25km</td><td>N</td></tr><tr><td>Chapa Tank</td><td>0.75 km</td><td>SW</td></tr><tr><td>Katangjhari Tank</td><td>9.50 km</td><td>N</td></tr><tr><td>Kas Naal</td><td>1.50 km</td><td>SW</td></tr><tr><td>Dhokriya Nalla</td><td>3 km</td><td>SW</td></tr><tr><td>Tondiya Nalla</td><td>1.25 km</td><td>E</td></tr><tr><td>Kamti Talav</td><td>6.75 km</td><td>N</td></tr><tr><td>Jamuniya Left Bank Canal</td><td>5 km</td><td>NNE</td></tr><tr><td>Wainganga Main Canal</td><td>9.775 km</td><td>NE</td></tr></table></td><td></td></tr>
<tr><td>8</td><td>Existence of ESZ/ ESA/ National Park/ wild life sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>Nil.

List of Reserved and protected forest
1. G. F. Sonewani RF – 6.00km- NW
2. PF- 4.25km- NW
3. PF- 5.00km- NNE
4. PF- 1.75km- SW</td><td></td></tr>
</table>

13.8.6 The existing project was accorded environment clearance vide no J-11011/161/2011-IA-II (I) dated 19.11.2014. The consent to operate for the existing unit was accorded by MP Pollution Control Board vide no AWH-56275 dated. The validity of CTO is up to 30.11.2027.

13.8.7 Implementation status of the existing EC:

S No	Facilities	Configuration / Capacity	As per EC Dated 19.11.2014	Implementation status on	Production as per CTO
1	Existing Ferro Alloys Unit	2 X 6 MVA SAF	2 X 6 MVA SAF	Implemented and in operation	17820 MT per year

S No	Facilities	Configuration / Capacity	As per EC Dated 19.11.2014	Implementation status on	Production as per CTO
					(54 TPD)

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

SN	Plant Equipment & Facility	Existing Facility as per EC dated 19.11.2014		Proposed Unit		Final (Existing + Propose)	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
1	Ferro Alloys Unit with sub merged arc furnace	2X6 MVA	54 TPD	3X7.5 MVA	102 TPD	2X6 MVA & 3X7.5 MVA	156 TPD

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

Sn	Raw Material	Quantity Required Per annum			Source	Distance from the site In km	Mode of transportation
		Existing	Expansion	Total			
For **Manufacturing of Si-Mn**							
1.	Mn Ore	48180	90420	138600	Captive Mine/ MOIL Nagpur	15 /25	By Road
2.	Mn Slag	4125	7755	11880	In plant generation	-	By Road
3.	Dolomite	825	1551	2376	Balaghat	40	By Road
4.	Met Coke/ Coal	19800	37125	56925	Dhanbad, Gujarat & Karnataka	900/1200 km	By Road
5.	Carbon Paste	412.5	772.2	1184.70	Maharashtra & CG	300	By Road
For Manufacturing of Fe-Mn							
1	Mn Ore	64020	120450	184470	Captive Mine/ MOIL Nagpur	15/25	By Road
2	Perl coke/ coal	21285	18645	39930	Dhanbad, Gujarat & Karnataka	900/1200	By Road
3	Dolomite	462	866	1328	Balaghat, Chhindwara, Katni	40/70/90	By Road
4	Carbon paste	429	805	1234	Maharashtra & C.G.	300	By Road

13.8.10 The existing water requirement is 75 m^3/day which is obtained from River Chandan and permission for the same has been obtained from Water Resource Department of Govt of MP vide letter no CB/31/2009/SL-173/44 dated 27.01.2010. The water requirement for the proposed project is estimated as 143 m^3/day. Total requirement will be 218 m^3/day, which will

be sourced from River Chandan on the same permission obtained from Water Resource Department of Govt of MP vide letter no CB/31/2009/SL-173/44 dated 27.01.2010.

13.8.11 Existing Power requirement of 12 MVA is obtained from MPSEB. The power requirement for the proposed project is estimated as 22.50 MVA, and total requirement will be 34.50 MVA which will be sourced through MPSEB.

13.8.12 Baseline Environmental Studies

<table>
<tr><td>Period</td><td>March to May, 2021</td></tr>
<tr><td>AAQM parameters at 10 Locations (Min and Max)</td><td>• PM-2.5 = 18.48 to 28.90 µg/m^3
• PM-10 = 43.02 to 72.65 µg/m^3
• SO_2 = 4.37 to 16.60 µg/m^3
• NOx = 5.18 to 27.01 µg/m^3
• CO = <1 mg/m^3</td></tr>
<tr><td>Incremental GLC</td><td>• PM_{10} = 2.36 µg/m^3 (level at 0.50 km in S direction)
• SO2 = 18.72 µg/m^3 (level at 0.50km in NE direction)
• NOX = 42.36 µg/m^3 (level at 0.50km in NE direction)</td></tr>
<tr><td>Ground Water quality at 11 Locations</td><td>• pH = 6.52 to 7.59
• Total Hardness = 144 to 356 mg/l
• Chlorides = 7.99 to 61.54 mg/l
• Fluoride = <0.10 to 0.98 mg/l
• Heavy Metals = < 0.05 mg/l</td></tr>
<tr><td>Surface water quality at 09 location</td><td>• pH = 7.27 to 7.92
• DO = 5.10 to 5.50 mg/l
• BOD = 4 to 9 mg/l
• COD = 40 to 70 mg/l</td></tr>
<tr><td>Noise Level Leq (Day & Night)</td><td>36.30 to 64.20 for day time and 31.20 to 38.20 for night time</td></tr>
<tr><td>Traffic Assessment study findings</td><td>Traffic study has been conducted at Katangi-Waraseoni State Highway which is approximately 100 mtrs from the plant site.
Transportation of raw material, fuel and finished product will be done 100% by road
Existing PCU is 145 PCU/Hr on Katangi-Waraseoni State Highway and existing level of services (LOS) is
<table>
<tr><th>S. No.</th><th>Road</th><th>V (Existing volume in PCU/hr.)</th><th>C (Existing capacity of road in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>1</td><td>Katangi Waraseoni State Highway</td><td>145</td><td>400</td><td>145/400=0.36</td><td>B</td></tr>
</table>
PCU Load after proposed project will be 145 (existing) + 15 additional) PCU/hr and level of services (LOS) will be:
<table>
<tr><th>S. No.</th><th>Road</th><th>Existing volume in PCU/hr.</th><th>Proposed volume in PCU/hr.</th><th>V (total volume of PCU/hrs after capacity expansion)</th><th>C (Existing capacity of road in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
</table></td></tr>
</table>

	1	**Katangi Waraseoni State Highway**	145	15	160	400	160/400 = 0.40	**B**
	Note: Capacity as per IRC 64 & IRC 106 guideline for capacity for roads. The level of services will B after including additional traffic due to proposed project.							
Flora & Fauna	No schedule I fauna and endangered Flora is present in the study area.							

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

S no	**Type of waste**	**Source**	**Quantity generated (TPA)**	**Mode of Treatment**	**Disposal**
1	Slag from Ferro Manganese	Process	20196	-	Is/Will be reused in manufacture of SiMn as it containshigh SiO2 and Silicon.
2	Slag from Silico Manganese	Process	20592	-	Is/ Will be utilized in Road Construction (Road contractors (i.e. M/s. Yashwanti Construction, Gulmohar and Kalptaru Construction, Sam Builders) and is/ Will be used for Backfilling of captive mine
3	Dust from Bag filters of SEAF and during tapping	APC	165	-	It will be briquetted and reused in the sinter plant
4	Waste Oil	5.1	40	Stored in MS drums and given to recyclers	Disposed off to recyclers

13.8.14 Public Consultation

Details of advertisement given	17.12.2021
Date of public Consultation	24.01.2021
Venue	Plant Premises
Presiding Officer	Additional District Magistrate, Balaghat
Major Issue raised	• Employment • Conservation of environment • Development of area • Consent given /No objection with proposal

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

S No	Physical Activity and Action Plan		Year of Implementation Budget in Lacs			Total Expenditure In Lacs
	Activity	**Targets**	**1st**	**2nd**	**3rd**	
PH Issues						
1	Provision of Employment	Employment to 350 people (95 % from nearby places)	-	-	-	-
2	Provision of control measures wrt Pollution from expansion	Water- Settling tanks and zero discharge condition, PTZ camera Air – Gas cleaning system with bag filter Noise- Noise shield and control equipment Green belt – with 5000 plants (Existing & proposed) Rain water Harvesting System- Implemented	Budget Included in cost of EMP			Capital - 405.50 Lacs Recurring – 34.05 Lacs
3	Financial Assistance of village Developmental Activity	Education (Construction/ Extension/ additional facilities e.g. Laboratory, Library, Computer class, Toilets, Drinking Water Facilities etc. for village schools) at Sarandi, Khandwa, Chandori, Sonbatola,	20	20	20	60
		Drinking Water Facilities (Hand Pumps, Wells, Tap Water, Water Storage Tanks, Deepening & Cleaning of Ponds, Roof Top Rain Water Harvesting Structure, promoting Drip irrigation etc.). at Sarandi, Khandwa, Chandori, Sonbatola,	15	15	15	45
		Vocational Training Centre for educated youth of village and skill development to unemployed local youth under Govt scheme at Sarandi	7	8	7	22
		Infrastructure facility viz chairs, playing material, black boards, fan, Ro for drinking water for children of Aganwadi of village Sarandi, Khandwa, Chandori,	1	1	1	3
		Financial assistance For Need Base Activities at nearby villages Sarandi and Sawangi, Chandori, Sorbitol	8	8	9	25
		Total	**51**	**52**	**52**	**155**

13.8.15 The existing capital cost of project was Rs 48.83 Crores . The capital cost of the proposed project is Rs 103.34 Crore and the capital cost for environmental protection measures is

proposed as Rs 405.50 Lacs. The annual recurring cost towards the environmental protection measures is proposed as Rs 34.05 Lacs. The employment generation from the proposed project/expansion is 450 numbers. The details of cost for environmental protection measures is as follows:

Budget For Implementation Of Environmental Management Plan					
		Existing in Lacs		**Proposed in Lacs**	
Heads	**Description**	**Capital Cost**	**Recurring Cost**	**Capital Cost**	**Recurring Cost**
Air Pollution	Air pollution Control equipment for plant, Bag Filters, Conveyor and storage gantry coverings	114	2.0	200	2.0
	Sheds & Silos for raw material storage				
	Sub Total	Capital – 314 Recurring – 4.0			
Waste Water Management	Installation & Up gradation of septic tanks and soak pit system /sewer line /storm water drainage system	06	1.0	04	1
	Sub Total	Capital – 10 Recurring – 2.0			
Green Belt development	Plant, roads	14.50	4.50	4.50	1.35
	Sub Total	Capital – 19 Recurring – 5.85 for 10000 plants			
Noise Control and measures	Plant	10	1.0	15	1.0
	Sub Total	Capital – 25 Recurring – 2.0			
Solid & Hazardous waste Management	Plant	03	1.50	02	0.50
	Sub Total	Capital – 05 Recurring – 02			
OHS Aspect	Plant	05 (@5000 per head)	2.0 @ 2000 per head	17.50	7.0
	Sub Total	Capital – 22.50 Recurring – 9.0			
Rain water harvesting Structure		10	1.0	-	-
Sub Total		Capital – 10 Recurring – 1.0			
Environmental Monitoring		-	6.40	-	1.80
Sub Total		Capital – Nil			

Budget For Implementation Of Environmental Management Plan					
		Existing in Lacs		Proposed in Lacs	
Heads	**Description**	**Capital Cost**	**Recurring Cost**	**Capital Cost**	**Recurring Cost**
		Recurring – 8.20			
	Total	**162.50**	**19.40**	**243**	**14.65**
Grant Total (Existing + Proposed)		**Capital - 405.50** **Recurring – 34.05**			

13.8.16 The existing greenbelt has been developed in 1.64 ha which is about 33% of the total project area of 4.971 ha with total sapling of 10,000 Trees. A 5 meter wide green belt consisting of 3 tier around plant boundary will be developed as green belt and green cover as per CPCB/MoEF&CC, New Dehli guideline. Local and Native species will be planted with a density of 2500 trees per hectare. Further green belt with 2000 number of plants shall be developed along the road and in village area.

13.8.17 There is no court case/show cause/direction for the project. However, there was a court case earlier which was disposed off and chronology of the same is as follows:

Date	Events
Applicant company (Ramnik Power & Alloy Pvt Limited) was established with the intent of conducting business related to manufacturing of various alloys like Ferro Manganese, Silicon Manganese etc. along with power generation, mining and other activities.	
2009	Applicant company established its unit for the production of Ferro Alloys (Ferro Manganese and Silico Manganese) Plant at Industrial Development Area, Village Sarandi, Tahsil-Waraseoni, District-Balaghat (M.P.) with a capacity of Ten Thousand Three Hundred Metric Tons per year along with its 6 MW capacity Biomass Based Captive Power Plant.
22.04.2009	Consent granted by the respondent (MPPCB) to the applicant company under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 to operate its plant.
01.05.2009	Environmental clearance was granted by the respondent for the applicant company to run and operate their 6 MW Biomass Power Plant.
20.02.2011	Application preferred by applicant company for expansion of the production of the Ferro Alloy Unit Plant from 27 TPD to 54 TPD.
18.05.2011	The applicant company as per the direction of respondents applied for necessary environmental clearance.
12.09.2011	The consent for renewal for the power plant for the production capacity of 6 MW for the year 2011-2012 was granted to the petitioner company by the respondents (MPPCB).
23.11.2011	The petitioner company was served with the closure notice by the respondents (MPPCB).
09.12.2011	The applicant company was granted interim stay against the notice dated 23.11.2011 by the Hon'ble High Court of MP in W.P.No.20579/2011.
29.10.2012	Expert Appraisal Committee, MoEF&CC constituted by Govt. of India considered the application for expansion submitted by the applicant company.
28.11.2011	Applicant company apprised the respondent regarding the application submitted for environmental clearance to MoEF&CC. The proposal was appraised by EAC.
01.12.2011	***The case was disposed off finally by the Hon'ble High Court of MP in W.P.No.20579/2011 with the direction dated 01.12.2011 to MoEF&CC to***

Date	Events
	accord the Environment clearance along with continuation of interim protection to the applicant company vide previous order dated 09.12.2011

Certified Compliance report from Regional office

13.8.18 The status of compliance of earlier EC was obtained from regional office Bhopal vide letter no 5-1/2020/(ENV)/711 dated 29.10.2021 and 5-1/2020/(ENV)/289 dated 03.03.2020 in the name of M/s Ramnik Power & Alloys Pvt Limited. No non-compliance has been reported by the RO, MoEF&CC.

Deliberations by the Committee

13.8.19 The Committee noted the following:

1. The instant proposal is for capacity expansion in existing Ferro- Alloy (Fe-Mn & Si-Mn) production from 54 TPD (Existing 2x6 MVA submerged arc furnace) to 156 TPD (Additional 3x7.5 MVA submerged arc furnaces).
2. The existing project was accorded environment clearance vide letter dated 19.11.2014 for 54 TPD (Existing 2x6 MVA submerged arc furnace) Ferro Alloy Plant.
3. 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.
4. 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.
5. 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.
6. The total project area is 12.286 Acres/4.9718 ha. Land allotted by DIC of Govt of MP on dated 18.02.2008 for 99 years and lease deed is valid till 17.02.2107.
7. The total water requirement is estimated to be 218 m^3/day which will be obtained from River Chandan.
8. Chandan River, Katngajhari Canal, Chapa Tank, Katangjhari Tank, Kas Naal, Dhokriya Nalla, Tondiya Nalla, Kamti Talav, Jamuniya Left Bank Canal and Wainganga Main

Canal exists within the study area of 10 km around the project site. The EAC is of the opinion that it shall not be disturbed. Mitigation measures w.r.t. safeguarding the Damodar river 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 the existing greenbelt has been developed in 1.64 ha which is about 33% of the total project area with total sapling of 10,000 Trees. Further green belt with 2000 number of plants shall be developed along the road and in village area. The Committee deliberated on the action plan and budget allocation for green belt development and found it satisfactory.

11. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found them to be satisfactory.

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

13. The Committee deliberated upon the certified compliance report of RO 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:

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

A. Specific 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. Chandan River, Katngajhari Canal, Chapa Tank, Katangjhari Tank, Kas Naal , Dhokriya Nalla, Tondiya Nalla, Kamti Talav, Jamuniya Left Bank Canal and Wainganga Main Canal exists within the study area of 10 km around 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.

iv. 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.

v. 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.

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

vii. Particulate matter emission from stacks shall be less than 30 mg/Nm^3.

viii. The PP shall carry out periodically occupational health survey as per the applicable norms.

ix. The 4^{th} hole extraction system shall be provided in the Sub Merged Arc Furnaces.

x. 100% of the slag generated through the process shall be utilised.

xi. The total water requirement of 218 m^3/day shall be obtained from River Chandan. GW abstraction is not permitted.

xii. The proposed project shall be designed as "Zero Liquid Discharge" Plant. There shall be no discharge of effluent from the plant. Domestic effluent shall be treated in Septic Tank and Soak Pit. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.

xiii. 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.

xiv. The PP shall undertake village adoption and formulate Village Adoption program consisting of need-based community development activities, and implement the same to develop them into model villages.

xv. Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.

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

xvii. 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. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.

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

xix. 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.

xx. 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.

xxi. 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); 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.

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

X. Miscellaneous

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

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

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

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

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

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

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

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

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

ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.

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

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

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

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

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

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

***

Agenda No. 13.9

13.9 Expansion of Cement Plant with Clinker Production from 0.75 MTPA to 3.00 MTPA, Cement from 0.95 MTPA to 4.00 MTPA and captive Power plant from 25 MW to 40 MW (Installation of Waste Heat Recovery Boiler: 15 MW) by M/s Sagar Cements (R) Limited, located at Gudipadu Village, Yadiki Mandal, Anantapur District, Andhra Pradesh – Consideration of Environmental Clearance.

[Proposal No. IA/AP/IND/263638/2018; File No. J-11011/421/2017 IA II(I)]
[Consultant: B. S. Envi-Tech Pvt. Ltd.; valid upto 15.05.2023]

13.9.1 M/s Sagar Cements (R) Limited has made an online application *vide* proposal no. IA/AP/IND/263638/2018 dated 06.09.2022 along with copy of EIA/EMP report, Form - 2 and certified EC compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(b) Cement Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

13.9.2 Name of the EIA consultant: M/s. B. S. Envi-Tech Pvt. Ltd. [Sl. No. 147, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/RA 0174; valid upto 16.11.2022, Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

13.9.3 The details of the ToR are furnished as below:

Date of Application	Consideration	Details	Date of accord	ToR Validity
18.04.2020	Standard TOR Granted	Terms of Reference	22.04.2020	21.04.2024
20.01.2021	29th Meeting of the REAC (Industry – 1 sector) to be held on 27th January, 2021	Amendment Terms of Reference	08.02.2021	

13.9.4 The project of M/s. Sagar Cements (R) Limited located in Gudipadu Village, Yadiki Mandal, Anantapur District, Andhra Pradesh is for increase in production of Clinker from 0.75 MTPA to 3.00 MTPA, Cement from 0.95 MTPA to 4.00 MTPA and captive Power plant from 25 MW to 40 MW (Installation of Waste Heat Recovery Boiler: 15 MW).

13.9.5 Environmental Site Settings:

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details submitted by the PP</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>80 ha.

Land use:
<table>
<tr><th>S.No</th><th>Description</th><th>Land use</th><th>Before expansion</th><th>After expansion</th></tr>
<tr><td>1</td><td>Cement Plant</td><td>Cement Plant, Power plant, space in between and Roads</td><td>25.0</td><td>30.0</td></tr>
<tr><td>2</td><td></td><td>Parking</td><td>4.0</td><td>4.0</td></tr>
</table></td><td>-</td></tr>
</table>

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details submitted by the PP</th><th>Remarks</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>3</td><td></td><td>Greenbelt</td><td>26.2</td><td>30.0</td></tr>
<tr><td>4</td><td></td><td>Vacant space</td><td>8.8</td><td>-</td></tr>
<tr><td>5</td><td colspan="2">Colony with infrastructure</td><td>16.0</td><td>16.0</td></tr>
<tr><td colspan="3">Total area of cement plant and colony</td><td>80.0</td><td>80.0</td></tr>
</table>
</td><td></td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>The Cement Plant is located in SCRL’s own land of 80 Ha. Keeping in view of utilizing the existing infrastructure, SCRL proposes to locate New Line adjacent to the existing kiln.

No additional land will be acquired.</td><td>-</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>No additional land will be acquired

Nearest Village:
1. Gudipadu – 1.48 km – NNE
2. Guruvanipalli – 3.17 km – E

The study area comprises of 18 villages falling in Anantapuramu and Kurnool Districts</td><td>No R&R.</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site.</td><td>
<table>
<tr><th>S. No.</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1</td><td>15° 4'21.79"N</td><td>77°58'43.23"E</td></tr>
<tr><td>2</td><td>15° 4'49.55"N</td><td>77°58'43.26"E</td></tr>
<tr><td>3</td><td>15° 4'49.10"N</td><td>77°59'8.26"E</td></tr>
<tr><td>4</td><td>15° 4'26.31"N</td><td>77°59'7.92"E</td></tr>
<tr><td>5</td><td>15° 4'26.29"N</td><td>77°59'6.24"E</td></tr>
<tr><td>6</td><td>15° 4'21.33"N</td><td>77°59'6.27"E</td></tr>
</table>
</td><td>-</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>Average altitude of 371 - 343 m above msl</td><td>-</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No Forest land involved</td><td>-</td></tr>
<tr><td>vii.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>1. Stream is passing inside the Plant Site in N.
2. Stream Adjacent to the Plant Site 0.11 km – E
3. Major Stream - 0.79 km– ESE
4. Pedda Vanka – 4.67 km – NE</td><td>HFL : 4.6 km</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>Nil</td><td>-</td></tr>
</table>

13.9.6 The Environmental Clearance was initially granted in the name of M/s. BMM Cement Limited vide SEIAA Lr. No. SEIAA/ANT-10/2008 dated 26.02.2010 for production of 0.66

MTPA of clinker and 0.95 MTPA Cement along with a Coal based Thermal Power Plant of 25 MW. Further, Environmental clearance was obtained for the increase of clinker production from 0.66 to 0.75 MTPA vide SEIAA Lr. No. SEIAA/AP/ANT/IND/12/2018/787 dated 03.05.2019 in the name of M/s Sagar Cements (R) Limited. IRO, MoEF&CC made an observation during monitoring on 29.04.2022 that EC dated 03.05.2019 has been issued by SEIAA, Andhra Pradesh in favor M/s Sagar Cements (R) Limited without transfer of earlier EC. In this regard PP submitted the application to SEIAA, Andhra Pradesh vide proposal No. SIA/AP/IND/278593/2022 dated 17.06.2022 for transfer of EC dated 26.02.2010. Accordingly, EC was transferred in favour of Sagar Cement (R) ltd by SEIAA, AP. vide File No APPCB11033/246/2022-TEC-EC-APPCB dated 05.09.2022. The Consent for Operation (CFO) of Cement plant and Coal based Captive Power Plant obtained from time to time and latest CFO obtained from Andhra Pradesh Pollution Control Board is given below.

- Cement Plant: CFO issued vide Order No. APPCB/KNL/KNL/17731/HO/CFO/2020 Dated 14.12.2020 with validity upto 30.09.2025
- Captive Power Plant: CFO issued vide Order No. APPCB/KNL/KNL/17731/ CFO&HWM/HO/2021 Dated 29/04/2021 with validity upto 31.05.2026

13.9.7 Implementation status of the existing EC

S. No	CLEARANCES	CAPACITY
1	**Cement Plant EC-1** SEIAA/ANT-10/2008 dated 26.02.2010	Clinker: 0.66 MTPA, Cement: 0.95 MTPA & Captive Power Plant (CPP): 25MW
2	**Transfer of EC1** File No. APPCB-11033/246/2022-TEC-EC-APPCB dated 05.09.2022	Clinker: 0.66 MTPA, Cement: 0.95 MTPA & Captive Power Plant (CPP): 25MW
3	**Cement Plant EC-2** SEIAA/AP/ANT/IND/12/2018/787 dated 03.05.2019	Increase of clinker production Clinker: 0.66 to 0.75 MTPA

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

Cement Plant	Present Capacity			Capacity after Proposed Enhancement		
	Clinker (MTPA)	Cement (MTPA)	Power (MW)	Clinker (MTPA)	Cement (MTPA)	Power (MW)
Unit –I	0.75	0.95	25 (CPP)	1.00	1.35	25 MW CPP + 15 MW WHRB
Unit –II (New)	-	-		2.00	2.65	
Total	**0.75**	**0.95**	**25**	**3.00**	**4.00**	**40**

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

Sl. No.	Material	Before Expansion	After Expansion	Source Locality	Distance, km	Mode of transport
1	Limestone	1.00	4.7	Captive Limestone Mine	2.2	Conveyor
2	Laterite/ Bauxite	0.07	0.32	Rajamundry or Warangal	450	By Road

Sl. No.	Material	Before Expansion		After Expansion	Source Locality	Distance, km	Mode of transport
3	Red mud	0.02		0.10	Belgaum area, Karnataka	400	
4	Iron ore	0.025		0.10	Veldurthy	100	
5	Gypsum	0.03		0.14	EID Pary India Ltd., Chennai & Coramandel Fertilizers Ltd., Chennai.	350	
6	Indian coal/ Imported coal/ Pet coke/ Spent carbon.	Cement Plant	0.122	0.553	Local Market Indian, Imported & other sources.	450	
7	Coal	CPP	0.156	0.156			
8	Slag requirement for PSC	0.05		2.2 (max)	JSW Bellary, Arjas steel Tadipatri	140 & 30	
9	Ash requirement for PPC	0.099		1.4 (max)	RTPS, AP Genco Nellore / SEMBCORP, Nellore	300	

13.9.10 The present water requirement of the plant is 960 m^3/day. With proposed expansion water requirement increases to 1550 m^3/day. Water is sourced from bore wells within the plant site. Necessary permission for water drawl has been obtained from Ground Water and Water Audit Department, Government of Andhra Pradesh for drawl of 1710 m^3/day vide letter no.3154/Hg-II/2018 dated 06.09.2019.

13.9.11 The present power consumption in the Cement plant including colony and mine is 14 MW. Power requirement is met from 25 MW Captive Power Plant. Additional power requirement is 25 MW for the proposed expansion. The total power requirement of 39 MW post expansion will be met with existing 25 MW Captive Power Plant and Proposed 15 MW WHRB Power Plant.

13.9.12 Baseline Environmental Studies:

Period	Winter Season, 2019-2020
AAQ parameters at 09 Locations	• PM_{10} = 44.8 to 60.7 µg/m^3 • $PM_{2.5}$ = 18.7 to 30.4 µg/m^3 • SO_2 = 8.2 to 14.6 µg/m^3 • NOx = 9.0 to 15.8 µg/m^3 • CO: less than 1 ppm
AAQ modelling (Incremental GLC)	• PM_{10} = 20.31 µg/m^3 - 6.0 km – NNE direction • $PM_{2.5}$ = 6.71 µg/m^3 - 6.0 km – NNE direction • SO_2 = 3.17 µg/m^3 - 8.0 km – ENE direction • NOx = 17.40 µg/m^3 - 6.0 km – NW direction

	• CO = <5.0 μg/m^3 - 50 m – Either Side of The Road • Model used: AERMOD – Version 10.1
Ground water quality at 08 locations	• pH = 6.62 – 7.79 • Total Hardness = 83 - 584 mg/l • Chlorides = 6.0 - 178 mg/l • Fluoride = <0.1 – 1.15 mg/l • Heavy Metals (Zinc) = <0.02 – 0.98 mg/l
Surface water quality at 01 Locations	• pH: 7.68; • DO: 6.2 mg/l; • BOD: <2 mg/l ; • COD : <4mg/l
Noise Levels At 09 Locations	50.6 to 70.8 dB (A) for the day time 41.8 to 62.5 dB (A) for the Night time.

Traffic assessment study Findings

- ❑ Traffic study has been carried out on road connecting Cement plant and Venkatampalli Gate with monitoring point at BMM Main gate.
    - Type of Road: Arterial - 2 lane divided (2 way) road
    - PCU limit: 1500 PCU per hour
- ❑ Transportation of raw material, fuel & finished product will be done 100% by road.
- ❑ Existing PCU is 267 PCU/hr and existing level of service (LOS) is A (Excellent)

Road	Existing V	C	Existing V/C	LOS
Cement plant and Venkatampalli Gate	267	1500	0.18	A (Excellent)

- ❑ PCU load after proposed project will be 267 (Existing) + 145 (Additional) PCU/hr and level of service (LOS) will be:

Road	Existing V	Additional	C	Total	Existing V/C	LOS
Cement plant and Venkatampalli Gate	267	66(145)	1500	267+145= 412	0.274	B (Very Good)

* Note: Capacity as per IRC-106:1990.

The Level of Service which is at present in A Category (Excellent)) will change to B Category (Very Good)

- ❑ **EMP MEASURES**
    - Closed trucks will be employed for transport of Materials/Products
    - Trucks Pollution Under Control (PUC) will be employed
    - Monitoring of trucks to ensure compliances such as covering of trucks by tarpaulin, avoiding spillage on roads etc.

- ❑ **PARKING FACILITIES:**

SCRL has earmarked an area of 4.0 Ha for Parking facility with following
1.5 Ha Area for roads and free movement of trucks
1.0 Ha area for 500 vehicles (@30 m2 /truck)

0.50 Ha for greenbelt around the parking area 1.0 Ha for facilities to truck drivers All facilities, such as canteen, toilets, rest rooms, etc. will be provided for truck drivers. Separate office building equipped with all communication and other infrastructure will be provided to the transporters.	
Flora and fauna	There are no Schedule-I species presented in study area.

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

- **Cement Plant :**
  No solid waste generated.
  Dust collected from Pollution control Equipment - Recycled back to the process

- **Colony :**
  Solid waste generated (garbage) - Present is 6.0 t/month.
  Additional 4.5 t/month
  Segregating - Bio-degradable - Food waste is vermi composted
  Non-degradable - paper/plastic/packaging etc. - burnt in kiln

- **Power Plant:** Ash generated - 0.06 MTPA - used in cement manufacturing process
- **Sewage treatment plant :** Sludge-Completely used as manure in the Plantation work

Hazardous Waste:

Type Of Waste	Source Name	Quantity		Treatment before disposal	Mode Of Disposal	Agreement Details For Disposal
		Existing	Additional			
Used oil generation and waste grease	Cement Plant	5.5 KL /annum	2.0 KL/annum	None	Containers	Authorized Recycler

13.9.14 Public Consultation:

Details of advertisement given	Notice made through advertisement in the Newspapers "The Indian Express" (English News Paper) and Sakshi (Telugu News Paper) on 07.12.2021.
Date of public consultation	07.01.2022
Venue	Existing Cement plant Gudipadu Village, Yadiki Mandal, Anantapur District, Andhra Pradesh
Presiding Officer	District Revenue Officer & Addl. District Magistrate, Ananthapuramu District, A.P.
Major issues raised	• Local Employment • Development of Gudipadu Village • Setting up RO Plants • Development of Pathology lab at PHC • Laying of Road for Gudipadu School • Frequent Medical Camps arrangements • Sewing centres for women

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

S. No	Activity		Year 22-23	Year 23-24	Year 24-25	Total Amount Rs in Lakhs
SWACHH BHARAT						
1	Repair of drainage system in Gudipadu village	**Physical Nos**	**1**	-	-	**6.00**
		@Village	Gudipadu	Gudipadu	Gudipadu	
		Budget Rs Lakhs	2.0	2.0	2.0	
2	Cleaning at temples surrounding areas.	**Physical No's**	**1**	-	-	**1.00**
		@Village	Gudipadu	-	-	
		Budget Rs Lakhs	1.00	-	-	
EDUCATION AND SPORTS						
1	Providing note books and other stationary item to school children every year	**Physical Nos**	175	175	175	**3.0**
		@ Village	Gudipadu	Gudipadu	Gudipadu	
		Budget Rs Lakhs	1.0	1.0	1.0	
2	Providing of computers, projector & printer to Gudipadu upper primary school. (175 students)	**Physical Nos**	1	1	1	**3.0**
		@ Village	Gudipadu	Gudipadu	Gudipadu	
		Budget Rs Lakhs	1.0	1.0	1.0	
3	Development of playground with necessary facilities in Gudipadu villages	**Physical Nos**	-	1	-	**10.00**
		@Village	-	Gudipadu	-	
		Budget Rs Lakhs	-	10	-	
4	Providing school buses for the village	**Physical Nos**	1+1	-	-	**50.0**
		@Village	Gudipadu Kundanakota	-	-	
		Budget Rs Lakhs	60	-	-	
WOMEN WELFARE						
1	Women training – Tailoring and providing sewing machines	**Physical Nos**	100	100	100	**6.00**
		@Village	Gudipadu & kundanakota	Gudipadu & kundanakota	Gudipadu & kundanakota	
		Budget Rs Lakhs	2.00	2.00	2.00	
2	Training and Funding women in making Jute products & cotton disposal bags	**Physical Nos**	1	-	-	**15**
		@Village	Gudipadu	-	-	
		Budget Rs Lakhs	15	-	-	
ROADS DEVELOPMENT						
1	Repair and maintenance of internal roads at Gudipadu village & venkatampalli village to Gudipadu approach road.	**Physical Nos**	1	1	1	**80.00**
		@Village	Gudipadu	venkatampalli village to Gudipadu approach road	Gudipadu	
		Budget Rs Lakhs	5	70	5	
2	Approach road at school in Gudipadu village for hassle free entry to students.	**Physical Nos**	175	-	-	**3.00**
		@Village	Gudipadu	-	-	
		Budget Rs Lakhs	3.0	-	-	

S. No	Activity		Year 22-23	Year 23-24	Year 24-25	Total Amount Rs in Lakhs
	Development of Roads in Gudipadu Village -Cement concreting – 3.00 km	**Physical Nos**	-	-	1	**35**
		@Village	-	-	Gudipadu	
		Budget Rs Lakhs	-	-	35	
VILLAGE						
1	Development and maintenance of Temples & surrounding area in Gudipadu village.	**Physical Nos**	1	1	1	**20.0**
		@Village	Gudipadu	Gudipadu	Gudipadu	
		Budget Rs Lakhs	3.50	13.00	3.50	
2	Solar street light posts at junctions in four locations	**Physical Nos**	-	4	-	**5.0**
		@Village	-	Gudipadu	-	
		Budget Rs Lakhs	-	5.0	-	
3	Supply of LED bulbs to all houses in Gudipadu Village	**Physical Nos**	500	-	-	**2.0**
		@Village	Gudipadu	-	-	
		Budget Rs Lakhs	2.0	-	-	
DRINKING WATER						
1	Providing of RO plant with infrastructure for village at Kundanakota	**Physical Nos**	-	1	-	**10.00**
		@Village	-	Kundanakota	-	
		Budget Rs Lakhs	-	10.00	-	
2	Installation of RO plant at Gudipadu school	**Physical Nos**				**3.0**
		@Village	Gudipadu			
		Budget Rs Lakhs	3.0	-	-	
SKILL DEVELOPMENT						
1	Providing skill development training to ITI & diploma passed local youth (for 10 members) per year.	**Physical Nos**	10 students/year	10 students/year	10 students/year	**30**
		@Village	**Local Youth from 10 km radius**			
		Budget Rs Lakhs	10	10	10	
HEALTH CARE						
1	Increasing medical check-up camp from one time to twice in a month at Gudipadu and introduction medical check-up once in a month at Kundanakota Village including Ambulance facility	**Physical Nos**	1	1	1	**28.00**
		@Village	Gudipadu	Gudipadu & Kundanakota	Gudipadu & Kundanakota	
		Budget Rs Lakhs	8.00	10.00	10.00	
2	Extension of Pathology lab facilities at OHC	Physical No's		1		**5.00**
		@village		OHC		
		Budget. RS. Lakhs	-	2.50	**2.50**	
OTHERS						
1	Plantation of Local species Neem, cassasimea, Jamun, Awala etc. – 5000 Saplings @Rs 200 per saplinroadg.	**Physical Nos**	-	2500 saplings	2500saplings	**10.00**
		@Village	Gudipadu to Venkatampalli			
		Budget Rs Lakhs	-	5.00	5.00	
2	Maintenance & Development of Green Belt @ Rs. 7.0 lakh/year	**Physical Nos**	-	-	-	**21.00**
		@Village	Gudipadu to Venkatampalli			
		Budget	7.0	7.0	7.0	

S. No	Activity		Year 22-23	Year 23-24	Year 24-25	Total Amount Rs in Lakhs
		Rs Lakhs				
3	Water pipe line of length 2.50 km from Borewell to storage tank	Physical No's	1	1	1	**12.0**
		@village	-	Gudipadu	-	
		Budget. RS. Lakhs	-	12.0	-	
4	Water pipe line of length 2.0km from storage tank to Gudipadu village	Physical No's	1	-	-	**10.0**
		@village	Gudipadu	-	-	
		Budget. RS. Lakhs	10.0	-	-	
5	Arrangement of water facility to the cattle to meet in summer periods.	Physical No's	1	-	-	**5.0**
		@village	Gudipadu	-	-	
		Budget. RS. Lakhs	5.0	-	-	
6	Construction of water pit for cattle	Physical No's	1	-	-	**2.0**
		@village	Gudipadu	-	-	
		Budget. RS. Lakhs	2.0	-	-	
7	Rain water harvesting pits development in villages	Physical No's	10	10	-	**5.0**
		@village	Gudipadu	Kundana kota villages	-	
		Budget. RS. Lakhs	2.5	2.5	-	
8	Agricultural – providing 2 nos motorised tillers for common usage	Physical No's	2	-	-	**10.0**
		@village	Gudipadu	-	-	
		Budget. RS. Lakhs	10	-	-	
TOTAL BUDGET (In lakhs of rupees) – Implementation period - 3 years						**403**

13.9.15 The cost of the proposed expansion is estimated to be about Rs. 500 Crores. SCRL has spent about Rs 34.20 crores for installation of EMP measures and about Rs. 5.53 crores per Annum in maintenance. Under Expansion an amount of Rs. 8772 Lakhs (Rs. 87.72 crores) for implementation of environmental management plan and recurring cost of about Rs. 82 Lakhs (Rs. 0.82 crores) per annum has been allotted. The manpower at the existing plant is 535. Additional manpower required for proposed expansion is 50. During the construction phase, 200 people on daily average will be employed for a period of 24 months. The details of cost for environmental protection measures is as follows:

S. No.	Description		Capital Cost (Rs. Crores)	Recurring Cost per annum (Rs. Crores)
1	Air Pollution	Air Pollution Control Equipment for Cement Plant	17	0.50
		Sheds & Silos for raw material storage	70	-
2	Wastewater Management	Neutralization pit for WHRB CPP	0.17	-
3	Greenbelt development additional area of 3.80 Ha		0.03	0.02
4	Occupational Health (Initial medical examination for new recruits and Personal Protection Equipment for all plant personnel		-	0.20
5	Environmental Monitoring		0.52	0.10

S. No.	Description	Capital Cost (Rs. Crores)	Recurring Cost per annum (Rs. Crores)
	Total	**87.72**	**0.82**

13.9.16 Greenbelt is developed in an area of 26.20 ha as per EC (33 % of green belt). Thick green belt of width of 10m along the boundary has been developed. Species are plated in consultation with the local DFO. Additional greenbelt will be developed in an area of 3.8 Ha vacant land in the next five years within the plant site. The greenbelt program for the next five years is given below.

Year	Area (Ha)	Number of saplings	Estimated budget	
			Capital Cost (Rs. Lakhs)	Recurring Cost per annum (Rs. Lakhs)
2020-21	0.76	1140	0.6	0.4
2021-22	0.76	1140	0.6	0.4
2022-23	0.76	1140	0.6	0.4
2023-24	0.76	1140	0.6	0.4
2024-25	0.76	1140	0.6	0.4
Total	**3.8**	**5700**	**3.0**	**2.0**

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

Certified compliance report from IRO MoEFCC

13.9.18 The Certified Compliance Statement of earlier EC issued by Regional Office, MoEFCC, Vijayawada vide Lr. No. IRO/VIJ/EPA/MISC/111-01/2021 Dated 09.06.2022. SCRL submitted the action taken report on observation to IRO, MoEFCC, Vijayawada on 20.06.2022 Compliance report was issued by IRO, MOEFCC, Vijayawada on 26.07.2022. The summary of the IRO observations as per letter dated 26.07.2022 are as follows:

Sl. No.	Observation made during monitoring on 29.04.2022	ATR submitted by the project proponent on 09.06.2022	Review of IRO, MoEFCC dated 26.07.2022
1	It has been observed that the Environmental Clearance vide letter No. SEIAA/ANT-10/2009 dated 26.02.2010 has issued in favor of M/s BMM Cements Ltd. However, the expansion EC vide letter No. SEIAA/AP/ANT/ IND/12/2018/787 dated 03.05.2019 has been issued by SEIAA, Andhra Pradesh	As per the observation, PP has submitted application for name change in the EC granted to them by SEIAA vide No: SEIAA/ANT-0/2008 dt 26.10.2010 for 0.66 MTPA Clinker, 0.95 MTPA Cement production and 25 MW Power Plant. PP is herewith enclosing the acknowledgement slip	As per the ATR submitted, it has been observed that the PA are in process of transferring the EC Letter No. SEIAA/ANT-0/2008 dt 26.10.2010 for 0.66 MTPA Clinker, 0.95 MTPA Cement production and 25 MW Power Plant in favor M/s Sagar Cements (R) Limited. In this regard, PAs have submitted application to SEIAA, Andhra Pradesh vide proposal No.

Sl. No.	Observation made during monitoring on 29.04.2022	ATR submitted by the project proponent on 09.06.2022	Review of IRO, MoEFCC dated 26.07.2022
	in favor M/s Sagar Cements (R) Limited without transfer of earlier EC	received as enclosure to this letter. Once PP receive the EC transfer, the same will be submitted.	SIA/AP/IND/278593/2022 dated 17.06.2022.
Further, the EC was transferred in favour of Sagar Cement (R) Ltd. by SEIAA, AP. vide File No APPCB11033/246/2022-TEC-EC-APPCB dated 05.09.2022.			

Written representations:

13.9.19 During the meeting, based on the deliberations made by the EAC, the project proponent vide letter dated 15.09.2022 through email dated 15.09.2022 submitted the following information:

Point -1: Reply to the written representation submitted during Public Hearing by the Member of Parliamentary Standing Committee

SCRL Submission: Reply of SCRL for each written representation (20 representations) submitted during Public hearing is submitted. SCRL would like to submit that the replies to the written representation were uploaded in the online Form 2 – EC application form under slot – 7.1 (1) from Page numbers 100-120.

Point -2: Water requirement of cement plant has to be submitted in comparison with other cement plants

SCRL Submission: Water requirement in comparison with other cement plants is submitted.

- Average specific water consumption for plant operations is 0.19 m^3/tonne of equivalent OPC for dry process based cement plants.
- SCRLs specific water consumption at present production (0.95 MTPA-Cement) with Cement plant requirement of 475 m^3/day is 0.195 m^3/tonne of OPC). Total water consumption including cement plant, power plant and colony is 960 m^3/day.
- SCRLs specific water consumption at expanded production (4.00 MTPA-Cement) with Cement plant requirement of 775 m^3/day is 0.08 m^3/tonne of OPC). Total water consumption after expansion including cement plant, power plant and colony is 1550 m^3/day.

Point 3: Water balance table has to be submitted clearing showing consumption/ process loss and Evaporation loss in cement plant

SCRL Submission: Water Balance table is revised showing the process consumption and evaporation losses

REVISED WATER BALANCE, (m^3/day)

		Requirement	Consumption (CL)/ Evaporative (EL)	Wastewater
Cement Plant consumption in process		725	725 (CL)	0
Cement Plant – cooling of bearings - makeup		50	50 (EL)	0
Power Plant		500	400(EL)	100
Dust Suppression		25	25 (CL)	0
Domestic Use	Plant	70	15(CL)	55
	Colony	180	30(CL)	150
TOTAL		**1550**	**1245**	**305**

Point – 4 : Public Hearing budget to be increased from Rs 2.68 to Rs. 4.0 crores

SCRL Submission: Budget for Public Hearing is revised by increasing the amount from Rs 2.68 to 4.03 crores. The revised budget statement along with the activities proposed is incorporated at para 13.9.14 above.

Point – 5 : Education support by SCRL done so far and proposed for future

SCRL Submission: Details of education support by SCRL is given below

SCRL has implemented the following in the Govt Primary School – Gudipadu by incurring an amount of Rs 6 Lakhs

- Supply of stationary
- - Computers
- Kitchen facility
- Flooring of the school
- Plantation around the school

The proposed activities for support of education in future are given below:

- Providing fees for 50 students from 7^{th} – 10^{th} class
- Providing bus facility upto Yadki
- Providing uniform support for students
- Providing Tution Center - bearing Facility expenses and tutor expenses at Gudipadu village
- Adult Education at Panchayat Office - all expenses will be borne by SCRL

Point – 6: Revise budget for the two villages i.e Gudipadu and Kundanakota from Rs 10 Lakhs /year /village to Rs 20 Lakhs/year/village and provide list of proposed activites

SCRL Submission: The list of activities proposed for two villages i.e Gudipadu and Kundanakota @ Rs 20 Lakhs/year/village are given below

Education

a. Providing fees for 50 students from 7^{th} – 10^{th} class
b. Providing bus facility upto Yadki

c. Providing uniform support for students
d. Providing Tution Center - bearing Facility expenses and tutor expenses at Gudipadu village
e. Adult Education at Panchayat Office - all expenses will be borne by SCRL

Health
a. Medical Camps and free medicines – once in quarter
b. Malnutrition care for Children

Drinking water and Sanitation
a. Providing toilets to the houses who are not having facility
b. Providing one RO plant with distribution outlet

Infrastructure
a. Roads repair
b. Providing Solar street lights
c. Supply of LED bulbs
d. Constructing Rainwater Harvesting pits for houses wherever permitted

Point – 7: Contribution of SCRL in the total predicted cumulative ground level concentrations

SCRL Submission: The contribution of incremental ground level concentrations due to emissions from SCRL plant and mine expansion to the overall scenario of Ambient Air Quality excluding other industries expansion is given below

PREDICTED INCREMENTAL GROUND LEVEL CONCENTRATIONS AND OVERALL SCENARIO, μg/m^3 (INCLUDING TRANSPORTATION ACTIVITY) CONSIDERING SOURCES OF SCRL CEMENT PLANT AND LIMESTONE MINE

24-Hourly Concentrations	**Particulate Matter-10 (PM_{10})**	**Particulate Matter-2.5 ($PM_{2.5}$)**	**Sulphur Dioxide (SO_2)**	**Oxides of Nitrogen (NOx)**	**Carbon Monoxide (CO)**
	24-hourly				**8-hourly**
Baseline concentration, max	60.3	29.5	14.2	15.3	1144 (<1 ppm)
Predicted incremental ground level concentration, max	9.40	1.20	1.31	7.8	49
Overall Scenario	**69.70**	**30.70**	**14.51**	**23.1**	**1193**
National Ambient Air Quality (NAAQ) standard limits specified for Industrial, Residential, Rural and other areas.	**100**	**60**	**80**	**80**	**2000 – 8 hourly**

Point – 9: Provide Year-wise CO_2 sequestration plan

SCRL Submission: Year-wise carbon sequestration plan is given below

CO_2 generation at present – 6,99,600 TPA
CO_2 generation after expansion – 21,09,700 TPA

YEAR WISE MEASURES FOR CO_2 SEQUESTRATION

		Annual CO_2 saving (kg)							
Proposed initiatives	**Emission factor (kg CO_2 /GJ)**	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**	**29-30**
Increasing use of alternate fuels to the	83	0	0	9156726 extent of 5 % Thermal Substitution rate (TSR)	12819416.4 extent of 7 % Thermal Substitution rate (TSR)	12819416.4 extent of 7 % Thermal Substitution rate (TSR)	14650761.6 extent of 8 % Thermal Substitution rate (TSR)	14650761.6 extent of 8 % Thermal Substitution rate (TSR)	18313452 extent of 10 % Thermal Substitution rate (TSR)
Reduction of clinker factor		0	0	18007551 (~ 2 %) by increasing production of blended cement	18007551 (~ 2 %) by increasing production of blended cement	27011326.5 (~ 3 %) by increasing production of blended cement	27011326.5 (~ 3 %) by increasing production of blended cement	27011326.5 (~ 3 %) by increasing production of blended cement	30612836.7 (~ 5 %) by increasing production of blended cement
Installation of 15 MW Waste Heat Recovery Power Plant	822 (Kg CO_2/MWh)	0	0	10413307	10413307	10413307	10413307	10413307	10413307
Installing a Solar power plant with a capacity of 5 MW.	822 (Kg CO_2/MWh	0	0	1972800	1972800	1972800	1972800	1972800	1972800
Total in kgs				39550384	43213074.4	52216850	54048195	54048195	61312396
Total in tonnes				39550.38	43213.0744	52216.85	54048.2	54048.2	61312.4
PERCENTAGE OF REDUCTION				**1.87**	**2.05**	**2.48**	**2.56**	**2.56**	**2.91**

Point – 9: Factors considered for Passenger Car Units (PCU) for the traffic study

SCRL Submission: Factors considered for computation of Vehicles to Passenger Car Units (PCUs) as per IRC for Traffic Study are given below

FACTORS CONSIDERED FOR COMPUTATION PASSENGER CAR UNITS AS PER IRC FOR TRAFFIC STUDY

Type of Vehicle	Factor for converting into PCU as per IRC
2-Wheelers	0.5
3-Wheelers	1
4- (Cars, Jeeps, Vans)	1.4
Buses/ Lorries/ Trucks	2.2
Heavy Vehicles	4

Deliberations by the Committee

13.9.20 The Committee noted the following:

1. The instant proposal is for increase in production of Clinker from 0.75 MTPA to 3.00 MTPA, Cement from 0.95 MTPA to 4.00 MTPA and captive Power plant from 25 MW to 40 MW (Installation of Waste Heat Recovery Boiler: 15 MW).
2. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.
3. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.
4. The existing project was granted Environmental Clearance in the name of M/s. BMM Cement Limited vide SEIAA Lr. No. SEIAA/ANT-10/2008 dated 26.02.2010 for production of 0.66 MTPA of clinker and 0.95 MTPA Cement along with a Coal based Thermal Power Plant of 25 MW. Further, Environmental clearance was obtained for the increase of clinker production from 0.66 to 0.75 MTPA vide SEIAA Lr. No. SEIAA/AP/ANT/IND/12/2018/787 dated 03.05.2019 in the name of M/s Sagar Cements (R) Limited. IRO, MoEF&CC made an observation during monitoring on 29.04.2022 that EC dated 03.05.2019 has been issued by SEIAA, Andhra Pradesh in favor M/s Sagar Cements (R) Limited without transfer of earlier EC. In this regard PP submitted the application to SEIAA, Andhra Pradesh vide proposal No. SIA/AP/IND/278593/2022 dated 17.06.2022 for transfer of EC dated 26.02.2010. Accordingly, EC was transferred in favour of Sagar Cement (R) ltd by SEIAA, AP. vide File No APPCB11033/246/2022-TEC-EC-APPCB dated 05.09.2022.
5. 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.
6. A stream is passing through a project site in the north. Two streams and Pedda Vanka exists adjacent to the project site within the study area. The EAC is of the opinion that water bodies shall not be disturbed. Mitigation measures w.r.t. safeguarding the water bodies shall be implemented. The EAC deliberated the Action Plan and found in order.

7. 1550 m^3/day water will be required for the project post expansion; which will be sourced from Groundwater. The EAC advised that project proponent shall explore the possibility of shifting to alternate source of water to reduce dependency on groundwater.
8. Greenbelt is developed in an area of 26.20 Ha as per EC (33 % of green belt). Thick green belt of width of 10m along the boundary has been developed. Additional greenbelt will be developed in an area of 3.8 Ha vacant land in the next five years within the plant site. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP the green belt development shall be completed in a year.
9. The Committee has found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
10. Gudipadu (1.48 Km, NNE) and Guruvanipalli (3.17 Km, E) villages are in the vicinity of the project site. The EAC advised that Project Proponent shall take appropriate environmental safeguard measures to minimise the impact on the habitation of the locals. The PP shall also include these locations in its environmental monitoring programme.
11. The Committee deliberated upon the certified compliance report of IRO MoEFCC as well as action taken report submitted by PP with respect to the observations reported by IRO along with the review report of IRO and found it 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. The EAC also noted that several written representations are received during Public Hearing including from Member of Parliamentary Standing Committee. SCRL through written submission reported that for each written representation (20 representations) submitted during Public hearing reply has been submitted. Accordingly, reply to Member of Parliamentary Standing Committee has been submitted vide letter dated 15.09.2022. The EAC deliberated the Action Plan and found in order.
13. The Committee also deliberated on the written submission of PP on the issues raised by EAC during meeting 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

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

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

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

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

(iii) A stream is passing through a project site in the north. Two streams and Pedda Vanka exists adjacent to the project site within the study area. The PP shall take suitable steps / conservation plan along with contouring, Run-off calculations, disposal etc. for conservation of stream. A robust Conservation scheme to protect these water bodies; along with Soil conservation scheme and multiple Erosion control measures shall be implemented.

(iv) Gudipadu (1.48 Km, NNE) and Guruvanipalli (3.17 Km, E) villages are in the vicinity of the project site. Project Proponent shall take appropriate environmental safeguard measures to minimise the impact on the habitation of the locals. The PP shall also include these locations in its environmental monitoring programme.

(v) As committed, PP shall adopt Gudipadu and Kundanakota villages and develop them into model villages in next 10 years.

(vi) 1550 m^3/day water will be required for the project post expansion; which will be sourced from Groundwater. Necessary permission shall be obtained from the Competent Authority in this regard. PP shall explore the possibility of shifting to alternate source of water to reduce dependency on groundwater.

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

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

(ix) Rain water harvesting system as per Hydro-geological Study Report incorporated in EIA/EMP Report shall be implemented.

(x) 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.

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

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

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

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

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

(xvi) The proposed project shall be designed as "Zero Liquid Discharge" Plant. PP shall provide the Reverse Osmosis (RO) plant and capacity of RO plant with ETP and there shall be no discharge of effluent from the plant. Domestic waste water shall be treated in STP and treated water shall be re-used for greenbelt development and plantation and dust suppression.

(xvii) DeSOx system shall be provided dry type. NOx level shall be maintained below 600 mg/Nm^3 by using best available technology.

(xviii) Petcoke dosing shall be controlled automatically to control SO2 emission from chimney within the prescribed limits.

(xix) PP shall identify the Source of fluoride emissions and action plan to mitigate the same shall be implemented.

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

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

(xxii) All the commitments made to the public during the Public Hearing/Public Consultation shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.

(xxiii) As committed by the PP, two school buses shall be provided for two villages and the PP shall to this affect submit the credentials for procuring/ providing the buses to the IRO, MoEFCC in the six monthly report.

(xxiv) Under the CER programme, PP shall focus on Communication skills and personality development programmes for women in the nearby villages.

(xxv) 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.

(xxvi) The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.

B. General conditions

I. Statutory compliance:

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

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25thAugust, 2014 (Cement) and subsequent amendment dated 9thMay, 2016 (Cement) and 10th May, 2016 (in case of Co-processing Cement); as amended from time to time; and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

iii. The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions.

iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.
viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
ix. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.
x. Provide wind shelter fence and chemical spraying on the raw material stock piles; and
xi. Provide Low NOX burners as primary measures and SCR /NSCR technologies as secondary measure to control NOX emissions.
xii. Have separate truck parking area and monitor vehicular emissions at regular interval.
xiii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport
xiv. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants.

III. Water quality monitoring and preservation

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

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures

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

VI. Waste management

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

VII. Green Belt

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

VIII. Public hearing and Human health issues

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

IX. Environment Management

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt villages based on the socio-

economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.

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

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

X. Miscellaneous

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Consideration of TOR Proposal

Agenda No. 13.10

13.10 Expansion of Existing Chrome Ore Beneficiation Plant from 1,20,000 TPA to Proposed 2,00,000 TPA (throughput), with addition of Chrome Briquetting Plant 1,60,850 TPA, High Carbon/Medium Carbon/Low Carbon Ferro Chrome 1,45,000 TPA (max) OR Silico manganese 1,34,640 TPA, Metal Recovery Plant (Crushing) - 181,250 TPA by M/s Anand Exports, located at - Nimapali, Golagaon, Po-Pankapal, Tehsil – Sukinda, P.S.- Kalinga Nagar, Dist-Jajapur, Odisha – Consideration of TOR.

[Proposal No. IA/OR/IND/283111/2022; File No. IA-J-11011/268/2022-IA-II(IND-I)]
[Consultant: M/s Visiontek Consultancy Services Private Limited; valid upto 16.12.2023]

13.10.1 M/s. Anand Exports has made an application online vide proposal no. IA/OR/IND/283111/2022 dated 30/08/2022 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No.3(a) Metallurgical Industries (Ferrous and Non/ferrous) and 2(b) Mineral Beneficiation under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

13.10.2 Name of the EIA consultant: M/s Visiontek Consultancy Services Private Limited [S. No. 103, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2023/RA 0209 valid till 16.12.2023; Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

13.10.3 The project of M/s. Anand Exports located in Nimapali, Golagaon Village, Sukinda Tehsil, Jajapur District, Odisha is for enhancement of Existing Chrome Ore Beneficiation Plant from 1,20,000 TPA to Proposed 2,00,000 TPA (throughput), with addition of Chrome Briquetting Plant 1,60,850 TPA, High Carbon/Medium Carbon/Low Carbon Ferro Chrome 1,45,000 TPA (max) OR Silico manganese 1,34,640 TPA and Metal Recovery Plant (Crushing) 181,250 TPA.

13.10.4 Environmental site settings:

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>39.578 ha [Private land: 39.578 ha (non-forest)]</td><td>Land use: Industrial</td></tr>
<tr><td></td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>Existing Land: 5.37 Ha. (Acquired);
Additional Land: 34.208 Ha. (Land already Acquired);
Total Land: 39.578 Ha. (Non-forest)</td><td></td></tr>
<tr><td>ii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td><u>Project Site:</u>
No habitants or houses within the project area.

<u>Study Area:</u>
<table>
<tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Golagan</td><td>0.16 km</td><td>NW</td></tr>
<tr><td>Baghbahali</td><td>0.44 km</td><td>SE</td></tr>
<tr><td>Nimapalli</td><td>0.46 km</td><td>SW</td></tr>
<tr><td>Bhitar Manika</td><td>0.96 km</td><td>N</td></tr>
<tr><td>Bhaluhgi</td><td>1.30 km</td><td>SSW</td></tr>
<tr><td>Jatarapal</td><td>1.42 km</td><td>E</td></tr>
</table></td><td>R & R is not applicable.</td></tr>
<tr><td>iii.</td><td>Latitude and Longitude of all corners of the project site.</td><td>
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>20°55'29.82"N</td><td>86° 0'4.28"E</td></tr>
<tr><td>B</td><td>20°55'27.37"N</td><td>85°59'58.99"E</td></tr>
<tr><td>C</td><td>20°55'1.68"N</td><td>85°59'55.22"E</td></tr>
<tr><td>D</td><td>20°54'57.69"N</td><td>86° 0'3.87"E</td></tr>
<tr><td>E</td><td>20°55'22.79"N</td><td>86° 0'17.71"E</td></tr>
<tr><td>F</td><td>20°55'26.94"N</td><td>86° 0'15.93"E</td></tr>
</table></td><td></td></tr>
<tr><td>iv.</td><td>Elevation of the project site</td><td>27 to 36 m AMSL</td><td></td></tr>
<tr><td>v.</td><td>Involvement of Forest land if any.</td><td>Forest Land: No forest Land Involved.</td><td></td></tr>
<tr><td>vi.</td><td>Waterbody exists within the project site as well as the study area</td><td>Project site:
No water body exists.

Study area:
<table>
<tr><th>Water body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Brahmani River</td><td>2.79 km</td><td>S</td></tr>
</table></td><td>HFL Data of Brahmani River, Highest Flood: 23.765 m (2011); Station: Jenapur at 9.60 km from the</td></tr>
</table>

S.No.	Particulars	Details			Remarks
		Pandara Nadi	5.06 km	SW	Project site
		Bhalupada Nala	5.56 km	SSE	
		Sukinda Pat	8.06 km	E	
		Ganda Nadi	8.95 km	ENE	
vii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study Area.	Nil **Protected Forest:** Sunajhari PF (3.79 km, NW) Dangadi PF (8.50 km, NE) **Reserve Forest:** Balibo RF (8.38 km, WSW)			

13.10.5 The existing project was accorded environmental clearance vide F. No. J-11015/225/2010-IA.II(M), Dated 24/09/2012 for expansion of ore beneficiations plant from 1000 TPA to 1,20,000 TPA throughput capacity. 1st CTE vide letter no 1709 dated 15/07/2009 & 2nd CTE vide letter no. 1823 dated 17.05.2012 & 3rd CTE vide letter no. 524/Ind-242, Dated 08/03/2021 were obtained from SPCB. Due to typographical error in production quantity, Corrigendum of said CTE has been granted vide letter no 2298/KNG/IND/242, dtd 19/08/2022 of Capacity 1,20,000 TPA (Throughput). Current CTO granted vide Ref. No. 743/KNG/IND/242, dated 25/03/2022 valid upto 31/03/2023 with corrigendum vide letter no 2300/KNG/IND/242, dtd 19/08/2022 of Capacity 1,20,000 TPA (Throughput) by the State Pollution Control Board.

13.10.6 Implementation status of the existing EC:

Sl. No.	Facilities	Units	As per EC dated 13/07/2009	Implementation Status & Production Achieved	Production as per CTO dated 25/03/2022 (Corrigendum dated 19/08/2022)
1	Chrome Ore Beneficiation Plant	0.12 MTPA (throughput)	0.12 MTPA (throughput)	Installed and Operational Maximum Production achieved 89,940.5 TPA in the year 2018-19.	1,20,000 TPA (Throughput)

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

S. No.	Plant Equipment/ Facility	Existing facilities as per EC dated 24/09/2012								Proposed Units		Final (Existing + Proposed)	
		Total (A+B)		Implemented (A)		Un-implemented (B)		As per CTO dated 25/03/2022 (Corrigendum dated 19/08/2022)					
		Configuration	Capacity	Configuration	Configuration	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
1	Chrome Ore Beneficiation	1x0.12 MTPA (throughput)	0.12 MTPA	1x0.12 MTPA	1x0.12 MTPA (throughput)	-	-	1x0.12 MTPA (throughput)	0.12 MTPA	Enhancement of existing unit by 0.08 MTPA	0.08 MTPA	1x0.2 MTPA (throughput)	0.2 MTPA
2	Chrome Briquetting Plant	-	-	-	-	-	-	-	-	160,850 TPA	160,850 TPA	160,850 TPA	160,850 TPA
3	High/ Med./ Low Carbon Ferro Chrome **OR** Silico Manganese									4x9 MVA, 2x16 MVA SAF	1,45,000 TPA	4x9 MVA, 2x16 MVA	1,45,000 TPA
											1,34,640 TPA	4x9 MVA, 2x16 MVA	1,34,640 TPA
4	Metal Recovery Plant (Crushing)									1 x 40 TPH	181,250 TPA	1 x 40 TPH	181,250 TPA

**** Possible options: High carbon chrome 1,45,000 TPA (or High carbon Chrome - 104,200 TPA and Medium carbon chrome - 34,000 TPA or High carbon Chrome - 104,200 TPA and Low carbon chrome - 33,000 TPA) or Silico Manganese – 134,640 TPA***

13.10.8 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			Distance	Source	Mode of Transport
		Existing	Proposed	Total			
1 a.	Chrome Ore Fines	1,20,000	80,000	2,00,000	26 km	Company Owned Mine	Truck
1 b.	Chrome Ore Lumps	-	1,58,150	1,58,150	26 km	Company Owned Mine	Truck
2	Coke	-	1,73,998	1,73,998	5 km	Local	Truck
3	Coal	-	21,750	21,750	105 km	Open Market/ Imported	Truck
4	Dolomite	-	13,050	13,050	970 km	Katni, Madhya pradesh	Train
5	Quartz	-	36,353	36,353	360 km	Vijaynagaram	Truck
6	Manganese Ore	-	1,50,796	1,50,796	92 km	Imported (Paradeep)	Truck
8	Lime	-	20,400	20,400	290 km	Raigarh	Train
11	Ferro Silicon	-	1700	1700	420/290 km	Chhatishgarh/ Raigarh	Truck
12	L.D.O	-	1700	1700	5 km	Local	Truck
13	Manganese Slag	-	85,228	85,228	50 km	Laxmi Associates, Cuttack	Truck
14	Oxygen	-	22,060	22,060	184 km	Linde India Ltd (Rourkela)	Tanker
15	Nitrogen	-	2720	2720			

13.10.9 The total water required is 1874 KLD (make-up). Existing water requirement is 78 KLD, which is obtained from CGWA vide letter no CGWA/NOC/IND/ORIG/2020/9444, dated 29/10/2020 valid upto 28/10/2023. Water requirement for the total project after expansion is estimated as 1874 KLD, out of which fresh water requirement of 1494 KLD will be met from Brahmani River and remaining requirement of 380 KLD will be met from the Rain Water Harvesting. The Permission for drawl of Surface water will be obtained. Ground water use will be phased out after availability of surface water at site.

13.10.10 The total power requirement for plants is 32.13 MW per hour. Existing power requirement is 0.614 MW (667 KVA), which is obtained from NESCO. The remaining power requirement for the project is estimated as 31.516 MW, which will be obtained from Nearest State GRID (Permission of the same will be obtained).

13.10.11 The capital cost of the project is Rs. 255.50 Crores (Existing Rs. 32.50 Crores & Proposed Rs. 223.00 Crores) and the capital cost for Environmental Protection Measures is proposed as Rs. 20.40 Crores (Existing Rs. 2.50 Crores & Proposed Rs. 17.90 Crores). Employment generation from the expansion is 1320 (Existing 40, Proposed 380 & Indirect 900).

13.10.12 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.

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

Environmental Aspect	Frequency/ Parameters / Locations
Micro Meteorology	**Frequency:** Continuous recording of hourly micro-meteorological parameters for 3 months **Parameters:** Temperature, Relative Humidity, Rainfall, Wind speed, Wind direction, Cloud cover, **Location:** At/Near Project Site
Ambient Air Quality	**Frequency:** Twice a week on 24 hrs basis for 12 weeks **Parameters:** PM_{10}, $PM_{2.5}$, SO_2, NOx, CO, NH_3, O_3 BaP & Fe **Locations:** 11 locations within the study area covering core zone, upwind directions, downwind directions, crosswind directions and nearby habitations based on the predominant windrose as presented above.
Ambient Noise Levels	**Frequency:** Continuous monitoring for 24 hours (Day & Night) at each location, Once in a month for 3 months **Parameters:** Leq Day Time, Leq Night Time **Locations:** 12 locations within the study area covering core zone, various land uses and nearby habitations.
Surface Water Quality	**Frequency:** Once during the study period (Three Months) **Parameters:** Colour, pH, Dissolved Oxygen (min), Conductivity, Total Hardness, Turbidity, Chlorine (Cl^-),Total Dissolved Solids, Oil & Grease (max), BOD (3) days at 27°C (max), Chemical Oxygen Demand (COD), Arsenic (As), Lead (Pb), Cadmium (Cd) (max), Hexa Chromium as Cr^{+6}, Copper (Cu) (max), Zinc (Zn) (max), Selenium (Se) (max), Cyanide (CN) (max), Fluoride (F), Sulphates ($SO4^-$), Calcium (Ca), Magnesium (Mg), Manganese (Mn), Boron (B), Mercury (Hg), Phenolic Compounds as C_6H_5OH (max), Iron (Fe) (max), Nitrate (NO_3), Anionic Detergents (max), Total Coliform. **Locations:** 9 locations within the study area covering major surface water bodies.
Ground Water Quality	**Frequency:** Once during the study period (Three Month) **Parameters:** Color, Odour, Taste, Turbidity, pH, Total Hardness (as $CaCO_3$), Iron (Fe) , Chloride (Cl^-), Residual Free Chlorine, Total Dissolved Solids as TDS, Calcium (Ca), Magnesium (Mg), Copper (Cu), Manganese (Mn), Sulphate (SO_4^-), Nitrate (NO_3), Fluoride (F), Phenolic Compounds as C_6H_5OH, Mercury (Hg), Cadmium (Cd), Selenium (Se), Arsenic (As), Cyanide (CN), Lead (Pb), Zinc (Zn), Total Chromium as Cr, Mineral Oil, Alkalinity, Aluminium (Al), Boron (B), Total Coliform as TC, Amonia Total, Barium (Ba), Molybdenum (Mo), Nickel (Ni), PAH & Pesticide. **Locations:** 8 locations within the study area.
Soil Quality	**Frequency:** Once during the study period (Three Months) **Parameters:** Conductivity, Water Holding Capacity, Infiltration Rate, pH, Texture, Sand, Silt, Clay, Bulk Density, Exchangeable Calcium, Exchangeable Sodium, Exchangeable Magnesium, Available Potassium, Available Phosphorus, Available Nitrogen, Organic Matter, Organic Carbon, Water Soluble Chloride, Water Soluble Sulphate,

Environmental Aspect	Frequency/ Parameters / Locations
	Sodium Absorption Residue, Aluminium, Iron, Manganese, Boron, Zinc, Chromium, Hexavalent Chromium, Nickel, Copper, Cadmium, Iron, Silica, Lead, Available Phosphorus. **Locations:** 6 locations within the study area covering different land uses such as agriculture land, park, waste land, etc.
Hydrogeology	**Frequency:** During Winter & post-monsoon season **Parameters:** Drainage pattern, Ground water table depth, ground water quality, ground water yield, etc. **Locations:** villages within 10 km radius study area
Land use land cover	Satellite imagery-based land use study and preparation of land use land cover maps based on latest LULC classifications & Ground truthing. **Parameters**: Agricultural area, Water bodies, Industrial land, Barren land, Built-up land, Forest area.
Ecology & Biodiversity	**Frequency:** Primary survey during study period. Secondary data collection from Forest department **Parameters:** Terrestrial Flora & Fauna, Aquatic flora & fauna, Forests, etc. **Location:** 10 km radius study area
Socio-economy	**Frequency:** Primary survey during study period. Secondary data collection from Govt. offices, Village Panchayats, Census of India records **Parameters:** Demographic pattern, economic pattern, social amenities availability **Location:** 10 km radius study area

Deliberation by the Committee

13.10.14 The Committee noted the following:

i. The instant proposal is for enhancement of Existing Chrome Ore Beneficiation Plant from 1,20,000 TPA to Proposed 2,00,000 TPA (throughput), with addition of Chrome Briquetting Plant 1,60,850 TPA, High Carbon/Medium Carbon/Low Carbon Ferro Chrome 1,45,000 TPA (max) OR Silico manganese 1,34,640 TPA and Metal Recovery Plant (Crushing) 181,250 TPA.

ii. The EAC deliberated on the proposal. Based on the KML file presented by the PP, the proposed Unit is brownfield project.

iii. The existing plant is in operation based on EC dated 24.09.2012 for Capacity of 1,20,000 TPA (Throughput).

iv. The existing land with M/s. Anand Exports is 5.37 ha. Additional land of 34.208 ha has been acquired by the company. The total land will be 39.578 ha where the expansion project will be implemented.

v. Brahmani River, Pandara Nadi, Bhalupada Nala, Sukinda Pat and Ganda Nadi exists within the study area of 10 km of the project site. The EAC is of the opinion that the water bodies shall not be disturbed.

vi. Water requirement for the total project after expansion is estimated as 1874 KLD. Fresh water requirement of 1494 KLD will be met from Brahmani River and remaining requirement of 380 KLD will be met from the Rain Water Harvesting.

vii. The EAC noted that there is a pond inside the project boundary. The EAC is of the opinion that suitable measures shall be adopted for conservation of the pond.

Recommendations of the Committee

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

(i) PP shall submit the suitable plan for conservation of the pond existing within the project boundary.

(ii) Brahmani River, Pandara Nadi, Bhalupada Nala, Sukinda Pat and Ganda Nadi exists within the study area of 10 km of the project site. The PP shall submit the suitable steps /conservation plan along with contouring (close intervals), Run -off calculations, disposal etc. A robust and full proof Micro-Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.

(iii) The water balance allotting appropriate distribution for each activity/facilities associated with the project shall be submitted.

(iv) Explore the possibility of raising the EMP cost associated with the project.

(v) PP advised to submit the coal dust exposure concentrations at coal handling areas; whether they are within 2 mg/m^3 in respirable dust containing less than 5% silica/quartz.

(vi) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.

(vii) Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(viii) The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.

(ix) PP shall submit action plan for rainwater harvesting system.

(x) Action plan for 100 % solid waste utilization shall be submitted.

(xi) PP shall explore the possibility of plastic waste utilization in the Plant/Unit process.

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

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

(xiv) Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames", when PP comes for EC proposal. This study shall be formulated keeping in view of India's Net-zero commitment at the COP-26 Climate Summit.

(xv) As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey (10 Kms radial coverage from the project site) and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.

(xvi) Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by sea/rail/road with anticipated vessels/rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.

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

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

(xix) Monitoring and control of NOx, SO_2 and CO gases from the furnace must be included in the pollution control scheme.

(xx) The total quantity of PM generated per annum and the percentage of this captured by the pollution control equipment must be reported regularly.

(xxi) Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.

(xxii) A Plan of Action for disposal of e-waste must be drawn up and implemented.

(xxiii) A Standard Operation Procedure for arresting emissions (PM as well as gas) when these approach critical values may be established.

(xxiv) A scheme for Dry disposal of Ore Beneficiation Plant tailings after dewatering shall be submitted.

***

Agenda No. 13.11

13.11 Expansion of existing 60,000 TPA of Sponge Iron from DRI Kiln to Proposed final capacity of 900,000 TPA (throughput) Beneficiation Plant, 600,000 TPA Pelletization Plant, 297,000 TPA of Sponge Iron, 157,500 TPA of Billets, 150,000 TPA of Rolling Mill, 2x9 MVA Submerged Arc Furnace for Ferro Alloy & 46 MW of CPP (21 MW WHRB & 25 MW CFBC) by M/s LN Metallics limited, located at Village – Sripura, Tehsil – Jharsuguda, District – Jharsuguda, Odisha – Consideration of TOR.

[Proposal No. IA/OR/IND/285385/2022; File No. IA-J-11011/277/2022-IA-II(IND-I)]
[Consultant: Visiontek Consultancy Services Pvt. Ltd.]

13.11.1 M/s LN Metallics Limited has made an application online vide proposal no. IA/OR/IND/285385/2022 dated 01/09/2022 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), 2(b) Mineral Beneficiation and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

13.11.2 Name of the EIA consultant: M/s Visiontek Consultancy Services Private Limited [S. No. 103, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2023/RA 0209 valid till 16.12.2023; Rev. 25, Sept 05, 2022].

Details submitted by Project proponent

13.11.3 The project of M/s LN Metallics Limited is located in Sripura Village, Jharsuguda Tehsil, Jharsuguda District, Odisha State is for enhancement of existing 60,000 TPA of Sponge Iron from DRI Kiln to Proposed final capacity of 900,000 TPA (throughput) Beneficiation Plant, 600,000 TPA Pelletization Plant, 297,000 TPA of Sponge Iron, 157,500 TPA of Billets, 150,000 TPA of Rolling Mill, 2x9 MVA Submerged Arc Furnace for Ferro Alloy & 46 MW of CPP (21 MW WHRB & 25 MW CFBC).

13.11.4 Environmental site settings:

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>33.18 ha [Private land]</td><td>Land use: Industrial.</td></tr>
<tr><td></td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>Acquired Land (non-forest): 12.926 Ha.; Land Yet to be Acquired: 20.254 Ha. (Approval is under process);
Total Land: 33.18 Ha. (Non-forest)</td><td></td></tr>
<tr><td>ii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td><u>Project Site:</u>
No habitants or houses within the project area.
<u>Study Area:</u>
<table>
<tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Sripura</td><td>0.05 km</td><td>South</td></tr>
</table>
</td><td>R & R is not applicable.</td></tr>
</table>

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Sripura (Major)</td><td>0.6 km</td><td>ESE</td></tr>
<tr><td>Bhagipali</td><td>1.4 km</td><td>NE</td></tr>
<tr><td>Gumakarama</td><td>1.7 km</td><td>SE</td></tr>
<tr><td>Brundamal</td><td>2.5 km</td><td>NNE</td></tr>
</table>
</td><td></td></tr>
<tr><td>iii.</td><td>Latitude and Longitude of all corners of the project site.</td><td>
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>21° 46' 56.309" N</td><td>84° 1' 26.357" E</td></tr>
<tr><td>B</td><td>21° 46' 46.830" N</td><td>84° 1' 26.178" E</td></tr>
<tr><td>C</td><td>21° 46' 42.974" N</td><td>84° 1' 55.061" E</td></tr>
<tr><td>D</td><td>21° 46' 51.343" N</td><td>84° 1' 55.754" E</td></tr>
<tr><td>E</td><td>21° 47' 2.583" N</td><td>84° 1' 43.775" E</td></tr>
<tr><td>F</td><td>21° 47' 3.711" N</td><td>84° 1' 35.341" E</td></tr>
</table>
</td><td></td></tr>
<tr><td>iv.</td><td>Elevation of the project site</td><td>198 to 218 m</td><td></td></tr>
<tr><td>v.</td><td>Involvement of Forest land if any.</td><td>Forest Land: No forest Land Involved.</td><td></td></tr>
<tr><td>vi.</td><td>Waterbody exists within the project site as well as the study area</td><td>Project site:
No water body exists.

Study area:
<table>
<tr><th>Water body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Bhedan River</td><td>0.25 km</td><td>N</td></tr>
<tr><td>Kharkhari Nala</td><td>0.83 km</td><td>N</td></tr>
<tr><td>Ib River</td><td>7.68 km</td><td>WNW</td></tr>
<tr><td>Hirakud Reservoir</td><td>7.88 km</td><td>SW</td></tr>
<tr><td>Telen Nadi</td><td>9.32 km</td><td>E</td></tr>
</table>
</td><td>HFL Data of Bheden River, Peak Gauge: 192.8 m (year 2021); Peak Discharge: 31,226 Cusec (year 2021); Station: Kherual Gauge at 1.45 km from the Project site</td></tr>
<tr><td>vii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study Area.</td><td>Nil

Reserve Forests
Katikela RF (3.75 km, ENE)
Malda RF (5.55 km, W)
Ghichamura RF (5.65 km, ESE)
Khait RF (5.92 km, W)
Patrapali RF (6.23 km, WSW)
Rampur RF (6.59 km, W)
Shriyapali RF (7.46 km, ENE)</td><td></td></tr>
</table>

13.11.5 Consent to Establish (CTE) was obtained for the existing project vide letter no. 15962/Ind-II-NOC-2431, dated 25.07.2003 for production of Sponge Iron - 5000 T/month. The existing project was installed and came into operation before the EIA Notification 2006, thus EC for the existing unit was not applicable. The latest Consent To Operate (CTO) for the existing unit has been accorded by Odisha State Pollution Control Board vide letter no. 3058/IND-I-CON-3363, dated 17.03.2018. The validity of current CTO is for period from 01.04.2018 to 31.03.2023.

13.11.6 Implementation status of the existing CTE:

S.	Facilities	Units	Environmental	Production as per (CTE/CTO)	Implementation

No			Clearance Obtained (Yes/No)	Existing CTE (15962/ Ind-II-NOC-2431, dated 25.07.2003)	Current CTO (3058/IND-I-CON-3363, dated 17.03.2018) Validity up to 31.03.2023	Status as on 08.09.2022
1	DRI Kiln	2x100 TPD	EC was not obtained as The plant was under operation since 2005 i.e. prior to EIA Notification 2006. No expansion has been carried out till date.	5000 T/month	5000 T/month	Implemented Maximum Production achieved **39,798 TPA** in the year 2016-17.
2	Iron Ore Crusher	1x50 TPH		1x50 TPH	1x50 TPH	Implemented

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

Sl. No	Plant Equipment/ Facility	Product	Existing facilities as per CTO dated 17.03.2018 valid up to 31.03.2023		Proposed Units		Final (Existing + Proposed)
			Configuration	Capacity	Configuration	Capacity	
1.	Beneficiation	Beneficated Iron Ore	-	-	1x0.9 MTPA	900,000 TPA (throughput)	**9,00,000 TPA** (throughput)
2.	Pelletization	Pellet	-	-	1x0.6 MTPA	600,000 TPA	**6,00,000 TPA**
3.	DRI Kiln	Sponge Iron	2x100 TPD	60,000 TPA (300 days)	2x350 TPD	2,31,000 TPA (330 days)	**297,000 TPA (330 days)**
4.	SMS (Induction Furnace)	Billets	-	-	3 x15 T	157,500 TPA	**157,500 TPA**
	LRF		-		-		
	CCM		-		6/11M x 2 Strand		
5.	Rolling Mill	Rolled Products	-	-	150,000 TPA	150,000 TPA	**150,000 TPA**
6.	CPP (WHRB)	Power	-	-	21 MW	46 MW	**46 MW**
	CPP (CFBC)		-		25 MW		
7.	Submerged Arc Furnace (for Ferro Alloy)	Ferro – Manganese	-	-	2x9 MVA	36,000 TPA	**36,000 TPA**
8.	Iron Ore Crusher	Iron Ore Crusher	1x50 TPH	1x50 TPH	-	-	1x50 TPH

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

S.	Raw	Quantity required per annum	Source	Aerial	Mode of

No.	Material	Existing (TPA)	Expansion (TPA)	Total (TPA)		Distance from site (Kms)	Transportation
1	Iron Ore	118,800	781,200	900,000	OMCL (Khandadhar, Gandhamardan, Barbil)	115, 153, 144	Rail (Railway Siding: Lapanga)
2	Coal	79,200	497,451	576,651	Mahanadi Coalfields Limited	15 km	Road
3	Manganese Ore	-	86,400	86,400	OMCL (Keonjhar)	144 km	Road
4	Bentonite	-	13,063	13,063	Barajamda	150 km	Rail/ Road
5	Dolomite/ Lime stone	3,300	27,913	31,213	Rayagada	295 km	Rail/ Road
6	Pig Iron	-	17,050	17,050	Rourkela	100 km	Road
7	Ferro Alloys	-	1575	1575	In-house	-	Road
8	Quartzite	-	7200	7200	Sundargarh	37 km	Road
9	LDO	-	3.6 KLD	3.6 KLD	Local Market	8 km	Road

13.11.9 The total water required is 4231 KLD (make-up). Existing water requirement is 360 KLD which is obtained from ground water for which permission has been obtained from District Industries Centre, Jharsuguda vide Letter no. 513 dated 17/03/2021. Water requirement for the Proposed project is estimated as 4231 KLD (as Ground water use will be phased out after availability of surface water at site), fresh water requirement will be obtained from the Bheden River and remaining requirement will be met from the Rain Water Harvesting of 340 KLD. The Permission for drawl of Surface water will be obtained.

13.11.10 The total power requirement for plants is 46 MW per hour. Existing power requirement of 0.7 MW is obtained from WESCO. The Power requirement for the proposed project is estimated as 45.3 MW, which will be obtained from the Captive Power Plant.

13.11.11 The capital cost of the project is Rs. 737.00 Crores (Existing Rs. 16.00 Crores & Proposed Rs. 721.00 Crores) and the capital cost for Environmental Protection Measures is proposed as Rs. 60.00 Crores (Existing Rs. 0.50 Crores & Proposed Rs. 59.50 Crores). Employment generation from the expansion is 3600 (Existing 180, Proposed 920 & Indirect 2500).

13.11.12 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.

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

Environmental Aspect	Frequency/ Parameters / Locations
Micro Meteorology	**Frequency:** Continuous recording of hourly micro-meteorological parameters

Environmental Aspect	Frequency/ Parameters / Locations
	for 3 months **Parameters:** Temperature, Relative Humidity, Rainfall, Wind speed, Wind direction, Cloud cover, **Location:** At/Near Project Site
Ambient Air Quality	**Frequency:** Twice a week on 24 hrs basis for 12 weeks **Parameters:** PM_{10}, $PM_{2.5}$, SO_2, NOx, CO, NH_3, O_3 , BaP & Fe **Locations:** 10 locations within the study area covering core zone, upwind directions, downwind directions, crosswind directions and nearby habitations based on the predominant windrose as presented above.
Ambient Noise Levels	**Frequency:** Continuous monitoring for 24 hours (Day & Night) at each location, once in a month for 3 months **Parameters:** Leq. Day Time, Leq. Night Time **Locations:** 9 locations within the study area covering core zone, various land uses and nearby habitations.
Surface Water Quality	**Frequency:** Once during the study period (Three Month) **Parameters:** Colour, pH, Dissolved Oxygen (min), Conductivity, Total Hardness, Turbidity, Chlorine (Cl^-),Total Dissolved Solids, Oil & Grease (max), BOD (3) days at 27°C (max), Chemical Oxygen Demand (COD), Arsenic (As), Lead (Pb), Cadmium (Cd) (max), Hexa Chromium as Cr^{+6}, Copper (Cu) (max), Zinc (Zn) (max), Selenium (Se) (max), Cyanide (CN) (max), Fluoride (F), Sulphates ($SO4^-$), Calcium (Ca), Magnesium (Mg), Manganese (Mn), Boron (B), Mercury (Hg), Phenolic Compounds as C_6H_5OH (max), Iron (Fe) (max), Nitrate (NO_3), Anionic Detergents (max), Total Coliform. **Locations:** 8 locations within the study area covering major surface water bodies.
Ground Water Quality	**Frequency:** Once during the study period (Three Month) **Parameters:** Color, Odour, Taste, Turbidity, pH, Total Hardness (as $CaCO_3$), Iron (Fe) , Chloride (Cl^-), Residual Free Chlorine, Total Dissolved Solids as TDS, Calcium (Ca), Magnesium (Mg), Copper (Cu), Manganese (Mn), Sulphate (SO_4^-), Nitrate (NO_3), Fluoride (F), Phenolic Compounds as C_6H_5OH, Mercury (Hg), Cadmium (Cd), Selenium (Se), Arsenic (As), Cyanide (CN), Lead (Pb), Zinc (Zn), Total Chromium as Cr, Mineral Oil, Alkalinity, Aluminium (Al), Boron (B), Total Coliform as TC, Amonia Total, Barium (Ba), Molybdenum (Mo), Nickel (Ni), PAH & Pesticide. **Locations:** 8 locations within the study area.
Soil Quality	**Frequency:** Once during the study period (Three Month) **Parameters:** Conductivity, Water Holding Capacity, Infiltration Rate, pH, Texture, Sand, Silt, Clay, Bulk Density, Exchangeable Calcium, Exchangeable Sodium, Exchangeable Magnesium, Available Potassium, Available Phosphorus, Available Nitrogen, Organic Matter, Organic Carbon, Water Soluble Chloride, Water Soluble Sulphate, Sodium Absorption Residue, Aluminium, Iron, Manganese, Boron, Zinc, Chromium, Hexavalent Chromium, Nickel, Copper, Cadmium, Iron, Silica, Lead, Available Phosphorus. **Locations:** 6 locations within the study area covering different land uses such as agriculture land, park, waste land, etc.
Hydrogeology	**Frequency:** During Winter & post-monsoon season **Parameters:** Drainage pattern, Ground water table depth, ground water quality, ground water yield, etc. **Locations:** villages within 10 km radius study area

Environmental Aspect	Frequency/ Parameters / Locations
Land use land cover	Satellite imagery-based land use study and preparation of land use land cover maps based on latest LULC classifications & Ground truthing. **Parameters**: Agricultural area, Water bodies, Industrial land, Barren land, Built-up land, Forest area.
Ecology & Biodiversity	**Frequency:** Primary survey during study period. Secondary data collection from Forest department **Parameters:** Terrestrial Flora & Fauna, Aquatic flora & fauna, Forests, etc. **Location:** 10 km radius study area
Socio-economy	**Frequency:** Primary survey during study period. Secondary data collection from Govt. offices, Village Panchayats, Census of India records **Parameters:** Demographic pattern, economic pattern, social amenities availability **Location:** 10 km radius study area

Deliberation by the Committee

13.11.14 The Committee noted the following:

i. The instant proposal is for enhancement of existing 60,000 TPA of Sponge Iron from DRI Kiln to Proposed final capacity of 900,000 TPA (throughput) Beneficiation Plant, 600,000 TPA Pelletization Plant, 297,000 TPA of Sponge Iron, 157,500 TPA of Billets, 150,000 TPA of Rolling Mill, 2x9 MVA Submerged Arc Furnace for Ferro Alloy & 46 MW of CPP (21 MW WHRB & 25 MW CFBC).

ii. The EAC deliberated on the proposal. Based on the KML file presented by the PP, the proposed Unit is brownfield project.

iii. The existing plant is in operation based on CTE. Consent to Establish (CTE) was obtained for the existing project vide letter no. 15962/Ind-II-NOC-2431, dated 25.07.2003 for production of Sponge Iron - 5000 T/month. The existing project was installed and came into operation before the EIA Notification 2006, thus EC for the existing unit was not applicable

iv. The acquired land with M/s. LN Metallics Limited is 12.926 ha. Additional land of 20.254 ha is yet to be acquired by the company. The total land will be 33.18 ha where the expansion project will be established.

v. Bhedan River, Kharkhari Nala, Ib River, Hirakud Reservoir and Telen Nadi exists within the study area of 10 km of the project site. The EAC is of the opinion that the water bodies shall not be disturbed.

vi. Water requirement for the total project after expansion is estimated as 4231 KLD (as Ground water use will be phased out after availability of surface water at site). Fresh water requirement will be obtained from the Bheden River and remaining requirement will be met from the Rain Water Harvesting of 340 KLD.

Recommendations of the Committee

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

(i) Air cooled condensers shall be provided in the power plant.

(ii) Bhedan River is at a distance of 250 meter from the project site. PP shall submit the HFL data of Bhedan River for the past 25 years authenticated from the Competent Authority.

(iii) Bhedan River, Kharkhari Nala, Ib River, Hirakud Reservoir and Telen Nadi exists within the study area of 10 km of the project site. The PP shall submit the suitable steps /conservation plan along with contouring (close intervals), Run -off calculations, disposal etc. A robust and full proof Micro-Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.

(iv) CO gas sensors shall be installed at all relevant locations (furnaces).

(v) PP advised to submit the coal dust exposure concentrations at coal handling areas, ball mills, furnace charging areas through personal/area monitoring; whether they are within 2 mg/m^3 in respirable dust containing less than 5% silica/quartz.

(vi) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species. Water Fauna study shall also be emphasised.

(vii) Effluent discharge directly into the river is prohibited. Action plan for effluent discharge management shall be submitted. Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(viii) Explore the possibility to re-design the plant layout in such a manner so as to minimise the tree felling in the project site to bare minimum.

(ix) PP shall submit action plan to improve the house keeping in the project site.

(x) The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.

(xi) PP shall submit action plan for rainwater harvesting system.

(xii) Action plan for 100 % solid waste utilization shall be submitted.

(xiii) PP shall explore the possibility of plastic waste utilization in the Plant/Unit process.

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

(xv) 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.

(xvi) Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames", when PP comes for EC proposal. This study shall be formulated keeping in view of India's Net-zero commitment at the COP-26 Climate Summit.

(xvii) As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey (10 Kms radial coverage from the project site) and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted. Social welfare measures along-with provision of RO water to the nearby villages shall also be included.

(xviii) Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by sea/rail/road with anticipated vessels/rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.

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

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

(xxi) Monitoring and control of NOx, SO_2 and CO gases from the furnace must be included in the pollution control scheme.

(xxii) The total quantity of PM generated per annum and the percentage of this captured by the pollution control equipment must be reported regularly.

(xxiii) Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.

(xxiv) A Plan of Action for disposal of e-waste must be drawn up and implemented.

(xxv) A Standard Operation Procedure for arresting emissions (PM as well as gas) when these approach critical values may be established.

(xxvi) A scheme for Dry disposal of Iron Ore Beneficiation Plant (IOBP) tailings after dewatering shall be submitted.

(xxvii) Mass balance of Iron Ore Grinding and De-Sliming Plant (Beneficiation Plant) shall be submitted in the EIA report.

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Agenda No. 13.12

13.12 Capacity Expansion of Coke Production from 0.78 MTPA to 1.275 MTPA by modification of Battery#2 and installation of a New Stamp Charge By-product Recovery Coke Oven Battery#3 in the existing plant by M/s Jindal Coke Limited, located at Kalinga Nagar, Industrial Complex, District Jajpur, Odisha – Consideration of TOR.

[Proposal No. IA/OR/IND/275972/2022; File No. IA-J-11011/111/2018-IA-II(I)]

13.12.1 Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The Member Secretary appraised the Committee that no information has been received from PP in this regard. The Committee opined that project proponent has just wasted the time of the Committee for not making any communication. EAC requested the Ministry to place the proposal in the EAC meeting only after receiving request/communication from project proponent.

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Any other item with permission of the Chair

Agenda No. 13.13

13.13 Proposed integrated Ferro Alloy & Steel complex including 2x65 MW Captive coal based power plant at Wadapally village & Sy.No's 111/?/1, 129/?/1, 147/3, 154/1, 161/14, Of Irikigudem village, Dhamarcharla Mandal, Nalgonda district of Telangana by M/s Krishna Godavari Power Utilities Limited- Consideration of modification of TOR

[Proposal No. IA/TG/IND/282896/2022; File No. J-11011/245/2020-IA.II(I)]

13.13.1 M/s Krishna Godavari Power Utilities Limited made an application online *vide* proposal no. IA/TG/IND/282896/2022 dated 11.07.2022 along with Form 3, revised Form-1 and revised PFR seeking amendment in Terms of Reference accorded by the Ministry vide letter no. J-11011/245/2020-IA.II(I), dated 15.12.2020.

13.13.2 The project proponent has proposed for the following amendment in ToR dated 15.12.2020 w.r.t. Reorganization of Revenue survey numbers of the project site and reduction in project area as detailed below:

Reference of Approved ToR dated 15.12.2020	Description as per approved ToR dated 15.12.2020	Description as per proposed amendment	Justification submitted by the PP
Para 5, Page 2	Survey No;s	Sy. No's. 82, 82/ ఎ1, 87/2,	Govt. of AP GO no. 92 dated

Reference of Approved ToR dated 15.12.2020	Description as per approved ToR dated 15.12.2020	Description as per proposed amendment	Justification submitted by the PP
	29/1, 29/2, 147, 155, 152, 153, 154, 82, 89, 90, 91/1, 91/2, 92, 88, 83, 84, 85, 86, 87, 88, 115/1, 130. 114, 118	87/3, 88/2, 88/3, 115/1/2, 115/7, Wadapally village & Sy.No's 111/అ1, 129/అ1, 147/3, 154/1, 161/14, Of Irikigudem village	11.02.1997 (combined State) has allocated 150.30 Gunta acres of land for main plant area falling in survey no. 115 & 82 in Wadapally village and Survey no. 129, 147 and 154 in Irikigudem village. Additional land of 20 acres of patta land has been purchased The survey numbers have been split into sub survey no's due to reorganization. Right of Way survey no. have been deleted. 355176.611E, 1844651.052N – No change in location
Para 5 (Page 2) & Para 12, point ii, (Page 3)	74.2 Ha (178.8 acres)	69.23 Ha (171 Acres) including 10.5 acres for Sodium Saccharine plant	Reorganization of Revenue survey numbers.

13.13.3 **Reason for Amendment:** Govt. of AP, vide GO no. 92 dated 11.02.1997 (combined State) has allocated 150.30 Gunta acres of land for main plant area falling in survey no. 115 & 82 in Wadapally village and Survey no. 129, 147 and 154 in Irikigudem village. Additional land of 20 acres of patta land has been purchased. The survey numbers have been split into sub survey no's due to reorganization. Right of Way survey no. have been deleted. 355176.611E, 1844651.052N – No change in location Reorganization of Revenue survey numbers.

13.13.4 Project Proponent reported that there is no change in configuration and capacity of the proposed project.

13.13.5 The proposal was initially considered during the 10th meeting of the EAC for Industry-I sector held on 1st-3rd August, 2022 wherein the proposal was recommended for amendment in Terms of Reference no. J-11011/245/2020-IA.II(I) dated 15.12.2020 as per the deliberation below:

Deliberation by the Committee (EAC during 1st-3rd August, 2022)

13.13.6 The Committee noted the following:

i. The EAC noted that Terms of Reference was accorded by the Ministry vide letter no. J-11011/245/2020-IA.II(I) dated 15.12.2020.

ii. The instant proposal is for amendment in ToR dated 15.12.2020 w.r.t. Reorganization of Revenue survey numbers of the project site and reduction in project area as detailed in para 10.15.2 above.

iii. Project Proponent reported that Govt. of AP GO no. 92 dated 11.02.1997 (combined State) has allocated 150.30 Gunta acres of land for main plant area falling in survey no. 115 & 82 in Wadapally village and Survey no. 129, 147 and 154 in Irikigudem village. Additional land of 20 acres of patta land has been purchased. The survey numbers have been split into sub survey no's due to reorganization. Right of Way survey no. have been deleted. 355176.611E, 1844651.052N – No change in location Reorganization of Revenue survey numbers.

iv. The EAC also noted that during the meeting the project proponent made an additional request for change of company name from M/s. Krishna Godavari Power Utilities Limited to M/s Krishna Power Utilities Limited in the aforesaid TOR dated 15.12.2020 as per the Certificate of Incorporation obtained from Govt. of India, Ministry of Corporate Affairs dated 7th June 2022. In this regard, the it was appraised to the Committee and the Project Proponent that Ministry has laid down a separate procedure for transfer of TOR/EC and Project Proponent has to apply on PARIVESH for transfer of ToR in this case. The EAC agreed and advised the project proponent to apply for transfer/ change of company name in ToR dated 15.12.2020 as per the procedure laid down by the Ministry.

Recommendations of the Committee (EAC during 1st-3rd August, 2022)

After deliberations, the Committee **recommended** the project proposal for amendment in Terms of Reference no. J-11011/245/2020-IA.II(I) dated 15.12.2020 with respect to Reorganization of Revenue survey numbers of the project site and reduction in project area as detailed in para 13.13.2 above.

Additional Details Sought (ADS)

13.13.7 The Ministry raised the ADS on 30.09.2022 on PARIVESH citing that the project proponent has proposed amendment in ToR dated 15.12.2020 w.r.t. Reorganization of Revenue survey numbers of the project site and reduction in project area, no discussion of including Sodium Saccharin Plant to the granted ToR was discussed. The addition of 12000 TPA Sodium Saccharin Plant was not discussed in EAC meeting, further KML file of the project it has been noted that some area of the plant is already constructed. The matter has been examined and a clarification from PP is requested on the following subject:

1. Is the Sodium Saccharin Plant is already constructed? If so what is production capacity and whether CTO/ CTE for the chemical plant has been obtained?
2. Is the activity required EC under provision of EIA Notification, 2006?
3. Details of EC obtained for Sodium Saccharin Plant.

13.13.8 Based on the above ADS, project proponent vide letter dated 01.09.2022 (uploaded on PARIVESH on 01.09.2022) submitted the following clarification:

Sl. No.	ADS	Reply of PP
1.	Is the Sodium Saccharin Plant is already constructed? If so what is production capacity and whether CTO/ CTE for the chemical plant has been obtained?	**No construction activities started at the proposed site till date.** The construction activities visible in the KML file of the proposed site belongs to abandoned 1x60 MW coal based TPP for which EC was obtained vide letter no. J-13011/1/2000-IA.II (T) dated 06.01.2009. Project construction was 90% completed but could not be commissioned due to financial constraints & lack of consumers, thereby kept in abeyance. The Environmental Clearance & CFE issued for 1x60 MW TPP were expired due to delay in implementation. Expired EC copy is submitted. Krishna Godavari Power & Utilities Ltd (KGPUL) is intending to establish an Ferro Alloys & Steel plant with 2x60 MW CPP and 12,000 TPA Sodium Saccharin plant as an integrated unit in an area of 69.85 Ha (172.6 Ac) at Wadapalli Village and Irkigudem Village, Damarcherla Mandal, Nalgonda Dist., Telangana state. As chromium ore is being used in the Ferro Alloys & Steel plant, KGPUL would like to set up a sodium saccharin plant in an area of 10.5 Ac within the same integrated complex of 69.85 Ha (172.6 Ac) since Chromium ore is a common raw material for Ferro Alloys and Sodium Saccharin.
2.	Is the activity required EC under provision of EIA Notification 2006?	Yes, the proposed 12,000 TPA Sodium Saccharin plant activity falls under project activity 5 (f) - Synthetic organic chemical Industry, Category A as per the EIA notification 2006 and subsequent amendments.
3.	Details of EC obtained for Sodium Saccharin Plant.	**Environmental Clearance not yet obtained for 12,000 TPA Sodium Saccharin plant.** Terms of Reference obtained from Ministry of Environment, Forest and Climate Change (MoEF&CC) vide File. No: IA-J-11011/19/2021-IA-II(I), Proposal No: IA/TG/IND3/ 193642/2021, Dated 09.02.2021 which is submitted. Baseline studies were carried out during March-May 2021. An integrated EIA will be prepared using ToR for 3(a) [Steel & Alloys plant with CPP] & 5(f) [Sodium Saccharine Plant] with cumulative impacts & EMP, which is in progress.

13.13.9 Based on the above information, the proposal is reconsidered during the 13th meeting of the EAC for Industry-I sector held on 14-15th September, 2022. The deliberations and recommendations of EAC are as follows:

Written representations:

13.13.10 During the meeting, based on the deliberations made by the EAC, the project proponent vide email dated 15.09.2022 submitted the following information:

- The existing power project has not been able to commission due to no power off-takers and hence project proponent is planning to add steel complex for in-house captive power consumption.
- In this regard, the application for prior EC for proposed Steel & Alloys complex was submitted 02.11.2020. 25th EAC meeting considered the proposal on 25-27.11.2020. Accordingly, ToR was issued on 15.12.2020 by EAC Industry -I.
- In the said ToR, EAC directed to approach Industry III for consideration for issuance of separate ToR for 12,000 TPA Sodium Saccharine and its by-products. Accordingly, PP approached EAC Industry-III through separate Form-1 submitted on 02.02.2021. EAC Industry III accordingly issued Standard ToR dated 09.02.2021 separately for the chemical plant.
- The baseline data has been collected during March – May 2021 in line with approved separate ToRs issued by respective EACs of Honorable MoEF&CC. EIA report is in advanced stage of completion. At this juncture, the change in name of the company from M/s Krishna Godavari Power Utilities Ltd to M/s Krishna Power Utilities Ltd has taken place on 07.06.2022. Accordingly, PP submitted request for transfer of ToR to M/s Krishna Power Utilities Ltd along with the request for incorporating changed survey nos.
- The Steel & Alloys plant along with captive power plant and the chemical plant were to be implemented simultaneously within the same area extent and chemical plant is sharing the basic raw materials and common utilities. Hence, PP has considered it as an integrated common complex.
- Thereafter, PP approached MoEF&CC on 11.07.2022 for an amendment in the ToR with respect to the land survey nos. which are common to both the projects as there was a reorganization at Revenue Dept. which introduced DHARANI Portal thereby sub-division of Survey Nos. without any change in project location & project parameters.
- EAC Industry-I considered the modification in ToR on 02/08/2022 with respect to reorganization of revenue survey no of the project site and reduction in project area from 74.2 Ha to 69.23 Ha with no change in project location and also maintaining the same project parameters.
- The EAC Industry – I committee observed that the consultant was trying to mislead the Expert Members of the EAC by wrongly including the 12,000 TPA Sodium Saccharine plant in the proposed amendment presentation dated 02.08.2022.
- PP would like to submit that the inclusion of the above chemical plant was not intentional to hide the facts since all the three units i.e. CPP, Steel & Alloys plant and Chemical plant are coming up in the same project area extent under the same company and sharing the basic raw materials and common utilities. PP submit that since the submission of Form-1,

there were no changes in project parameters and no activity, what so ever, has been undertaken on ground by project proponent.

- PP also submitted that they will abide by all professional ethics and maintain good moral principles as per the guidance of the EAC, Industry I and submitted that this is unintentional mistake committed by PP/Consultant for which they apologize.

Deliberation by the Committee

13.13.11 The Committee noted the following:

i. The proposal was initially considered during the 10th meeting of the EAC for Industry-I sector held on 1st-3rd August, 2022 wherein after detailed deliberation, the proposal was recommended for amendment in Terms of Reference no. J-11011/245/2020-IA.II(I) dated 15.12.2020 as per deliberation summarized below:

a) The EAC noted that Terms of Reference was accorded by the Ministry vide letter no. J-11011/245/2020-IA.II(I) dated 15.12.2020.

b) The instant proposal is for amendment in ToR dated 15.12.2020 w.r.t. Reorganization of Revenue survey numbers of the project site and reduction in project area as detailed in para 10.15.2 above.

c) Project Proponent reported that Govt. of AP GO no. 92 dated 11.02.1997 (combined State) has allocated 150.30 Gunta acres of land for main plant area falling in survey no. 115 & 82 in Wadapally village and Survey no. 129, 147 and 154 in Irikigudem village. Additional land of 20 acres of patta land has been purchased. The survey numbers have been split into sub survey no's due to reorganization. Right of Way survey no. have been deleted. 355176.611E, 1844651.052N – No change in location Reorganization of Revenue survey numbers.

d) The EAC also noted that during the meeting the project proponent made an additional request for change of company name from M/s. Krishna Godavari Power Utilities Limited to M/s Krishna Power Utilities Limited in the aforesaid TOR dated 15.12.2020 as per the Certificate of Incorporation obtained from Govt. of India, Ministry of Corporate Affairs dated 7th June 2022. In this regard, the it was appraised to the Committee and the Project Proponent that Ministry has laid down a separate procedure for transfer of TOR/EC and Project Proponent has to apply on PARIVESH for transfer of ToR in this case. The EAC agreed and advised the project proponent to apply for transfer/ change of company name in ToR dated 15.12.2020 as per the procedure laid down by the Ministry.

ii. However, the Ministry raised the ADS on 30.09.2022 on PARIVESH citing that the project proponent has proposed amendment in ToR dated 15.12.2020 w.r.t. Reorganization of Revenue survey numbers of the project site and reduction in project area, no discussion of including Sodium Saccharin Plant to the granted ToR was discussed. The addition of 12000 TPA Sodium Saccharin Plant was not discussed in EAC meeting, further KML file of the project it has been noted that some area of the plant is already constructed. The matter has been examined and clarification from PP was requested as detailed in para 13.13.7 above.

iii. The EAC deliberated on the ADS reply submitted by the PP vide letter dated 01.09.2022 (as detailed in para 13.13.8) and the written submission of PP through email dated 15.09.2022 as detailed in para 13.13.10 and noted the following:

a) The construction activities visible in the KML file of the proposed site belongs to abandoned 1x60 MW coal based TPP for which EC was obtained vide letter no. J-13011/1/2000-IA.II (T) dated 06.01.2009. Project construction was 90% completed but could not be commissioned due to financial constraints & lack of consumers, thereby kept in abeyance. The Environmental Clearance & CFE issued for 1x60 MW TPP were expired due to delay in implementation. Krishna Godavari Power & Utilities Ltd (KGPUL) is intending to establish an Ferro Alloys & Steel plant with 2x60 MW CPP and 12,000 TPA Sodium Saccharin plant as an integrated unit. As chromium ore is being used in the Ferro Alloys & Steel plant, KGPUL would like to set up a sodium saccharin plant in an area of 10.5 Ac within the same integrated complex of 69.85 Ha (172.6 Ac) since Chromium ore is a common raw material for Ferro Alloys and Sodium Saccharin.

b) Environmental Clearance not yet obtained for 12,000 TPA Sodium Saccharin plant. PP had earlier submitted the application for ToR for proposed Steel & Alloys complex on 02.11.2020 which was considered during 25th EAC meeting held on 25-27.11.2020. Accordingly, ToR was issued on 15.12.2020. In the said ToR, EAC directed to approach Industry III for consideration for issuance of separate ToR for 12,000 TPA Sodium Saccharine and its by-products. Accordingly, PP approached EAC Industry-III through separate Form-1 submitted on 02.02.2021. EAC Industry III accordingly issued Standard ToR vide File. No: IA-J-11011/19/2021-IA-II(I), Dated 09.02.2021. An integrated EIA is being prepared using ToR for 3(a) [Steel & Alloys plant with CPP] & 5(f) [Sodium Saccharine Plant] with cumulative impacts & EMP, which is in advanced stage of completion.

c) The Steel & Alloys plant along with captive power plant and the chemical plant were to be implemented simultaneously within the same area extent and chemical plant is sharing the basic raw materials and common utilities. Hence, PP has considered it as an integrated common complex and approached MoEF&CC on 11.07.2022 for an amendment in the ToR with respect to the land survey nos. which are common to both the projects. EAC Industry-I recommended for amendment in TOR. However, based on the observation of the Ministry, the EAC Industry – I committee observed that the consultant was trying to mislead the Expert Members of the EAC by wrongly including the 12,000 TPA Sodium Saccharine plant in the proposed amendment presentation dated 02.08.2022.

iv. The EAC further noted that PP has submitted that the inclusion of the above chemical plant was not intentional to hide the facts since all the three units i.e. CPP, Steel & Alloys plant and Chemical plant are coming up in the same project area extent under the same company and sharing the basic raw materials and common utilities.

v. The EAC after detailed deliberation directed the Consultant to submit the complete facts while uploading the information on Parivesh Portal.

vi. Further, PP has submitted that this is unintentional mistake committed by them for which they apologize.

Recommendations of the Committee (EAC during 1st-3rd August, 2022)

13.13.12 After deliberations, the Committee **recommended** the project proposal for amendment in Terms of Reference no. J-11011/245/2020-IA.II(I) dated 15.12.2020 with respect to Reorganization of Revenue survey numbers of the project site and reduction in project area as detailed in para 13.13.2 above. The EAC also advised the Ministry to change the subject in the instant ToR amendment proposal to exclude '12000 TPA Sodium Saccharin Plant' from the subject as the same is not under the purview of EAC Industry-I sector. PP shall approach EAC Industry III for any proposal related to issued Standard ToR vide File. No: IA-J-11011/19/2021-IA-II(I), dated 09.02.2021 w.r.t. 12000 TPA Sodium Saccharin Plant.

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Agenda No. 13.14

13.14 Expert opinion/clarification regarding coverage of Activities under Secondary Metallurgy as per the EIA Notification-2006 and amended thereof by M/s Ratnamani Metals and Tube Limited, located at Vastrapur, Ahmedabad, Gujarat- regarding.

[File No: IA-Z-11013/27/2022-IA-II(IND-I), M/s Ratnamani Metals and Tube Limited]

13.14.1 M/s Ratnamani Metals and Tube Limited vide letter dated 14.03.2022 has requested for Expert opinion/clarification regarding coverage of their project activities under Secondary Metallurgy as per the EIA Notification-2006 and amended thereof.

13.14.2 The project of M/s Ratnamani Metals and Tube Limited located at Vastrapur, Ahmedabad, Gujarat involves manufacturing and export of Carbon steel, Stainless-Steel Pipes & Tubes.

Details submitted by Project Proponent

13.14.3 M/s Ratnamani Metals and Tube Limited had filed application with GPCB for CTO. The GPCB interpreted that for making of Pipe/tubes, it is mandatory to seek prior Environment Clearance, taking a view that such activity I falling under metallurgical process under Notification S. O 1533 dated 14th September, 2006 issued by MoEF&CC under Schedule-Projects of Activates in Para 3 (a) Metallurgical Industries (ferrous & non-ferrous).

13.14.4 The project proponent has requested for expert opinion / clarification on the following:

1. To considering the process flow of the industry and clarify it does not fall under the definition of secondary Metallurgy
2. To define the same in the proposed amendments in EIA notification.
3. Requesting to advice concerned authority(GPCB) to issue CTE/CTO amendments.

13.14.5 M/s Ratnamani Metals and Tube Limited has further submitted the following points.

a. Main Raw material used are only Round bar/Coils/Plates/seamless and welded tube/pipes/ Mother Hollows. They don't use ore reduction process, scarp, salvage and ingots as Raw material as mentioned in Para 31 of IL&ES.
b. The secondary metallurgy as per cat (3(a)) includes process of iron making, rerolling, and conventional casting in foundries as an integrated process. PP is not carrying out any kind of melting, iron making, re-rolling, forging, and conventional casting.
c. Under Customs Traffic Act various products are harmonised as per internationally accepted product categories which is understood as Harmonised System Nomenclature (HSN) Accordingly, the Pipes and tubes are classified under Chapter 73 as 'Article of Iron Steel'. Whereas all Steel making activities that have their final product as Round bar, SS HR/CR Coils Plates and Carbon Steel HR/Cils Plates are classified as'lron & Steel' in Chapter 72 of the Tariff.
d. Consider the aforesaid clause c., PP can infer that all steel making activities/process/products are considered separate than the products used as the 'end products'. Considering the same inference, PP feel 'Pipes and Tubes' should not be considered at par with steel making process but as 'Article of Iron & Steel'. Therefore, their operations should not be subjected to be treated as Secondary Metallurgical process. The segment wise process chart is submitted.
e. The manufacturing process does not involve any induction and electrical arc furnace, submerged arc furnace, and cupola furnace as mentioned in EIA notification -2006.
f. PP has got SS Pipe and Tube plant audited by Schedule-I Auditor (Duly approved by GPCB) and the Auditor have also concluded and certified that our unit do not fall under the applicability of ElA Notification 2006. The said Report is submitted.

13.14.6 The proposal was initially considered in 9th EAC meeting of Re-constituted EAC (Industry – 1) held on 14-15th July, 2022. The deliberations and recommendation is given as below:

Deliberation and Recommendation of the Committee (during 14-15th July, 2022)

13.14.7 After detailed deliberations, the Committee advised the project proponent to engage any reputed government / government undertaking institution to examine the process of their industry and give a report whether process adopted in the said industry falls under the purview of Primary / Secondary Metallurgy process or not as per provision of the EIA Notification, 2006 and Technical Guidelines issued under thereon. Based on the submission of the report, the EAC may give its opinion whether the process requires prior EC under EIA Notification, 2006 and amendments thereof.

Submission made by PP

13.14.8 Based on the above deliberation, the project proponent has submitted the reply vide letter dated 09.09.2022. As per the reply PP approached the National Institute of Secondary Steel Technology (Estd. The Ministry of Steel, Govt. of India) and the Director NISST and with

other team members visited plants on 08.08.2022 & 09.08.2022 and NISST Director given report reference No. NISST/Dir/22/7932 dated 08.09.2022.

13.14.9 The details of the NISST report is given below

- On Primary examination it was found that Kutch plant doesn't produce finished steel and is not an Iron and Steel producing unit rather a producer of engineering goods and pipes for mainly Oil and Gas sector from Stainless steel (SS) and Carbon Steel supplied by Steel Plants like AMNS, JSPL, JSL and others.
- It can be termed as fabrication units of different types of pipes and tubes through Welding process.
- The plant is not having any Iron making, Steel Making, Argon Oxygen Decarbonisation (AOD), Vacuum treatment unit, Hot Rolling Mill, Re-rolling or Cold Rolling Mill as in an Iron and Steel plant like the Major Steel Plants or the Secondary Steel sector

Below are the key facilities:

1) **ERW (Electrical Resistance Welding) Pipes -** The ERW pipes are used in Oil and Gas sector and water line projects. Major customers for Oil and GAS sectors are PSUs like IOCL, HPCL, ONGC, EIL Etc.
2) **Spiral Welded Pipes-** Spiral Welded Pipes which are used for transportation of OIL and GAS. Also being used for the transportation of water. The major customers for oil and gas sectors are the IOCL, HPCL, ONGC, EIL, Reliance Industries, NRL, Adani Gas, GSPL Etc. For water line use GWSSB, PHED Rajasthan, Municipal corporations etc.
3) **Longitudinal Welded Sub-Merged Arc Welded Pipe (LSAW)/ Circumferential Welded sub-merged Arc Welded Pipes. (CSAW)** These Pipes are LSAW & CSAW used in tine pipes for supply of Oil & Gas to PSUs like IOCL, BPCL, HPCL,NRL etc.
4) **Stainless Steel Welded Pipes**- These pipes/tubes used in power sector, dairy industries, Pharmaceutical sector etc. They are also supplied to customers like BHEL, LET, Godrej, Praj India & TEMA etc

Input Raw Material type & its application-: Raw material used for above final products for Serial Number 1-3 is Carbon Steel Coils (HRC) & Plates and for Serial Number 4 is required Stainless Steel Coils & Plates. These are sourced from various domestic steel mills such as M/S JSW, TATA Steel Ltd, AM&NS, JSSL and wherein Indian Steel Mill don't produce, they are imported.

Process Verification: The manufacturing process of above Pipes & Tubes was thoroughly examined in line with sequence of production and application of each stage of the processes.

Machines & Equipment's verification-: All the machine, equipment and quality instruments were checked their application was noted. RMTL has one Pipe Mill for forming the ERW Pipes, two Mills for Spiral Pipe line, one Mill for LSAW/CSAW line and one welded tube mill for manufacture of Stainless Steel Welded Pipes & Tubes, which is the main equipment for the manufacturing of these Pipes/tubes. Here in all cases Plates and Sheets are curved by pressing and then welded. Pollution load is near to zero.

Commercial documents verification: They have also verified the documents like raw material purchase invoices and sale invoices for supply of Pipes & Tubes. The raw materials are classified in category of "Iron or Steel" under Chapter 72 and final products are classified under Chapter 73 of the Tariff as "Article of Iron Steel". This classification shows the clear demarcation of Iron or steel from the articles of iron steel.

Conclusion by NISST: As per the above examination, it is concluded that the above items manufactured by RMTL does not fall under the purview of Primary/Secondary Metallurgical Process or Iron and Steel sector as per the EIA Notification, 2006 as amended and guideline issued there under. The above pipes & tubes produced are merely the engineering products which are having their application in Oil and Gas sector and various specialized engineering sectors

Deliberations by the Committee

13.14.10 The Committee noted the following:

1. Instant proposal is for seeking Expert opinion/clarification regarding coverage of their project activities under Secondary Metallurgy as per the EIA Notification-2006 and amended thereof regarding M/s Ratnamani Metals and Tube Limited located at Vastrapur, Ahmedabad, Gujarat involves manufacturing and export of Carbon steel, Stainless-Steel Pipes & Tubes.
2. The EAC noted that the Project Proponent as per recommendation of EAC had engaged National Institute of Secondary Steel Technology (Estd. The Ministry of Steel, Govt. of India) and submitted a report on whether process adopted in the said industry falls under the purview of Primary / Secondary Metallurgy process or not as per provision of the EIA Notification, 2006 and Technical Guidelines issued under thereon.
3. The Committee noted that the as per National Institute of Secondary Steel Technology (NISST) report manufacturing process of pipes & tubes by M/s Ratnamani Metals and Tube Limited are merely the engineering products and therefore does not fall under the purview of Primary/Secondary Metallurgical Process or Iron and Steel sector as per the EIA Notification, 2006 as amended and guideline issued there under.

Recommendations of the Committee

13.14.11 The Committee deliberated the recommendations of the National Institute of Secondary Steel Technology. Based on the finding of this Report, the EAC also opines that coverage of project activities of M/s Ratnamani Metals and Tube Limited does not fall under the Secondary metallurgical industry as per the provision of the EIA Notification 2006 and amended, thereof does not require prior Environmental Clearance. The Policy Sector of IA Division in the Ministry may be requested for issuance of the necessary clarification in this regard.

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ANNEXURE –1

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 consists of project title with location, applicable schedule of the EIA Notification, 2006, ToR letter No. with date, study period along with EIA consultant & laboratory details with QCI/NABET/NABL accreditation certificate detail.

ii. Besides, following points shall be compiled as per QCI/NABET norms:
   a. Disclaimer by the EIA consultant.
   b. Declaration by the Functional Area Experts contributed to the EIA study and declaration by the head of the accredited consultant organization/authorized person.
   c. Undertaking by the project proponent owning the contents (information and data) of the EIA/EMP report.
   d. Undertaking by the EIA consultant regarding compliance of ToR issued by MoEF&CC.
   e. Consultant shall submit the Plagiarism Certificate for the EIA/EMP Report.

Structure of EIA/EMP report

Executive Summary

i. Table of Contents of the EIA report including list of tables/figures/annexures/abbreviations/symbols/notations.

ii. Point wise compliance to the ToR issued by MoEF&CC.

iii. Executive Summary
   I. Introduction
      i. Name of the project along with applicable schedule and category as per EIA, 2006.
      ii. Location and accessibility
   II. Project description
      i. Resource requirements (Land; water; fuel; manpower)
      ii. Operational activity
      iii. Key pollution concerns
   III. Baseline Environment Studies
      i. Ambient air quality
      ii. Ambient Noise quality
      iii. Traffic study
      iv. Surface water quality
      v. Ground water quality
      vi. Soil quality
      vii. Biological Environment
      viii. Land use
      ix. Socio-economic environment
   IV. Anticipated impacts

i. Impact on ambient air quality
ii. Impact on ambient noise quality
iii. Impact on road and traffic
iv. Impact on surface water resource and quality
v. Impact on ground water resource and quality
vi. Impact on terrestrial and aquatic habitat
vii. Impact on socio-economic environment

V. Alternative analysis
VI. Environmental Monitoring program
i. Ambient air, noise, water and soil quality
ii. Emission and discharge from the plant
iii. Green belt
iv. Social parameters

VII. Additional studies
i. Risk assessment
ii. Public consultation
iii. Action plan to address the issues raised during public consultation as per MoEF&CC O.M. dated 30/09/2020

VIII. Project benefits
IX. Environment management plan
i. Air quality management plan
ii. Noise quality management plan
iii. Solid and hazardous waste management plan
iv. Effluent management plan
v. Storm water management plan
vi. Occupational health and safety management plan
vii. Green belt development plan
viii. Socio-economic management plan
ix. Project cost and EMP implementation budget.

EIA/EMP Report

1. Introduction

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

2. Project description

A. Site Details

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

iv. Latest High-resolution satellite image data having 1 m - 5 m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc., along with delineation of plant boundary co-ordinates. Area must include at least 100 m all around the project location.

v. Environment settings of the site and its surrounding along with map.

vi. A list of major industries with name, products and distance from plant site within study area (10km radius) and the location of the industries shall be depicted in the study area map.

vii. In case if the project site is in vicinity of the water body, 50 meters from the edge of the water body towards the site shall be treated as no development/construction zone. If it's near the wetland, Guidelines for implementing Wetlands (Conservation and Management) Rules, 2017 may be followed.

viii. In case if the project site is in vicinity of the river, the industry shall not be located within the river flood plain corresponding to one in 25 years flood, as certified by concerned District Magistrate/Executive Engineer from State Water Resources Department (or) any other officer authorized by the State Government for this purpose as per the provisions contained in the MoEF&CC Office Memorandum dated 14/02/2022.

ix. In case of canal/ nala/ seasonal drain and any other water body passing through project site, the PP shall submit the suitable steps /conservation plan/mitigation measures along with contouring, Run -off calculations, disposal etc. A robust and full proof Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided in the report.

x. Type of land, land use of the project site needs to be submitted.

xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process as per the MoEF&CC O.M. dated 7/10/2014 shall be furnished.

xii. Project proponent shall prepare Engineering layout plan showing all internal roads minimum 6 m width and 9 m turning radius for smooth traffic flow inside including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

xiii. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including Rain Water Harvesting details with calculations mentioning about GW recharge along with relevant drawing.

xiv. A detailed report covering all aspects of Fire Safety Management and Fire Emergency Plan shall be submitted.

xv. Details of drone survey for the site, needs to be included in report and presented before the EAC during appraisal of the project.

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

i. Status of Forest Clearance for the use of forest land shall be submitted.

ii. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife if the project site located within notified Eco-Sensitive Zone, 10 km radius of national park/sanctuary wherein final ESZ notification is not in place as per MoEF&CC Office Memorandum dated 8/8/2019.

iii. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, Eco-sensitive Zone and Eco-sensitive areas, the project proponent shall submit the map duly authenticated by Divisional Forest Officer showing the distance between the project site and the said areas.

iv. Wildlife Conservation Plan duly authenticated by the Competent Authority of the State Government for conservation of Schedule I fauna along with budget and action plan, if any exists in the study area.

C. Salient features of the project

i. Products with capacities in **Tons per Annum** for the proposed project.

ii. If expansion project, status of implementation of existing project, details of existing/proposed products with production capacities in Tons per Annum.

iii. Site preparatory activities.

iv. List of raw materials required and their source along with mode of transportation.

v. Other than raw materials, other chemicals and materials required with quantities and storage capacities.

vi. Manufacturing process details along with process flow diagram of proposed units.

vii. Consolidated materials and energy balance for the project.

viii. Total requirement of surface/ ground water and power with their respective sources, status of approval.

ix. Water balance diagram

x. Details of Emission, effluents, hazardous waste generation and mode of disposal during construction as well as operation phase.

xi. Man-power requirement.

xii. Cost of project and scheduled time of completion.

xiii. In case of expansion projects, project proponent shall submit structural stability certificate showing whether existing structure withstand for proposed expansion activity.

xiv. Brief on present status of compliance (Expansion/modernization proposals)

   a. Cumulative Environment Impact Assessment for the existing as well as the proposed expansion/modernization shall be carried out.

   b. In case of ground water drawl for the existing unit, action plan for phasing out of ground water abstraction in next two years except for domestic purposes and shall switch over to 100 % use of surface water from nearby source.

   c. Copy of all the Environment Clearance(s) including Amendments/validity of extension/transfer of EC, there to obtained for the project from MoEF&CC/SEIAA shall be attached as Annexures. A Certified Compliance

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

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

3. Description of the Environment

i. Study period

ii. Approach and methodology for data collection as furnished below.

Attributes	Sampling		Remarks
	Network	Frequency	
A. Air Environment			
Micro-Meteorological • Wind speed (Hourly) • Wind direction • Dry bulb temperature • Wet bulb temperature • Relative humidity • Rainfall • Solar radiation • Cloud cover • Environmental Lapse Rate	Minimum 1 site in the project impact area	1 hourly continuous	• IS 5182 Part 1-20 • Site specific primary data is essential • Secondary data from IMD, New Delhi • CPCB guidelines to be considered.
Pollutants • $PM_{2.5}$	At least 8-12 locations	As per National Ambient Air Quality Standards,	• Sampling as per CPCB guidelines • Collection of AAQ data (except in monsoon season) • Locations of various
• PM_{10}			
• SO_2			
• NOx			
• CO			

Attributes	Sampling		Remarks
	Network	Frequency	
• HC • Other parameters relevant to the project and topography of the area		CPCB Notification.	stations for different parameters should be related to the characteristic properties of the parameters. • The monitoring stations shall be based on the NAAQM standards as per GSR 826(E) dated 16/11/2009 and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests, • Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAAQM Notification of 16/11/2009 along with min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
B. Noise			
• Hourly equivalent noise levels	At least 8-12 locations	As per CPCB norms	-
C. Water			
Parameters for water quality • pH, temp, turbidity, magnesium hardness, total alkalinity,	Samples for water quality should be collected and analyzed as per: • IS: 2488 (Part 1-5) methods for sampling and testing of Industrial effluents • Standard methods for examination of water and		

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

Attributes	Sampling		Remarks
	Network	Frequency	
• Particle size distribution • Texture • pH • Electrical conductivity • Cation exchange capacity • Alkali metals • Sodium Absorption Ratio (SAR) • Permeability • Water holding capacity • Porosity			
Land use/Landscape • Location code • Total project area • Topography • Drainage (natural) • Cultivated, forest, plantations, water bodies, roads and settlements	-		
E. Biological Environment			
Aquatic • Primary productivity • Aquatic weeds • Enumeration of phyto plankton, zoo plankton and benthos • Fisheries • Diversity indices • Trophic levels • Rare and endangered species • Marine Parks/ Sanctuaries/ closed areas /coastal regulation zone (CRZ) **Terrestrial** • Vegetation-species list, economic	• 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 • Importance value index (IVI) of trees • Fauna • Avi fauna • Rare and endangered species • Sanctuaries / National park / Biosphere reserve • Migratory routes			
F. Socio-economic			
• Demographic structure • Infrastructure resource base • Economic resource base • Health status: Morbidity pattern • Cultural and aesthetic attributes • Education	• Socio-economic survey is based on proportionate, stratified and random sampling method. • Primary data collection through questionnaire • Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies		

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

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

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

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

Activity	Environment	Ecological	Socio-economic

Construction phase			
Operation phase			

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

iii. Impact on ambient noise quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

iv. Impact on traffic (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

v. Impact on soil quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

vi. Impact on land use (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

vii. Impact on surface water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

viii. Impact on ground water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase
    b. Operation phase

ix. Impact on terrestrial and aquatic habitat (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
    a. Construction phase

b. Operation phase

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

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

5. Analysis of Alternatives (Technology & Site)

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

6. Environmental Monitoring Program

i. Details of the Environment Management Cell
ii. Performance monitoring schedule for all pollution control devices shall be furnished.
iii. Corporate Environment Policy
   a. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
   b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environment or forest norms / conditions? If so, it may be detailed in the EIA.
   c. What is the hierarchical system or Administrative order of the company to deal with the environment issues and for ensuring compliance with the environment clearance conditions? Details of this system may be given.
   d. Does the company have system of reporting of non compliances / violations of environment norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

iv. Action plan for **post-project environment monitoring matrix**:

Activity	**Aspect**	**Monitoring Parameter**	**Location**	**Frequency**	**Responsibility**
Construction phase					
Operation phase					

7. Additional Studies

i. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage after

offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.

ii. Details of adoption/ implementation status/plan to achieve the goal of Glasgow COP26 Climate Submit with regard to enhance the non-fossil energy, use of renewable energy, minimization of net carbon emission and carbon intensity with long-term target of "net Zero" emission.

iii. Implementation status/measures adopted for avoiding the generation of single used plastic waste.

iv. In cases the project is located in Critically and Severely Polluted Areas, additional mitigation measures adopted and detailed action plan to be submitted in the EIA/EMP Report as per MoEF&CC O.M. No. 22-23/2028-IA.III dated 31/10/2019 and MoEF&CC O.M. No. 22-23/2028-IA.III dated 5/07/2022 has to be submitted.

v. Public consultation details (Entire proceedings as separate annexure along with authenticated English Translation of Public Consultation proceedings).

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

vii. Summary of issues raised during public consultation along with action plan to address the same as per MoEF&CC O.M. dated 30/09/2020

S No	**Physical activity and action plan**		**Year of implementation (Budget in INR)**			**Total Expenditure (Rs. in Crores)**
	Name of the Activity	**Physical Targets**	**1st**	**2nd**	**3rd**	

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.

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ANNEXURE-2

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 (PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.

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 (PM_{10} 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 PM_{10} to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material 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 (PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.

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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 P2.5) 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.

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Executive Summary

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

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

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ANNEXURE-3

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

S. No.	Name	Position	14/09/2022	15/09/2022
1.	Shri Rajive Kumar	Chairman	***Present***	***Present***
2.	Dr. Dipankar Shome	Member	***Present***	***Present***
3.	Dr. S. Ranganathan	Member	***Present***	***Present***
4.	Dr. Ranjit Prasad	Member	***Present***	***Present***
5.	Dr. S. K. Singh	Member	***Present***	***Present***
6.	Dr. Tejaswini Ananthkumar	Member	***Present***	***Present***
7.	Dr. Hemant Sahasrabuddhe	Member	***Present***	***Present***
8.	Dr. Jai Krishna Pandey	Member	***Present***	***Present***
9.	Dr. E V R Raju	Member	***Present***	***Present***
10.	Dr. B. N. Mohapatra, DG, (Representatives of NCCBM)	Member	***Present***	***Present***
11.	Shri Nazimuddin, Scientist 'F' (Representative of CPCB)	Member	***Present***	***Present***
12.	Dr. S. Raghavan, Scientist 'D' (Representative of National Institute of Occupational Health (NIOH)	Member	***Present***	***Present***
13.	Dr. Sanjay Bist, Scientist 'E' (Representative of Indian Meteorological Department)	Member	***Present***	***Present***
14.	Dr. R.B. Lal, Scientist E, MoEFCC	Member Secretary	***Present***	***Present***
Other Officers of the MoEFCC				
15.	Dr R P Rastogi	Scientist C	***Present***	***Present***
16.	Dr Sandeepan BS	Scientist B	***Present***	***Present***

ANNEXURE-4

Approval of EAC Chairman

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

Re: Approval of the Draft minutes of the 13th EAC Meeting held on September 14-15, 2022

From :	chairman eac ind 1 <chairman.eac.ind.1@gmail.com>	Mon, Sep 26, 2022 08:53 PM
Subject :	Re: Approval of the Draft minutes of the 13th EAC Meeting held on September 14-15, 2022	
To :	Additional Director MoEFCC Dr R B LAL <rb.lal@nic.in>	
Cc :	rajivekumar1983@gmail.com, ranganathan metals <ranganathan.metals@gmail.com>, ranjitnitj@gmail.com, rajuevr60@gmail.com, sksinghdce@gmail.com, dshome61@gmail.com, tejaswini acf <tejaswini.acf@gmail.com>, sshemant 801 <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 <drjkpandey.eac.industry1@gmail.com>	

Dear Dr. Lal,
The draft minutes are approved. Kindly do the needful.

With best regards

Rajive Kumar
EAC-Industry-1

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