

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

Summary record of the twenty second (22nd) meeting of Re-Constituted Expert Appraisal Committee (REAC) held during 26-28th August, 2020 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.

The twenty second meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry-1 Sector Projects was held during 26-28th August, 2020 in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the ongoing Corona Virus Disease (Covid-19) issue. The list of EAC attendees is as follows.

S.No.	Name	Position	26/08/20	27/08/20	28/08/20
1.	Dr. Chhavi Nath Pandey	Chairman	Present	Present	Present
2.	Dr. Bipin Prakash Thapliyal, Director, CPPRI.	Member	Present	Present	Present
3.	Dr. Siddharth Singh, Scientist 'E' IMD.	Member	Present	Present	Present
4.	Dr. Jagdish Kishwan	Member	Present	Present	Present
5.	Dr. G.V. Subramanyam	Member	Present	Present	Present
6.	Dr. Tejaswini AnanthKumar	Member	Absent	Present	Present
7.	Shri. Ashok Upadhyaya	Member	Present	Present	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present	Present	Present
9.	Dr. Sanjay Deshmukh	Member	Absent	Absent	Absent
10.	Prof. S.K. Singh	Member	Present	Present	Present
11.	Dr. R. Gopichandran	Member	Absent	Absent	Absent
12.	Shri Jagannadha Rao Avasarala	Member	Present	Present	Present
13.	Shri. J.S.Kamyotra	Member	Present	Present	Present
14.	Shri. A.K. Agrawal	Member Secretary	Present	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 21st meeting held during 30th July, 2020 to 1st August, 2020 were confirmed by the EAC as already uploaded on PARIVESH.

26th August, 2020

22.1 Expansion of Sponge Iron from 60,000 TPA to 1,75,500 TPD and installation of New Induction Furnace to manufacture 1,53,000 TPA of M.S. Ingots / Billets, New Rolling Mill to manufacture 1,53,000 TPA of TMT bars / Structural Steel / Rolled Products & Power plant - 18 MW (WHRB – 12 MW & FBC – 6 MW) by M/s PHIL Ispat Private Limited located at Dighora Village, Takhatpur Tehsil, Bilaspur District, Chhattisgarh [Online Proposal No. IA/CG/IND/164582/2005; File No. J-11011/288/2018-IAII(I)] - **Environment Clearance – regarding.**

22.1.1 M/s. PHIL Ispat Private Limited has made online application vide proposal no. IA/CG/IND/164582/2005 dated 22/07/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at 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.

Details submitted by the project proponent

22.1.2 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
26/07/2018	36 th meeting held on 9-10 th October, 2018	Terms of Reference	9/11/2018

22.1.3 The proposed expansion of Steel Plant of M/s. PHIL Ispat Private Limited is located at Digora (V), Takhatpur (T), Bilaspur (D), Chhattisgarh. Presently, the project proponent is operating 2 x 100 TPD Sponge Iron plant. It is proposed to expand the Sponge Iron unit production capacity from 60,000 TPA to 1,75,500 TPA (Installation of additional 1x 350 TPD kiln), New Induction Furnaces of 3 x 15 T to produce M.S. Ingots / Billets of 1,53,000 TPA, New Rolling Mill to produce TMT Bars/ structural steel/Rolled products of 1,53,000 TPA (through hot charging), Captive Power Plant (WHRB – 12 MW; FBC – 6 MW) in the existing land premises over an extent of 27.78 Acres (11.24 ha.) & also in additional land of 2.40 acres (0.96 ha.). Total Land is 30.18 acres (12.2 ha.)

22.1.4 It is reported that existing plant doesn't have Environment Clearance. CTE has been obtained from CECB for existing 2x100 TPD sponge iron plant vide order no. 2202 / TS / CECB / 2005 dated 12/05/2005. CTE has been obtained prior to EIA Notification dated 14th September, 2006. As per EIA notification, 1994 greenfield project does not require Environmental clearance if the capital investment is less than RS 100 Crores. Hence, EC was not applicable for the existing plant as per EIA Notifications 1994 & 2006.

22.1.5 It has been reported that the Consent to Operate for existing plant was accorded by CECB, Chhattisgarh vide order no. 63/TS/CECB/2018 dated 3rd April 2018 for 2 x100 TPD Sponge Iron Plant which is valid up to 31st January 2021. Certified compliance report on CTO conditions (CTO order dated 03-04-2018) has been issued by CECB, Naya Raipur, Chhattisgarh vide letter no. 3245/HO/TECH/CECB/2020 dated 10 -07-2020. As per the report, conditions prescribed in CTO are adhered with.

22.1.6 The following are the existing and proposed plant configuration and production capacity:

S.No.	Name of the Product	Existing	Proposed expansion	After proposed expansion
1	DRI plant (Sponge Iron)	60,000 TPA (2x100 TPD)	1,15,500 TPA (1 x 350 TPD)	1,75,500 TPA (2 x 100 TPD & 1 x 350 TPD)
2	Induction Furnace (M.S. Billets / M.s. Ingots)	---	1,53,000 TPA (3 x 15 T)	1,53,000 TPA (3 x 15 T)
3	Rolling Mill (TMT Bars / Structural Steels / Rolled Products through hot charging)	--	1,53,000 TPA (30 TPH)	1,53,000 TPA (30 TPH)
4	Captive Power plant	--	WHRB – 12 MW CFBC – 10 MW	WHRB – 12 MW CFBC – 10 MW
5	Fly Ash Brick making plant	--	196 Lakhs/ Annum (56,000 Bricks /day)	196 Lakhs/ Annum (56,000 Bricks /day)

22.1.7 Total land earmarked for the project is 30.18 acres (12.2 ha.) out of which existing land is 27.78 acres is Industrial & additional land is 2.40 acres. No /forestland involved. The entire land is in possession of the management. No River / stream passes through the plant site area. It has been reported that no natural water body / stream existing the plant area and any modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

22.1.8 The plant area lies between 21°59'07.89 N to 21°59'23.37" N Latitude and 82°00'47.41"E to 82°01'02.72"E longitude in Survey of India Topo sheet no. 57 K/1 at an elevation of 254 m AMSL. The ground water table reported 5.0 mbgl below the land surface during the post-monsoon season and 5 to 16.5 mbgl below the land surface during the pre-monsoon season.

22.1.9 There are no Reserved Forests / National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ Elephant Corridors / migratory routes for Birds with in 10 Km. radius of the plant. There are no Schedule- I fauna exists in the study area.

22.1.10 The details of the raw material requirement is given as below:

Raw Material	Quantity (TPA)	Source	Mode of Transport
For DRI Kilns (Sponge Iron – 1,15,500 TPA)			
Iron ore / Pellets	1,84,800	NMDC and Other Supplies from Chhattisgarh and Odisha	By rail & road (through covered trucks)
Limestone	15,015	Chhattisgarh	By road (through

Raw Material		Quantity (TPA)	Source	Mode of Transport
				covered trucks)
Coal	Indian	1,50,150	SECL and others from Chhattisgarh and Odisha	By rail & road (through covered trucks)
	Imported	96,100	South African and Australian	Through sea route, rail route & by road
For Induction Furnace (MS Billets – 1,53,000 TPA)				
Sponge Iron		1,65,240	In-house generation	By Conveyor
Scrap		21,420	Chhattisgarh (Raipur)	By road (through covered trucks)
Ferro Alloys		2,295	Chhattisgarh (Raipur)	By road (through covered trucks)
For Rolling Mill – 1,53,000 TPA (TMT bars & Structural Steel)				
M.S. Ingots / Steel billets / Hot metal		1,75,950	In-house generation & remaining purchased	through conveyors
Furnace oil / LDO		7,650 KL	Chhattisgarh	Tankers
		Or		
For CFBC Boiler [Power Generation 6 MW]				
Dolochar		34,650	In-house generation	through covered conveyors
Coal	Indian (100 %)	37,800	SECL and Others from Chhattisgarh and Odisha	By rail & road (through covered trucks)
	Imported (100 %)	25,200	South African and Australian	Through sea route / rail route / by road

- 22.1.11 The targeted production capacity of the plant after expansion project is TMT Bars / Structural Steels / Rolled Products – 1,53,000 TPA along with 18 MW power (12 MW through WHRB & 6 MW through CFBC).
- 22.1.12 Major raw materials such as Coal & Iron Ore will be transported through railway rakes up to the nearest railway station (Bilha) and then to the site through road by covered trucks.
- 22.1.13 Impact on Vehicular Traffic Load due to proposed expansion
- Traffic load (Baseline) : 11268 PCU/day
- Additional Traffic load during operation of the expansion project : 742 PCU/day
- Total Traffic load during operation of existing and proposed expansion : 12010 PCU/day
- Traffic Capacity as per the IRC 73: 1980 for Highways : 20000 PCU/day
- 22.1.14 The existing road is adequate to cater to the additional traffic due to expansion project.
- 22.1.15 Water requirement for the Expansion project will be 263 KLD. Water requirement for existing plant is 50 KLD. Total water requirement after the proposed expansion will be 313 KLD. State Investment Promotion Board (SIPB), Govt. of Chhattisgarh has given a letter of assurance for allocation of Water required for the plant operations from the nearby surface source.

22.1.16 Total power required for the existing unit & for the proposed expansion units will be 21.7 MW. The required power will be taken from Captive Power generation and the remaining power (3.7 MW) will be sourced from state grid.

22.1.17 Baseline Environmental Studies

Period	1 st March 2018 to 31 st May 2018
AAQ parameters at 8 locations	PM _{2.5} = 23.6 to 37.2 µg/m ³ PM ₁₀ = 38.2 to 63.2 µg/m ³ SO ₂ = 7.6 to 12.8 µg/m ³ NO _x = 8.3 to 17.2 µg/m ³ CO = 452 to 1088 µg/m ³
AAQ modelling	PM ₁₀ = 2.29 µg/m ³ SO ₂ = 14.9 µg/m ³ NO _x = 15.1 µg/m ³ CO = 2.2 µg/m ³
Ground water quality at 8 locations	pH: 7.2 to 8.1, Total Hardness: 211 to 283 mg/l, Chlorides: 325 to 436 mg/l, Fluoride: 0.75 to 1.1 mg/l. Heavy metals are within the limits.
Surface water quality at 4 locations	pH: 7.3 to 7.9, DO: 4.9 to 6.6 mg/l, BOD: 2.2 to 2.6 mg/l & COD: 6.8 to 13.5 mg/l.
Noise levels	45.5 to 59.5 dBA for day time and 38.7 to 50.6 dBA for night time.

22.1.18 It has been reported that there are no habitations / people in the core zone of the project area. Hence no R & R involved.

22.1.19 The Solid wastes generation from existing, expansion proposals along with its utilization is given as below:

S.No.	Waste / By product	Quantity (TPA)			Proposed method of disposal in expansion
		Existing	Proposed	After Expansion	
1	Ash from DRI	10,800	20,790	31,590	Is being given to brick manufacturers. It is proposed to establish Fly Ash Brick manufacturing unit within the Plant & the entire Fly Ash will be utilized in making Fly Ash Bricks.
2	Dolochar	18,000	34,650	52,650	is being given to nearby Power plants. After proposed expansion it will be used as fuel in CFBC based power plant.
3	Kiln Accretion Slag	540	1,040	1,580	is being utilized in road construction and same practice will be continued after the proposed expansion also.
4	Wet Scraper	2,760	5,313	8,073	is being given to brick

S.No.	Waste / By product	Quantity (TPA)			Proposed method of disposal in expansion
		Existing	Proposed	After Expansion	
	Sludge				manufacturers and same practice will be continued after the proposed expansion also.
5	SMS Slag	---	15,300	15,300	Slag from SMS will be crushed and iron will be recovered & remaining non – magnetic material being inert nature, will be used as sub base material in road construction / used for brick manufacturing / civil construction works like PCC and wall construction
6	Dust from APCS	---	1,700	1,700	Will be being given brick manufacturers
7	Mill scales from Rolling Mill	---	3,060	3,060	Will be given to Ferro alloy manufacturing units.
8	End Cuttings	---	4,590	4,590	Will be recycled to SMS unit
9	Ash from Power Plant using Dolochar + Indigenous coal) (OR) Using Dolochar+ Imported Coal)	---	30,004 (OR) 24,476		It is proposed to establish Fly Ash Brick manufacturing unit within the Plant & the entire Fly Ash will be utilized in making Fly Ash Bricks.

22.1.20 The Public hearing for the proposed expansion project was held on 30th November 2019, at 12:00 P.M near Dighora Basti chowk near Old gate of Phil Ispat, Dighora (V), Takhatpur (T), Bilaspur (D), C.G. under the chairmanship of **Additional District Magistrate (ADM cadre)**. The issues raised during public hearing are Employment, Dust pollution, water problem, Effect on health of the people, cattle & crops, development of area.

22.1.21 An amount of Rs. 1.63 Crores out of project cost of Rs. 185 Crores (as per Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018) has been earmarked for Corporate Environment Responsibility (CER) based on Based on SIA study & public hearing issues.

22.1.22 The details of CER action plan proposed are as follows:

S. No.	Description	Amount to be spent (Rs. in Lakhs)			Total (Rs. in Lakhs)
		1 st Year	2 nd Year	3 rd Year	
1.	Based on SIA study the following activities are proposed under CER				
a.	Employment i. Vocational Training for Skill development for on welder / Fitter / wiremen etc ii. self-employment like Sewing iii. Craft making for Women Empowerment	20	20	20	60
b.	Education i. Construction of 4 No's of Toilets for Boys & Girls separately ii. Providing books to the School Library. iii. Providing furniture, computers, library. iv. sports equipment etc for schools v. Merit Scholarships to School Children (Higher Classes)	10	10	10	30
c.	Infrastructure & others i. Providing 4 Nos. of Solar Light to Gram Panchayat Bhawan ii. Speed breakers on the way to highway at required places iii. Sanitation facilities iv. NPK supply to local farmers	11	11	11	33
2.	Based on Public Consultation				
a)	Medical camps *	---	---	---	---
b)	For providing RO for drinking water *	---	---	---	---
c)	Plantation in Schools & villages	4	3	3	10
d)	RWH measures in the villages such as RHW Pits, de-siltation /deepening of village ponds.	10	10	10	30
	Total	55	54	54	163
Note: *Medical Camps, Providing RO water in the village will be covered under CSR as per companies act 2014					

22.1.23 The employment generation due to expansion will be 450 people including direct & indirect employment.

22.1.24 The capital cost of the project is **Rs.185 Crores** and the capital cost for environmental protection measures is proposed as **Rs.27 Crores**. The annual recurring cost towards the environmental protection measures is proposed as **Rs.2.8 Crores/annum**.

22.1.25 The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S.No	Particulars	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Crores)
1.	Air Emission Management		
	• Electro Static Precipitators (ESP)	8.0	1.6

S.No	Particulars	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Crores)
	• Fume Extraction system with bag filters	5.5	
	• Stacks	3.3	
	• Water Sprinklers	0.2	
2.	Wastewater Management		
	• for ETP & STP	1.0	0.50
	• for Garland drains	0.2	
3.	Solid waste Management		
	• Fly Ash Handling & disposal	1.2	0.30
	• Slag Handling & Disposal	0.2	
	• Hazardous waste storage & disposal	0.2	
	• Municipal solid waste storage & disposal	0.1	
4.	Greenbelt development, Land scaping, Noise Management,	0.3	0.07
5.	RWH in Plant & De-siltation of Ponds etc.	0.3	0.03
5.	Fire Safety Systems	3.0	0.05
6.	Environmental Monitoring		
	• AAQMS	1.5	0.10
	• CEMS	1.0	
7.	Occupational Health & Safety		
	• Primary Health Centre (PHC)	0.7	0.15
	• Personal Protective Equipment's (PPEs)	0.2	
	• Ambulance	0.1	
TOTAL		27.0	2.80

- 22.1.26 Greenbelt will be developed in 10 acres (4.05 ha.) which is about 33 % of the total area which is inclusive of existing greenbelt. A 10 to 85 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt as per CPCB guidelines. Total no. of 7000 nos. of plants will be there before September 2020.
- 22.1.27 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 22.1.28 Name of the EIA consultant: Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No. 120, Accredited EIA Consultant Organizations as on August 2020].
- 22.1.29 During the discussion, the Committee asked the PP to submit a written commitment with respect to revised CER action plan and energy consumption etc., The reply submitted by the PP is summarized as below:

Point no.1	Confirmation on capacity of Brick making Plant
Reply:	PP confirmed that the entire Fly ash generated will be utilized in making Fly Ash bricks within the plant premises. The total Fly Ash bricks will be 196 Lakhs/ Annum (56,000 Bricks /day)
Point no.2	Confirmation on Truck parking area allocated within plant premises
Reply:	PP confirmed that 1.0 Acre will be earmarked for Truck Parking within the plant premises.
Point no.3	Confirmation of 10 MW CFBC boiler instead of 6 MW CFBC Boiler for effective utilization of Dolochar & Confirmation on Fuel to be used in

	CFBC boiler.
Reply:	PP confirmed that CFBC boiler will be of 10 MW capacity for effective utilization of Dolochar generated from the DRI kilns along with good quality Indian Coal.
Point no.4	Submission of Revised CER proposal
Reply:	The Revised CER proposal is has been submitted.
Point no.5	Confirmation regarding combination of Fuel to be used in CFBC boiler.
Reply:	PP confirmed that in their CFBC boiler (to generate 10 MW) they will be using Entire Dolochar generated from the DRI kilns along with good quality Indian Coal only.
Point no.6	Provide bottom Ash Disposal
Reply:	The bottom ash generated will be given to Brick manufacturers.
Point no.7	Revise the GLCs with usage of Indian Coal in the CFBC boiler
Reply:	After considering the dolochar & Indian coal the incremental GLC for sulphur dioxide (SO ₂) will reduce to 12.3 µg/m ³ . Accordingly, the net resultant GLCs for SO ₂ will reduce to 25.1 µg/m ³ .
Point no.8	Provision of C.C. TVs for surveillance of Fire Safety & Control
Reply:	PP confirmed that C.C. TVs will be provided at strategic locations for Fire Safety & Control.
Point no.9	CEMS monitoring is to be part of Main Control Room
Reply:	PP confirmed that CEMS monitoring is to be part of Main Control Room.
Point no.10	Assurance on use of LDO in Re-heating furnace instead of Furnace Oil
Reply:	PP confirmed that 85 to 90 % of Hot charging and Reheating furnace will be established for remaining 10 to 15 % with LDO as fuel. No Furnace Oil / coal will be used.
Point no.11	Energy conservation with respect to Electrical motors, machinery
Reply:	All electrical motors above 30 KW capacity will have Variable Frequency Drives (VFD). Every effort will be made to adopt best quality equipment in terms of energy conservation also.

Observations of the Committee

22.1.30 The Committee noted the following:

- i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan were found to be addressing the issues in the study area and the issues raised during the public hearing. The certified compliance report of Chhattisgarh Environment Conservation Board (CECB) is also found to be satisfactory.
- ii. The written commitment submitted by the project proponent was found to be satisfactory, and addressing the concerns of the Committee.

Recommendations of the Committee

22.1.31 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 following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to sponge iron plants, induction furnace and rolling mills based on project specific requirements:

A. Specific conditions

- i. Only surface water shall be used to run the plant. No ground water abstraction shall be permitted.
- ii. Air cooled condensers shall be used.
- iii. CFBC of 10 MW capacity shall be installed and low sulphur Indian coal shall be used in the boiler.
- iv. Green belt shall be developed in 10.06 acres land @ 1000 trees per acre. In addition to this, 10,000 saplings shall be planted in nearby area during next three years.
- v. Dedicated vehicle parking area in one acre of the total plant area shall be established.
- vi. Road leading to plant shall be made pucca and maintained to reduce air pollution during traffic movement to and from the plant.
- vii. CER Activities shall be completed in a time frame of 3 years.
- viii. 85-90% rolling shall be done as hot charged. Use of LDO shall be practiced in RHF whenever it is run. FO and Pulverized coal shall not be used.
- ix. Fly ash and bottom ash brick making plant of 56000 bricks/day capacity shall be installed to consume 100 % Fly ash.
- x. PM emission shall be less than 30 mg/Nm³ and SO₂ & NO_x shall be maintained as 100 mg /Nm³ respectively as per prevailing norms.
- xi. CEMS data shall be used for process control through central control rooms.
- xii. Energy conservation measures like use of VFD, Slip power recovery etc., shall be adopted.

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 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 recognised 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. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- vi. 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.
- vii. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- viii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- ix. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- x. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

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

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

VI. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces.
- iii. 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 a 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 programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

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

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

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

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

22.2 Proposed Expansion of the Steel Plant by installation of Pellet Plant with Grinding Facility (2x0.85 MTPA), Sponge Iron Plant (1x350 TPD Kiln), Induction Furnaces (3x25T), Capacity revision from 600 TPD to 1000 TPD of Rolling Mill along with 7 MW capacity Captive Power Plant (WHRB based, utilizing waste heat from the proposed sponge plant) and Producer Gas Plant (12x4000 Nm³/hr) by **M/s. Bravo Sponge Iron Pvt. Ltd.**, located at Village Mahuda, P.O. Rukni, P.S. Para, **District Purulia, West Bengal** [Online Proposal No. IA/WB/IND/125425/2015; File No. J-11011/758/2009-IAII(I)] - **Environment Clearance – regarding.**

22.2.1 **M/s. Bravo Sponge Iron Pvt. Ltd** has made online application vide proposal no. IA/WB/IND/125425/2015 dated 7/12/2019 along with copy of EIA/EMP report and Form – 2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

22.2.2 The aforesaid proposal was considered in the 14th meeting of the EAC (Industry -1) held on 23-24th December, 2019, 18th meeting held on 29-30th April, 2020 and 21st meeting held on 30th July, 2020 – 1st August, 2020. The proceedings of the said meetings are furnished as below.

Proceedings of the EAC (Industry1) held on 23-24th December, 2019

The proposed expansion of Steel Plant for ultimate production of 1.7 MTPA Pellets, 745 TPD Sponge Iron, 1350 TPD Billets, 1000 TPD Rolled products, 25 MW Captive Power Plant (15 MW WHRB + 10 MW AFBC) & 48,000 Nm³/hr producer gas is located at Village Mahuda, P.O. Rukni, P.S: Para, District: Purulia in West Bengal by M/s Bravo Sponge Iron Pvt. Limited. Application was made on the MoEF&CC portal on 16/11/2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The proposal was considered in the second meeting of the Re-constituted Expert Appraisal Committee (EAC), Industry-1 held during 10-12th December, 2018 to determine the Terms of Reference (TOR) for undertaking detailed EIA study for obtaining Environmental Clearance in accordance with the provisions of the EIA Notification 2006. Terms of Reference (ToR) was received vide letter No. J-11011/758/2009-IA. II(I) dated 18/12/2018. Public Hearing was conducted on 22/07/2019.

Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 7/12/2019 vide online proposal No. IA/WB/IND/125425/2015.

The project of M/s Bravo Sponge Iron Pvt. Ltd. is located in Village Mahuda, P.O. Rukni, P.S: Para, District: Purulia, West Bengal State is for expansion of Steel Plant for ultimate production of 1.7 MTPA Pellets, 745 TPD Sponge Iron, 1350 TPD Billets, 1000 TPD Rolled products, 25 MW Captive Power Plant (15 MW WHRB + 10 MW AFBC) & 48,000 Nm³/hr producer gas.

The existing and proposed capacity for different units and products is as below:

S.No	Unit	Units as per State Clearance	Units as per MoEF&CC EC dated 18.04.17	Total	Units under operation	Balance units		Proposed expansion	Final configuration
						Under implementation	To be implemented		
1	Pellet Plant with Grinding Facility	-	-	-	-	-	-	2 X 0.85 MTPA	1.7 MTPA
2	Sponge Iron Plant	1X100 TPD (as per NOC dated 5.12.2002) + 1x95 TPD (as per State EC dated 24.03.2008)	2X100 TPD	1X100 TPD + 1x95 TPD + 2X100 TPD	1X100 TPD + 1x95 TPD + 2X100 TPD	-	-	1 X 350 TPD	745 TPD (1X100 TPD + 1x95 TPD + 2X100 TPD + 1X350 TPD)
3	SMS (Induction Furnace with CCM)	-	600 TPD (4 x 15 T)	600 TPD (4 x 15 T)	300 TPD (2 x 15 T)	150 TPD (1 x 15 T)	150 TPD (1 X 15T)	750 TPD (3 x 25T)	1350 TPD (4 x 15 T + 3 x 25T)
4	Rolling Mill	-	600 TPD	600 TPD	-	-	600 TPD*	Capacity revision from approved 600 TPD* to 1000 TPD	1000 TPD
5	Captive Power Plant	-	18 MW (8 MW WHRB + 10 MW AFBC)	18 MW (8 MW WHRB + 10 MW AFBC)	10 MW (4x10 TPH WHRB + 1X20 TPH AFBC*)	-	8 MW (1X20 TPH Proposed AFBC + *Balance 12 TPH Steam from existing AFBC)	7 MW WHRB	25 MW (15 MW WHRB + 10 MW AFBC)
6	Producer Gas Plant	-	-	-	-	-	-	12 x 4000 Nm ³ /hr	48,000 Nm ³ /hr

The Status of compliance of existing EC was obtained from Regional Office Bhubaneswar vide File No. 102-577/16/EPE/2389 dated 28/10/2019 wherein several non-compliances have been reported. Subsequently, PP has submitted Action Taken Report to the Regional Office on 20/11/2019 which have been examined and the report was furnished on 5/12/2019. As per the report, following non-compliances have been reported.

- i. Project proponent is yet to install the Effluent Treatment Plant and zero liquid discharge is not maintained.
- ii. Concreting of internal roads within the plant site is yet to be completed.
- iii. Green belt development all along the plant boundary covering 33% of the plant area is not satisfactory.
- iv. Noise monitoring report is not being submitted along with the six-monthly compliance report.

The proposed project will be installed on the available land of total 78.37 acres (31.73 hectares) within the existing plant premises. Land is already in possession of the Company. The river Damodar passes at a distance of 9 km towards North, from the project site. Modification / diversion in the existing natural drainage pattern at any stage has not been proposed.

The topography of the area is flat and reported to lie between Latitude - 23°32'48.67"N to 23°33'9.42"N and Longitude - 86°32'32.55"E to 86°32'59.22"E and at an elevation of 190 m AMSL.

No national park / wildlife sanctuary / biosphere reserve/tiger reserve / elephant reserve, etc. is reported to be located in the core and buffer zones of the project. The area also does not report to form corridor for Schedule-I fauna.

The raw material requirement for the existing and the proposed expansion are furnished as below:

Raw Material	Existing Units + Units under Implementation	Proposed Plant	Total	Mode of Transport	Source
Sponge Iron Plant:					
Pellet	223680	198198	421879	Internal	
Coal	140778	124740	265518	Rail / Road	Imported / West Bengal & through e-auction
Dolomite	76646	67914	144560	Rail / Road	
SMS (IF route) :					
Pig Iron	37915	47394	85309	Rail / Road	
Sponge Iron	173250	216563	389813	Internal / Road	
Ferro Alloys	387	484	872	Road	
Scrap	25011	31263	56274	Internal / Road	
Rolling Mill :					
Billets	207900	138600	346500	Internal	
Power Plant-AFBC :					
Coal	44355		44355	Rail	West Bengal & through e-auction
Dolochar	53104		53104	Internal	
Pellet Plant :					
Iron Ore Fines	-	1793400	1793400	Rail	Orissa/Jharkhand
Bentonite	-	11956	11956	Rail / Road	Kutch, Gujarat
Limestone	-	17080	17080	Rail / Road	Birmitrapur, Orissa
Coal	-	68320	68320	Rail / Road	West Bengal & through e-auction.
Producer Gas Plant :					
Coal	-	118800	118800	Rail / Road	West Bengal & through e-auction.

The targeted production capacity of the Steel Plant after expansion is 1.7 MTPA Pellets, 745 TPD Sponge Iron, 1350 TPD Billets, 1000 TPD Rolled products, 25 MW Captive Power Plant (15 MW WHRB + 10 MW AFBC) & 48,000 Nm³/hr producer gas. The major raw materials, which will be handled, consist of Iron Ore, Coal, Dolomite, Limestone, Ferro Alloys, Scrap, etc. The raw materials will be purchased from mines located in Orissa, West Bengal, Jharkhand, Gujarat (depending upon availability). Coal will be imported. Raw materials will be received through railways / roadways.

The daily make up water requirement for the entire project is estimated as 2284 m³/day (Existing Units: 400 m³/day, Units under implementation / to be implemented: 277 m³/day, Proposed Units: 1607 m³/day). The raw water will be sourced from DVC supply and project proponent has already made an agreement with Damodar Valley Corporation on 11/04/2018.

The power requirement of the project is estimated as 67.5 MW (Existing: 12.5 MW + Unit under implementation / to be implemented: 11.3 MW + Proposed: 43.7 MW), which will be sourced from existing and proposed 25 MW capacity Captive Power Plant and the remaining power will be obtained from DVC.

Baseline Environmental Studies were conducted during post-monsoon season, i.e. from 1st Oct, 2018 to 31st Dec, 2018. Ambient air quality monitoring has been carried out at 8 locations and

the data submitted indicated: PM₁₀ (50µg/m³ to 95 µg/m³), PM_{2.5} (18µg/m³ to 45µg/m³), SO₂ (4µg/m³ to 18 µg/m³) and NO_x (10 µg/m³ to 38 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed & existing units is 5.808µg/m³ (ESE direction), 5.808 µg/m³ (ESE direction) and 6.061 µg/m³(ENE direction), with respect to the SO₂, NO_x and PM respectively.

Ground water quality has been monitored at 9 locations in the study area and analyzed. pH: 6.7 to 7.4, Total Hardness: 108 to 176 mg/l, Chloride: 68 to 140 mg/l, Sulphate: 22 to 52 mg/l, Nitrate: 3.6 to 12.5 mg/l . Heavy metals are within the limits.

Surface water samples were analysed from 10 locations – 1 Damodarriver water sample, 1 canal water and 8 pond water samples. For flowing water body, pH: 6.8 and 6.9; DO: 6.8 mg/l and 7.1 mg/l and BOD: 3 and 5 mg/l. For 8 pond water samples, pH: 6.4 to 7.4; DO: 5.7 to 6.3 mg/l and BOD: 4 and 8 mg/l.

Noise levels are in the range of 55.7 - 69.9 dBA for day time and 45.2 – 55.1dBA for night time.

The solid waste generation and its utilization details are furnished as below:

Sl. No.	Type	Quantity in Tons/Year	Utilization
1.	Dolochar from 1x350 TPD DRI Kiln	25,000	To be used in FBC Boiler.
2.	Slag & Dust from IFs	33,500	Slag to be used for Land filling / Road Construction purpose.
3.	End Cuts, Scale & Scrap from CCM	5,000	To be used as raw materials in IFs.
4.	End cuts and missed rolls from Rolling Mill	16,500	To be used as raw materials in IFs.
5.	Tar generated from Producer Gas Plant	3,564	To be disposed as per MoEF&CC Guideline.

The Public hearing for the project was held on 22/07/2019 at Para Community Hall, Para Block, District Purulia in West Bengal under the chairmanship of Shri. Mufti Samim Sawkat, Additional District Magistrate (Gen.), Purulia. The issues raised during the public consultation are skill development to the unemployed youth, safety measures for labors, CSR programme for women, pollution control measures and utilization of ground water which have been addressed in the EIA report.

The company proposes to invest Rs. 381 Lakhs on Corporate Environment Responsibility (CER). This fund shall be utilized over a period of 3 years. The Company has identified certain areas, to be considered for implementing the CER activities in the context of the local scenario of the area:

Sl. No.	PROPOSED CER ACTIVITIES	INVESTMENT (IN LAKHS)			Total (in Lakhs)
		Year 1	Year 2	Year 3	
A)	PUBLIC HEARING RELATED ACTIVITIES				
1.	Skill development to unemployed local youth through National Skill Development Corporation, Govt. of India Scheme. Construction of a building along with the	5	5	5	15

Sl. No.	PROPOSED CER ACTIVITIES	INVESTMENT (IN LAKHS)			Total (in Lakhs)
		Year 1	Year 2	Year 3	
	necessary infrastructures for this purpose like different machineries for industries.				
2.	Development of Road (2 Km) in surrounding villages (@ Rs. 12 Lakhs per Km)	8	8	8	24
3.	Purchase of Mobile Water Tanker	-	26	-	26
4.	Construction of 5 Set Toilets at nearby villages (@ Rs. 3.00 Lakhs per set of 2 Toilets, separately for Ladies & Gents)	6	6	3	15
5.	Drinking Water Infrastructure facility at nearby villages (Tubewell: 15 nos. @ Rs. 2.0 Lakhs per tubewell)	10	10	10	30
6.	Street Lighting (Solar) provision at suitable public places – 20 nos. (@ Rs. 0.50 Lakhs per Solar Light).	4	4	2	10
7.	Construction of school building in the nearby village	60	50	50	160
8.	Construction of a building for providing training classes for local women.	5	3	3	11
B)	NEED BASED ACTIVITIES				
9.	Construction of a health check-up centre along with necessary facilities in nearby village.	7	6	6	19
10.	Rain Water Harvesting ponds in nearby villages (3 nos. @ Rs. 5 Lakhs per pond).	5	5	5	15
11.	Construction of 14 nos. of ground water Recharging system for rainwater in nearby villages (@2.5 lakhs per system)	15	10	10	35
12.	Development of parks, plantation of trees in the nearby areas.	5	4	4	13
13.	Development of Community Hall	4	2	2	8
Sub-Total		134	139	108	381
GRAND TOTAL					

The capital cost of the project is Rs 475.0 Crores and the capital cost for environmental protection measures is proposed as Rs 27.0 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 2.70 Crores. Additional 1000 persons apart from the existing 670 persons (total 1670 persons) will get employment during operational phase. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Item	Cost (in Crores)	Cost (in Crores)
Cost of Air Pollution Control Systems	17.00	1.70
Cost of Water conservation & Pollution Control	2.00	0.20
Cost of Solid Waste Management System	0.50	0.05
Green belt development	1.50	0.15

Item	Cost (in Crores)	Cost (in Crores)
Noise Reduction Systems	0.50	0.05
Occupational Health Management	0.50	0.05
Risk Mitigation & Safety Plan	2.50	0.25
Environmental Management Department	2.50	0.25
GRAND TOTAL	27.00	2.70

Greenbelt will be developed in 10.47 Ha which is about 33% of the total plant area. Local and native species will be planted with a density of 1500 trees per hectare. Total no. of 15,700 saplings will be planted and nurtured in 10.47 Hectares.

There is no court case or violation under EIA Notification to the project or related activity. Name of the Consultant: M/s. Envirotech East Pvt. Ltd. (Sl. No. 55 in the List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019).

Observations of the Committee held on 23-24th December, 2019

The Committee noted the following deficiencies in the EIA report submitted to the Ministry.

- i. Closure report from Regional Office on the observed non-compliances have not been furnished.
- ii. High level of Particulate matter in the Ambient Air has been reported and NOx in the source and the reasons for such high level reporting has not been mentioned.
- iii. COD parameter in the surface water sample has not been monitored. Hence, fresh assessment of surface water quality for all the parameters is required.
- iv. Hazard Identification and Risk Assessment (HIRA) report submitted is not satisfactory. Rules and Regulations pertaining to the HIRA has been wrongly mentioned in the report.
- v. Traffic assessment study has not been carried out.

Recommendations of the Committee held on 23-24th December, 2019

In view of the foregoing and after detailed deliberations, the committee deferred the consideration of the proposal cited above and sought following additional information for further consideration of the proposal:

- i. Closure report from Regional Office on the observed non-compliances regarding Effluent Treatment Plant, concreting of internal roads, green belt development and noise quality monitoring shall be furnished.
- ii. Fresh assessment of surface water quality for all the parameters shall be carried out and report submitted.
- iii. Hazard Identification and Risk Assessment (HIRA) report specific to the project activity shall be prepared and submitted.
- iv. Traffic assessment study report shall be carried out and submitted.
- v. Existing road conditions to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs shall be submitted.
- vi. Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be furnished.
- vii. Line source modelling shall be carried out based on the quantity of raw materials and products to be transported different modes such as road and rail respectively and report shall be furnished.
- viii. Reasons for higher level of presence of Particulate matter in the Ambient Air and NOx in the source shall be furnished.

- ix. Corporate Environmental Policy envisaging sharing of responsibility in case of accident/failures shall be furnished.
- x. Time bound action plan for green belt development covering 33% of the plant with a tree density of 2500/ha shall be prepared and submitted.
- xi. Details of the producer gas plant along with the pollution control systems envisaged shall be furnished.

22.2.3 Meanwhile, Ministry was in receipt of a public representation dated 21/12/2019 of Shri Subhasish Bose, Advocate alleging that the project proponent has commenced the civil/foundation works of 2 Nos. pellet plant before obtaining Environment Clearance from MoEF&CC. The said public representation was forwarded to the Regional Office by the Ministry on 20/01/2020 with a request to submit the factual status. In response to this, Regional Office has inspected the project site on 15/02/2020 and submitted the factual report to the Ministry on 26/02/2020. Further, PP has submitted their reply to the additional information sought by the EAC on 16/04/2020.

22.2.4 The aforesaid representation and response submitted by the PP have been deliberated upon by the EAC in its meeting held on 29-30th April, 2020.

Proceedings of the EAC (Industry1) held on 29-30th April, 2020

S.No.	Additional information sought by the EAC	Reply submitted by the PP
i.	Closure report from Regional Office on the observed non-compliances regarding Effluent Treatment Plant, concreting of internal roads, green belt development and noise quality monitoring shall be furnished.	As per the RO report dated 26.02.2020, the ETP plant is under operation, concreting of internal road have been undertaken, 90% of the green belt development has been carried out in and around the plant premises and noise quality monitoring is being carried out.
ii.	Fresh assessment of surface water quality for all the parameters shall be carried out and report submitted.	<p>Surface water samples were collected and analyzed from total ten (10) locations, including two (2) different locations from flowing water bodies viz., Damodar River (SW1) and Canal near Chak Kamakuri (SW2) and from eight (8) different ponds of different locations (SW3 to SW10) to assess the baseline status of the surface water quality in the study area.</p> <p><u>RESULTS OF SURFACE WATER QUALITY</u></p> <p>The surface water quality was compared with CPCB water quality criteria for surface water, for total 8 parameters for surface water.</p> <p><u>River Water Quality:</u></p> <p>The river water quality (SW1) parameters are within the standard for Class C i.e., Drinking water source after conventional treatment and after disinfection.</p>

S.No.	Additional information sought by the EAC	Reply submitted by the PP
		<p><u>Canal Water Quality:</u> The Canal Water Near Chak Kamakuri (SW2) parameters are within the standard for Class C except for BOD level, which is more than the standard (3 mg/l). Hence, this water is suitable for only “Propagation of Wildlife & Fisheries” (i.e., Class D) and “Irrigation, Industrial Cooling, and Controlled Waste Disposal” (i.e., Class E).</p> <p><u>Pond Water Quality:</u> The Pond water quality (SW3 to SW10) parameters are within the standard for Class C except for BOD level, which is more than the standard (3 mg/l). Hence, this water is suitable for only “Propagation of Wildlife & Fisheries” (i.e., Class D) and “Irrigation, Industrial Cooling, and Controlled Waste Disposal” (i.e., Class E).</p>
iii.	Hazard Identification and Risk Assessment (HIRA) report specific to the project activity shall be prepared and submitted.	The detailed Hazard Identification and Risk Assessment (HIRA) report, specific to the project activity is submitted and the findings of the report is given as below: <ul style="list-style-type: none"> • The Plant has lower risk potential than those industries dealing with toxic and flammable chemicals. Off-site people are not exposed to any dangers; hence the societal risk is insignificant. • The safety interlocks and concerned instruments will be essential part of process equipment during engineering and procurement of facilities. • The plant structures shall be designed for cyclone floods and seismic events to prevent structural collapse and integrity of weather (water) proofing for storage of dangerous goods. • With proper Standard Operating Practice (SOP) and Standard Maintenance Procedure (SMP) along with use of adequate PPEs will mitigate almost all the risk. However the most severe consequences will be due to Hot metal splashing in SMS and bursting of pressure parts in power plant, their chances of occurrences are low due to implementation of better safety features in the installations and constant monitoring of vessel/pipework with regular repair and maintenance, and hence proposed project facilities have low levels of risk. • Portable gas detectors shall be provided within the site in order to facilitate manual gas leak monitoring and regular leakage checks. Monitoring of gas leak shall be ensured for immediate identification of leaks and subsequent implementation of action plan to prevent development of any hazardous situation.

S.No.	Additional information sought by the EAC	Reply submitted by the PP
		<ul style="list-style-type: none"> • Further, all major units / equipment shall be provided with the following safety facilities: <ul style="list-style-type: none"> – Smoke /fire detection and alarm system – Fire hydrant system – Fire extinguisher - Foam/DCP/ABC/CO2 – Water fog and sprinkler system – Mobile fire-fighting equipment – First-aid appliances • Personal Protective Equipment (PPEs) shall be provided for additional protection to workers exposed to workplace hazards in conjunction with other facility controls and safety systems. • Restricted access to unauthorized person to those area which is prone to hazard such as Switch yard, Electrical control rooms, Turbine Generator building etc. Isolate people from load carrying/mechanical handling systems, vehicle traffic and storage and stacking locations. • The onsite Emergency Plan will be integrated with the district's Offsite Emergency Plan for comprehensive management of emergencies in minimum response time and maximum rescue results in an event of a disaster /emergency. • Co-ordination with nearby industries will also be maintained for creating unified Disaster management resource pool to be utilized in case of any disaster occurrence. • Security of facility to prevent unauthorized access to plant, entry of prohibited items and control of onsite traffic; and Development of emergency response management systems commensurate with site specific hazards and risks (fire, explosion, rescue and first aid). • Regular safety audits shall be undertaken to ensure that hazards are clearly identified and risk-control measures are maintained. • On the basis of the preliminary assessment, INR 479 lacs have been foreseen for disaster management plan at project stage.
iv.	Traffic assessment study report shall be carried out and submitted.	<p>Traffic density was monitored on following two locations:</p> <ul style="list-style-type: none"> • Chandankiyari-Dubra-Raghnathpur Road at Rukni More • Mahuda-Dendua-Chelyama Road near Bravo plant gate. <p>As per IRC: 64-1990 code, a Two Lane road in Plain</p>

S.No.	Additional information sought by the EAC	Reply submitted by the PP																							
		<p>terrain can accommodate vehicular traffic load of 15000 PCU per day.</p> <p>The additional traffic load due to material as well as manpower movement during operation of overall project of M/s Bravo Sponge Iron Private Limited after expansion has been added to the existing traffic load at both the above-mentioned points.</p> <p>The findings of the survey has been compared with Indian Roads Congress code for Guidelines for Capacity of Roads in Rural Areas (IRC: 64 – 1990).</p> <ul style="list-style-type: none"> • CHANDANKIYARI-DUBRA-RAGHUNATHPUR ROAD is two lane road with approx. 7 m width and can well accommodate existing traffic load along with the additional load due to M/s Bravo project (total PCU per day will be 1697). • MAHUDA-DENDUA-CHELYAMA ROAD is two lane road with approx. 6 m width and can well accommodate existing traffic load along with the additional load due to M/s Bravo project (total PCU per day will be 1140). 																							
v.	Existing road conditions to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs shall be submitted.	<p>Rukni more is 12 km from State Highway (SH-05) and 13 km from State highway (SH-12). At Rukni more, width of road is 22 feet (Two Lane) black topped along with 6 feet footpath on either side of the road. There is moderate traffic density on this stretch of the road.</p> <p>Bravo Plant gate is situated on Mahuda-Dendua-Chelyama Road having 20 feet width with black topped. Bravo Plant gate is approx.500 m from Rukni more. Traffic movement on this road is very low. Plant gate is designed with double gate system separately for inward and outward traffic movement to facilitate smooth movement of traffic for the plant.</p>																							
vi.	Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be furnished.																								
	<table border="1" data-bbox="325 1570 1401 1794"> <thead> <tr> <th data-bbox="325 1570 459 1641">Mode</th> <th data-bbox="459 1570 719 1641">Product Quantity</th> <th data-bbox="719 1570 1034 1641">Raw material Quantity</th> <th data-bbox="1034 1570 1254 1641">Total Quantity</th> <th data-bbox="1254 1570 1401 1641">%age</th> </tr> </thead> <tbody> <tr> <td data-bbox="325 1641 459 1713">Road</td> <td data-bbox="459 1641 719 1713">8,57,550 TPA</td> <td data-bbox="719 1641 1034 1713">2,56,366 TPA</td> <td data-bbox="1034 1641 1254 1713">11,13,916 TPA</td> <td data-bbox="1254 1641 1401 1713">26.50%</td> </tr> <tr> <td data-bbox="325 1713 459 1785">Rail</td> <td data-bbox="459 1713 719 1785">8,57,550 TPA</td> <td data-bbox="719 1713 1034 1785">22,31,498 TPA</td> <td data-bbox="1034 1713 1254 1785">3089048 TPA</td> <td data-bbox="1254 1713 1401 1785">73.50%</td> </tr> <tr> <td data-bbox="325 1785 459 1794">Total</td> <td data-bbox="459 1785 719 1794">17,15,100 TPA</td> <td data-bbox="719 1785 1034 1794">24,87,864 TPA</td> <td data-bbox="1034 1785 1254 1794">4202964 TPA</td> <td data-bbox="1254 1785 1401 1794">100%</td> </tr> </tbody> </table>					Mode	Product Quantity	Raw material Quantity	Total Quantity	%age	Road	8,57,550 TPA	2,56,366 TPA	11,13,916 TPA	26.50%	Rail	8,57,550 TPA	22,31,498 TPA	3089048 TPA	73.50%	Total	17,15,100 TPA	24,87,864 TPA	4202964 TPA	100%
Mode	Product Quantity	Raw material Quantity	Total Quantity	%age																					
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Rail	8,57,550 TPA	22,31,498 TPA	3089048 TPA	73.50%																					
Total	17,15,100 TPA	24,87,864 TPA	4202964 TPA	100%																					
vii.	Line source modelling shall be carried out based on the quantity of raw materials and products to be transported different	PM concentrations at the respective AAQM locations due to the vehicular emissions during transportation of raw materials and products are calculated in the range of 0.1 to 0.2 µg/m ³ . The corresponding NOx concentrations are calculated in the range of 0.01 to 0.03 µg/m ³ .																							

S.No.	Additional information sought by the EAC	Reply submitted by the PP
	<p>modes such as road and rail respectively and report shall be furnished.</p>	<p>Hence, it can be concluded that the contribution of the vehicular traffic due to the transportation of raw materials and products for the overall project after expansion is negligible.</p> <p>The overall scenario of the air quality at the respective monitoring locations in the area after adding the expected contributions due to overall plant operation after expansion to the maximum baseline data represents the maximum concentration in the range of 77.92 to 98.19 $\mu\text{g}/\text{m}^3$ for PM, considering the background level as monitored during the period of Oct'18 to Dec'18. The values for NOx are in the range of 22.46 to 38.51 $\mu\text{g}/\text{m}^3$.</p> <p>Considering the background level as monitored during the period of 1st Feb'20 to 14th Feb'20, the corresponding overall maximum values of PM & NOx are in the ranges of 68.82 to 88.19 $\mu\text{g}/\text{m}^3$ and 22.18 to 32.51 $\mu\text{g}/\text{m}^3$ respectively.</p> <p>All these values are within the stipulated norms of 100 $\mu\text{g}/\text{m}^3$ and 80 $\mu\text{g}/\text{m}^3$ respectively.</p>
viii.	<p>Reasons for higher level of presence of Particulate matter in the Ambient Air and NOx in the source shall be furnished.</p>	<p>Reasons for High value of PM in Ambient Air</p> <ul style="list-style-type: none"> • Out of the total 196 values, only 3 values have exceeded the level of 90 $\mu\text{g}/\text{m}^3$, which is only 1.5% of the total monitored values. Around 15% values are obtained in the range of 81 to 90. But, most of the values (around 84%) are below 80 $\mu\text{g}/\text{m}^3$. • The values above 90 $\mu\text{g}/\text{m}^3$ observed on two instances near the project site (AQ1) (92 $\mu\text{g}/\text{m}^3$ & 93 $\mu\text{g}/\text{m}^3$) may be attributed to the additional vehicular traffic around the Rukni railway siding area due to simultaneously lifting of two rakes materials which is a rare occurrence. This railway siding has only one unpaved platform to unload the material. Besides, wind blown dust due to the unpaved Road is another significant reason • The value of 95 $\mu\text{g}/\text{m}^3$ was obtained on 07.12.2018 at Ketlapur Nutandi (AQ5). It was observed that there were local community celebrations leading to significant vehicular movement on this particular day in the area. However, the overall mean value for 3 months period is calculated as 72 $\mu\text{g}/\text{m}^3$. It is relevant to note that this location was in the upwind direction of the project site of M/s Bravo Sponge Iron Pvt. Ltd. during the monitoring period. Hence, there is insignificant impact on the air quality of this location

S.No.	Additional information sought by the EAC	Reply submitted by the PP
		<p>due to air emissions from the existing plant of Bravo.</p> <ul style="list-style-type: none"> • Taking serious note of the concern raised by the Honorable EAC members, a two weeks' monitoring (1st February, 2020 to 14th February, 2020) was further conducted to study the air quality at all 8 locations with an emphases to assess the impact on the available sensitive receptors around the same 8 locations. While going through the statistical analysis for PM₁₀ for the respective locations, all the values are below 80 µg/m³ except at one occasion at AQ1 (83 µg/m³). Hence, all the values are well within the stipulated limit of 100 µg/m³. • All the values of PM_{2.5} (the maximum value being 45 µg/m³) are well within the stipulated limit of 60 µg/m³. <p>Reason for High value of NOx in Source</p> <ul style="list-style-type: none"> • There is NOx emission from five units (Existing-3, under Implementation-1, Proposed -1). The NOx emission from all these five units shall be maintained within the level of 100 mg/Nm³.Based on the stack emission data and NOx emissions, the Ground Level Concentrations (GLCs) were calculated using ISCST3 (Air Quality Dispersion Model) and the predicted maximum GLC of NOx was obtained as 5.808 µg/m³ in ESE direction at a distance of 0.8 km.
ix.	Corporate Environmental Policy envisaging sharing of responsibility in case of accident/failures shall be furnished.	Corporate Environmental Policy has been formulated and submitted.
x.	Time bound action plan for green belt development covering 33% of the plant with a tree density of 2500/ha shall be prepared and submitted.	<ul style="list-style-type: none"> • M/s Bravo Sponge Iron Pvt. Ltd. has earmarked 10.47 Hectares (25.87 acres) for Green Belt Development, which is 33% of the total plant area of 31.73 hectares (78.37 acres) of land (Existing & Proposed Project). Around 26,175 numbers of trees (@2500 nos. of tree per hectare) has been considered under plantation programme for greenbelt development. • Out of this 10.47 Hectares of land for greenery, 5.38 Hectares of land is already having green belt for existing project area. • Remaining 5.09 hectares will be utilized for green belt development in the plant area for proposed project where around 12725 numbers of trees (@2500 trees per hectare) will be planted. • Hence, there will be total 26225 trees (Existing

S.No.	Additional information sought by the EAC	Reply submitted by the PP
		<p>(13500) + Proposed (12725)) on 10.47 hectares of land after implementation of the proposed project.</p> <p>Time Schedule</p> <ul style="list-style-type: none"> • Development of greenbelt on 5.09 hectares (12.57 acres) of land for the proposed project will be completed in a phased manner within a span of three (3) years with continuous and intensive maintenance. <p>Total Cost</p> <ul style="list-style-type: none"> • Total cost, to be spent in three years for development of greenbelt on 5.09 hectares (12.57 acres) of land for the proposed project: Rs. 1,14,45,000 • Expenditure for yearly maintenance of green belt on total 10.47 Hectares (25.87 acres) of land after completion of project implementation period of 3 years: Rs. 14,67,300/-.
xi.	<p>Details of the producer gas plant along with the pollution control systems envisaged shall be furnished.</p>	<p>Coal Gas, produced in Producer Gas Plant (PGP) using coal gas technology, will be used as fuel in the pellet plant. This is a clean fuel. There will be 12 nos. coal gasifiers to produce 4000 Nm³/hour of producer gas. In a fixed bed gasifier, the coal passes downward in counter current direction to gas flow, through various phases (devolatilisation, gasification and combustion zones). Mixture of air and steam is introduced in lower part of gasifier through rotating grate. Coal Tar generated from PGP shall be collected using “Centrifugal Tar Separator” and used as Fuel in DRI Kiln / alternately sold to authorized re-processors. No waste water will be generated from the process.</p> <p>Pollutant and Pollution Control Systems</p> <ul style="list-style-type: none"> • Wastewater generated during the stage of gas cooling shall be charged in the ABC of DRI plant. • In Indirect Type “Centrifugal Tar Separator” Tar is removed by centrifugal action without any washing with water. Therefore, phenolic water is not generated in this method of tar separation and the associated water pollution issues are completely eliminated • Generated Tar from the proposed producer gas will be used as Fuel in DRI Kiln / alternately sold to authorized re-processors approved by SPCB / CPCB. • Dust emission during conveying and feeding of coal to producer gas plant will be mitigated by Using covered ground hopper with fogging system mixed with air and water to settle down dust and also by installing bag filter to control the fugitive emission from different transfer points.

With respect to the RO factual report regarding the points raised in the public representation, the Committee noted that as per the RO report:

- **Civil and foundation works for the pellet plant along with entrance gate, boundary wall, stores, administrative building, 132 KV substation and concreting of roads have been initiated at the project premises.** It has also been stated that steel and few components of the pellet plant have been imported and stored in the storage yard. However, no pellet plant equipment/components of the steel structures were constructed/ established at the project site. Further, it is stated that water reservoir with a capacity of 25,000 m³ is constructed for the existing and expansion plant and is in operation.
- As per the photographs furnished in the report, it is noted that PP has already commenced the construction activity before obtaining EC from MoEF&CC.

As per the MoEF&CC O.M. dated 19/08/2010, no activity relating to the project covered under this notification including civil construction can be undertaken at site without obtaining prior Environment Clearance except fencing of the site to protect it from getting encroached and construction of temporary shed for the guard.

In this regard, PP requested to provide an opportunity for submitting their clarification to the findings of the RO factual report.

Observations of the Committee meeting held on 29-30th April, 2020

The committee satisfied with the ADS reply of the project proponent. However, as per the RO factual report, civil and foundation works for the pellet plant has already been commenced by the PP before obtaining EC.

Recommendations of the Committee meeting held on 29-30th April, 2020

In view of the foregoing and after detailed deliberations, the Committee deferred the consideration of the proposal till the requisite actions as per extant provisions of rules are completed for commencing the civil and foundation works for the pellet plant without obtaining EC by the project proponent. Committee requested Ministry to issue Show Cause notice as per Ministry Office Memorandum dated 05th February 2020, in view of commencement of work by PP.

Proceedings of the EAC (Industry1) held on 30th July, 2020 – 1st August, 2020

The Member Secretary apprised the Committee that based on the EAC recommendations, the file was processed and the Show Cause Notice was issued on 21/06/2020. Further, informed that the project proponent has submitted their SCN reply on 6/7/2020 and Regional Office has furnished their comments on 17/07/2020 and 21/07/2020 which are under examination. Also apprised the EAC that Competent Authority in the Ministry has taken the following decision in another case and has directed principle to be followed in all cases where violation is suspected or alleged.

- Send the matter to the Sector EAC for consideration of the case on merit.
- Take action against the alleged violation as per law.
- Do not wait for either the evidence of action having been started or violation proceedings to finish before taking up the case on merit.
- The EC if given after consideration on merit would be valid from the date it is given and not with retrospective effect. For the period before it, if violation is established by the court or the competent authority, the punishment/penalty as per law would be imposed.

Observations of the Committee meeting held on 30th July, 2020 – 1st August, 2020

The Committee taken cognizance of the decision of the Competent Authority with respect to the cases wherein violation is suspected or alleged.

Recommendations of the Committee meeting held on 30th July, 2020 – 1st August, 2020

In view of the foregoing and deliberations, the Committee requested the Ministry to place the instant proposal under consideration in its forthcoming meeting for consideration on merit as per the decision of the Competent Authority.

- 22.2.5 Accordingly, the proposal was placed before the EAC in its meeting held on 26/08/2020 for consideration. The project proponent along with the EIA consultant namely, M/s. Enviro Tech East Private Limited made a presentation to the Committee.

Observations of the Committee

- 22.2.6 The Committee noted the following:

- i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing. The certified compliance report also found to be satisfactory.
- ii. Additional information submitted by the project proponent found to be satisfactory, and addressing the concerns of the Committee.
- iii. The EAC has considered the proposal on merit as per the directions of the Competent Authority.

Recommendations of the Committee

- 22.2.7 In view of the foregoing after deliberations, and taking cognizance of the decision of Ministry pertaining to alleged violation, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to sponge iron plants, induction furnace and rolling mills based on project specific requirements:

A. Specific conditions

- i. The 95 TPD DRI unit shall be upgraded to 100 TPD with installation of 2MW WHRB.
- ii. All dust generated and collected from the plant roads, floors and bag houses/ESPs shall be recycled to Pellet Plant.
- iii. CPP shall meet all norms for PM, SO₂ and NO_x emissions. CEMS shall be integrated with the plant control and the monitored data shall be used for process control.
- iv. Producer Gas Plant shall be closed circuit type without any generation of phenolic water. Tar sludge and tar shall be handled in environmentally sound manner as per HW Rules 2016.
- v. Only DVC water shall be used and abstraction of ground water is not permitted.
- vi. 100 % water consumed annually shall be recharged through water harvesting
- vii. A sum of Rs. 3.8125 Cr shall be allocated to CER Activities as per list furnished and all CER Activities shall be completed within three years.

- viii. All roads inside the plant shall be paved, vacuum cleaners shall be provided to clean roads and shop floors.
- ix. Water spray systems shall be included to control fugitive dust from RM Stockpiles.
- x. 40 % green belt shall be provided using 2500 trees per ha around the plant boundary.
- xi. 85-90% rolling shall be done as hot charged. Use of LDO shall be practiced in RHF whenever it is run. FO and Pulverized coal shall not be used.
- xii. Air cooled condensers shall be used.
- xiii. PM emission from the stacks shall be less than 30 mg/Nm³.
- xiv. Energy conservation measures like use of VFD, Slip power recovery etc shall be adopted.

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

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

III. Water quality monitoring and preservation

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

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

VI. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- iii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused in melting Furnaces.
- iv. 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 a 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 programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

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

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

22.3 Proposed Installation of Sponge Iron Plant (4x100 TPD Kilns), Induction Furnaces (3x20 T), 1,40,000 TPA capacity Rolling Mill along with 16 MW capacity Captive Power Plant (8 MW WHRB based & 8 MW AFBC based, utilization waste heat & dolochar from the proposed sponge plant) and 1,00,000 TPA Cement Grinding Unit of **M/s BRGD Sponge & Iron Pvt. Ltd.** located at Village Janardandih, Mouza Erekusum and Khoar, P.S. Natoria, **Dist. Purulia, West Bengal** [Online Proposal No. IA/WB/IND/72262/2018; File No. J-11011/65/2018-IAII(I)] – **Reconsideration for grant of Environment Clearance based on ADS reply – regarding.**

22.3.1 In pursuance to the Agenda upload on PARIVESH, the project proponent has circulated the requisite documents to the Ministry as well as the EAC members on 20/08/2020 by email. Thereafter, PP again vide email dated 24/08/2020 expressed their inability to participate in the meeting as their main expert has suddenly developed high temperature and has been advised to remain in isolation along with necessary treatment. In view of this, PP has requested to present their project in the next EAC meeting.

22.3.2 The Member Secretary requested the EAC to carry out the due-diligence based on the documents circulated by the PP even in absence of PP.

22.3.3 EAC noted that as the provisions of the EIA Notification, 2006 which states that “Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative”. In this regard, after deliberations, the EAC is of the considered view that participation of applicant in person or through an authorized representative is essential to facilitate the following:

- Conducting the meetings in a transparent manner.
- Getting consent of the PP while prescribing the conditions for which the proposal is considered by the EAC.
- Getting necessary clarifications pertaining to the technical queries/concerns of EAC which may emerged during the appraisal.
- The project proponent has requested to be allowed to present their project in the next EAC meeting. Therefore, appraising their documents in their absence would amount to rejecting their request which might go against the spirit of EIA Notification 2006 which desires that the EAC appraisal should be in transparent manner.

22.3.4 In view of the foregoing and deliberations, the Committee deferred the consideration of the proposal and recommended to consider the same in the next EAC meeting as requested by the project proponent.

22.4 Expansion of existing Mini Steel Plant (0.5 MTPA) into Integrated Steel Plant (0.264 MTPA) along with 20 MW Captive Power Plant (8 MW WHRB and 12 MW CFBC) **by M/s MSP Sponge Iron Limited** located at Village Haldiaguna, **District Keonjhar in Odisha** [Online Proposal No. IA/OR/IND/119663/2019; File No. J-11011/116/2011-IAII(I)] –**Environment Clearance under para 7(ii) of EIA, 2006 – regarding.**

22.4.1 M/s MSP Sponge Iron Limited has made an online application vide proposal no. IA/OR/IND/119663/2019 dated 11/08/2020 along with Form 2, pre-feasibility report and Addendum to the existing EIA report seeking Environment Clearance (EC) under para 7(ii) of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

Details submitted by the project proponent

22.4.2 The unit was accorded prior EC for 0.264 MTPA steel production vide letter No-J-11011/116/2011-IA.II(I) dated 10/10/2012 and no validity extension has been obtained from MoEF&CC beyond 9/10/2019. The implementation status of the same is furnished as below:

SL. NO	UNIT	CONFIGURATIONS & CAPACITY AS APPROVED IN EXISTING EC	IMPLEMENTATION STATUS
1	Coal Gasification	23,664 m ³ /hr	Implemented
2	Iron Ore Beneficiation	10,00,000 TPA	Implemented
3	Iron Ore Pellet	2 x 6,00,000 TPA	1 x 6,00,000 TPA Implemented

4	DRI Kilns	2 x 50 TPD, 2 x 40 TPD & 1 x 350 TPD	2 x 50 TPD 2 x 40 TPD Implemented
5	IF with CCM	3 x 5T & 4 x 15T	3 x 5T
6	Rolling Mill	42,000 TPA	42,000 TPA
7	CPP	CFBC 12 MW	Not Implemented
		WHRB 8 MW	
8	Sinter Plant	4,16,000 TPA	Dropped for non-availability of land
9	MBF	2, 00, 000 TPA	
10	Coal Beneficiation	6,00,000 TPA	

22.4.3 The present proposal of project proponent involves enhancement of production capacities of the following units under para 7(ii) of EIA, 2006.

Sl. No	Unit	Existing capacity	Modernization/ Modification proposed	Final configuration	Ultimate capacity in TPA
1	Coal Gasification	23,664 m ³ /hr	Nil	-	23,664 m ³ /hr
2	Iron Ore Beneficiation	10,00,000 TPA	Nil	-	10,00,000
3	Iron Ore Pellet plant	1 x 6,00,000 TPA	Capacity of running 1 x 6,00,000 TPA to be modernized to 1 x 8,50,000 TPA	1 x 8,50,000 TPA	8,50,000
4	DRI Kilns (Sponge Iron)	2 x 50 TPD, 2 x 40 TPD	To be modernized to 4 x 75 TPD and installation of 1x350 TPD	4 x 75 TPD 1 x 350 TPD	2,22,600
5	IF with CCM (MS-Billet)	3 x 5T & 4 x 15T (2,64,000 TPA)	3 x 5T Furnaces (IF) will be modernized to 3 x 8 T. Change in Configuration is proposed as 2 x 10 & 2 x 15 T (Total 2,64,000 TPA)	3 x 8 T 2 x 10 T 2 x 15 T	2,64,000
6	Rolling Mill (Hot Rolled Product)	42,000 TPA	40 TPH	40 TPH	2,50,800
7	CFBC Power	12 MW	Reduction by 8 MW	4 MW	4 MW
	WHRB Power	8 MW	Reduction of Waste Heat by implementation of 14 MW	14 MW	14 MW

Observations of the Committee

22.4.4 The Committee noted that the instant proposal does not qualify under para 7(ii) as the envisaged expansion is 300% more than the existing capacity.

Recommendations of the Committee

22.4.5 In view of the foregoing and after deliberations, the Committee recommended to reject the proposal as the instant proposal does not qualify under para 7(ii) of EIA Notification, 2006.

22.5 Proposed expansion of existing steel plant to Integrated Steel Plant through installation of 1800 TPD (3x600 TPD) DRI kilns along with Beneficiation Plant for Iron ore (1X0.6 MTPA), Pellet Plant (1x0.6 MTPA), Steel Melting Shop (2x25 T + 4x15 T Induction Furnaces) with matching LRF & CCM, Rolling Mill (0.35 MTPA), Ferro alloy Plant (4x16.5 MVA), Briquette plant for Chrome Ore (1x30 TPH), Oxygen plant (100 TPD) and 63 MW (38 MW WHRB based + 25 MW AFBC based) capacity Captive Power Plant **by M/s. Nilachal Iron and Power Limited** located at Ratanpur-Kandra Village, Gamharia Block, **District Saraikela-Kharsawan, Jharkhand** [Online Proposal No. IA/JH/IND/111776/2019; File No. J-11011/662/2008-IAII(I)] – **Prescribing of Terms of Reference (ToR) – regarding.**

22.5.1 **M/s. Nilachal Iron and Power Limited** has made application vide online proposal no. IA/JH/IND/111776/2019 dated 06/08/2020 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 & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

22.5.2 M/s Nilachal Iron & Power Limited proposes an expansion of existing steel plant to Integrated Steel Plant through installation of 1800 TPD (3x600 TPD) DRI kilns along with Beneficiation Plant for Iron ore (1X0.6 MTPA), Pellet Plant (1x0.6 MTPA), Steel Melting Shop (2x25 T + 4x15 T Induction Furnaces) with matching LRF & CCM, Rolling Mill (0.35 MTPA), Ferro alloy Plant (4x16.5 MVA), Briquette plant for Chrome Ore (1x30 TPH), Oxygen plant (100 TPD) and 63 MW (38 MW WHRB based + 25 MW AFBC based) Captive Power Plant on the available land within the existing plant premises, comprising of total 24.63 hectares (60.87 acres) as well on the additional land of total 56.3 hectares (139.13 acres) adjoining the existing plant premises.

22.5.3 The overall project scenario is given as below

Unit	Existing Unit under Operation	Unit under Implementation	Proposed Units Capacity	Total Capacity and Products
Beneficiation Plant	-		6,00,000 TPA	(1x0.6 MTPA) 6,00,000 TPA Concentrated Iron Ore
Pelletization Plant	-		6,00,000 TPA (Module: 1x6,00,000 TPA)	(1x0.6 MTPA) 6,00,000 TPA Pellets

Unit	Existing Unit under Operation	Unit under Implementation	Proposed Units Capacity	Total Capacity and Products
Sponge Iron Plant	550 TPD (2x100 TPD, 1x350 TPD)		1800 TPD (3x600 TPD)	2350 TPD Sponge Iron (2x100 TPD, 1x350 TPD, 3x600 TPD)
Steel Melting Shop (SMS) with matching LRF & CCM	-		Induction Furnaces (2x25 T + 4x15 T)	Induction Furnaces (2x25 T + 4x15 T) 3,63,000 TPA Liquid Steel (3,59,000 TPA Billets)
Rolling Mill (Liquid Steel)	-		3,50,000 TPA	3,50,000 TPA Rods, Bars, Light Structural
Ferro Alloy Plant	-		Submerged Arc Furnaces (SAF) - 4 x 16.5 MVA	(SAF) - 4 x 16.5 MVA 1,25,000 TPA Ferro Alloys (35,160 TPA Ferro-Chrome + 14,367 TPA Ferro-Silicon + 43,633 TPA Ferro-Manganese + 31,840 TPA Silico-Manganese)
Chrome Ore Briquette Plant	-		30 TPH	30 TPH
Oxygen Plant	-		100 TPD	100 TPD Oxygen
Captive Power Plant	-	12 MW WHRB based	63 MW (38 MW WHRB based + 25 MW AFBC based)	75 MW Power

- 22.5.4 The proposed unit is located at Ratanpur-Kandra Village, Gamharia Block, District Saraikela-Kharsawan, Jharkhand. The geographical co-ordinates are Latitude - 22°52'39.94"N & Longitude - 86°03'55.24"E with above Mean Sea Level (AMSL): 170 m.
- 22.5.5 The proposed expansion project will be installed on the available land within the existing plant premises, comprising of total 24.63 hectares (60.87 acres) as well on the additional land of total 56.3 hectares (139.13 acres) adjoining the existing plant premises. No forest land involved. Of the total area 26.71 ha (33%) land will be used for green belt development.
- 22.5.6 No national park / wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 22.5.7 Total project cost is approx. Rs. 886 Crores. Manpower, to the tune of 1700 persons will be required for the plant operations.
- 22.5.8 The targeted production capacity of the Beneficiation Plant (1x0.6 MTPA) is 6,00,000 TPA Concentrated Iron Ore, Pelletization Plant (1x0.6 MTPA) is 6,00,000 TPA Pellets, Sponge Iron Plant (2x100 TPD, 1x350 TPD, 3x600 TPD) is 2350 TPD Sponge Iron, Steel Melting Shop (SMS) with matching LRF & CCM (2x25 T + 4x15 T) is 3,63,000 TPA Liquid Steel (3,59,000 TPA Billets), Rolling Mill (3,50,000 TPA) is 3,50,000 TPA Rods, Bars, Light Structural, Ferro Alloy Plant (Submerged Arc Furnaces (SAF) - 4 x 16.5 MVA is 1,25,000 TPA Ferro Alloys (35,160 TPA Ferro-Chrome +14,367 TPA Ferro Silicon +43,633 TPA Ferro-Manganese +31,840 TPA Silico-Manganese), Chrome Ore Briquette Plant (30 TPH) is 30 TPH Chrome Ore Briquette, Oxygen Plant (100 TPD) is 100 TPD Oxygen, Captive Power Plant 75 MW (50 MW WHRB based + 25 MW AFBC based) is 75 MW Power. The raw material transportation will be done through Rail and road.
- 22.5.9 The estimated power requirement of the proposed expansion project is about 121 MW. The above power requirement for the plant is proposed to be met from proposed 75 MW captive power plant and rest from State grid.
- 22.5.10 Proposed raw materials and fuel requirement for major products of the project are as follows.

SL. NO.	RAW MATERIALS	ANNUAL REQUIREMENT (IN TPA)
BENEFICIATION PLANT (6,00,000 TPA)		
1.	RAW IRON ORE	9,30,000
PELLETIZATION PLANT (1X6,00,000 TPA)		
1.	IRON ORE FINES	6,00,000
2.	LIMESTONE	13000
3.	BENTONITE	20000
4.	COAL FINES	13,000
5.	COAL	60,000
DRI PLANT (3x600 TPD)		
1.	PELLET	9,00,000
2.	IMPORTED COAL	6,12,000
3.	DOLOMITE	31,000
INDUCTION FURNACES (2x25 + 4x15 T)		
1.	SPONGE IRON	2,20,000

2.	SCRAPS	55,000
3.	PIG IRON	55,000
4.	FERRO ALLOYS	2,900
CAPTIVE POWER PLANT (25.0 MW BASED ON AFBC BOILER)		
1.	IMPORTED COAL	1,50,000
2.	DOLOCHAR	1,50,000
FERRO ALLOY PLANT (4 X 16.5 MVA)		
FERRO-CHROME		
1.	CHROME ORE	91,400
2.	COKE	14,000
3.	COAL	6,330
4.	QUARTZ	700
5.	DOLOMITE	700
6.	LIME	880
7.	MOLASSES	2,110
SILICO-MANGANESE		
1.	MANGANESE ORE	54,130
2.	FERRO MANGANESE SLAG	22,300
3.	COKE	12,740
4.	COAL	12,740
5.	QUARTZ	6,370
FERRO SILICON		
1.	QUARTZ	24,425
2.	MILL SCALE	6,180
3.	M.S. SCRAP	290
4.	CHARCOAL	12,930
5.	LAM COKE	7,900
FERRO MANGANESE		
1.	MANGANESE ORE	1,04,720
2.	COKE	17,450
3.	COAL	17,450
4.	DOLOMITE	1,310

- 22.5.11 The total requirement of make-up water to meet process make-up and drinking needs of the proposed new facilities will be 3862 m³/day, to be sourced from Subarnarekha river. Domestic wastewater will be treated in Sewage treatment plant and industrial waste water generated will be treated in water treatment facility and reused completely.
- 22.5.12 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 22.5.13 Name of the EIA consultant: Enviro Tech East Private Limited [S.No. 61, List of Accredited Consultant Organizations as on August, 2020].

Observations of the Committee

22.5.14 The Committee noted the following:

- i. Water shall be withdrawn from Subarnarekha river.
- ii. Plant site is located 13 KM away from CEPI area i.e., Saraikela Kharsawan.
- iii. Status of additional land of 56.3 Acres required for the plant is not given.
- iv. Railway facility is available nearby in Kunki and Kandla.

Recommendations of the Committee

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

- i. EMP Matrix indicating EMP details, time line for implementation, Budgetary Provisions and Monitoring Schedule along with methodology shall be furnished in EIA report.
- ii. CPP of 25 MW using low sulfur Indian coal shall be installed with CEMS integrated with plant control for process control.
- iii. Green belt shall be developed in 40 % of the plant area.
- iv. CER amount to be spent shall be 1.5 times that of normal amount for meeting CEPI norms.
- v. Only surface Water shall be used. GW abstraction shall not be permitted.
- vi. 100 % water consumed annually shall be recharged through water harvesting.
- vii. PM level from chimneys shall be maintained at < 30 mg/Nm³ and Power plant emission norms of SO₂ and NO_x less than 100 Mg/Nm³ shall be adhered to.
- viii. The dust collected from roads, plant floors and APCDs shall be recycled to pellet plant.
- ix. IOBP tailings shall be dewatered and used for filling low lying areas and construction work. No dumping shall be permitted. 100 % of solid waste generated shall be utilized. Impervious concrete floor with shed shall be used to store chrome slag.
- x. 100% dolo char generated shall be used in CPP. Dumping of dolo char is not permitted.
- xi. Plant shall operate on ZLD.
- xii. Fourth hole extraction system shall be installed on SAF for control of dust emission.
- xiii. 85-90 % hot charging shall be practiced in RM. RHF shall be used in emergency to run only on LDO. Use of FO/Pulverized coal is not permitted.
- xiv. Waste Recovery Plant shall be installed to recover metallics, fluxes and aggregates from Slag.
- xv. Scheme for reduction of Green House gases shall be furnished in EIA report.
- xvi. Fe Cr slag storage shall be done in covered shed having impervious floor.
- xvii. All roads inside the plant shall be paved, vacuum cleaners shall be provided to clean roads and shop floors. Water spray systems shall be included to control fugitive dust from RM Stockpiles.
- xviii. Air cooled condensers shall be used.
- xix. Energy conservation measures like use of VFD, Slip power recovery etc., shall be adopted.

- xx. Roof Top solar system, LED lights and Solar Street lights shall be provided.
- xxi. Proposal to use nearby railway facility for the transportation of materials shall be explored and details shall be furnished in the EIA report.

22.6 Expansion of existing steel plant from 0.1 MTPA to 0.26 MTPA billet out of which 0.132 MTPA to be converted to TMT rods by **M/s. Bhaskar Steel and Ferro Alloy Private Limited** located at Badtumkela, PS-Banei, **Dist-Sundergarh, Odisha** [Online Proposal No. IA/OR/IND/167010/2020; File No. J-11011/491/2008-IA.II(I)] – **Prescribing of Terms of Reference (ToR) – regarding.**

22.6.1 M/s. Bhaskar Steel and Ferro Alloy Private Limited has made application vide online proposal no. IA/OR/IND/167010/2020 dated 07/08/2020 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 & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

22.6.2 The proposal titled “*modification cum expansion of existing project form 0.1 MTPA billet to 0.25 MTPA rolled product at badtumkela dist. Sundergarh odisha by M/s Bhaskar Steel and ferro Alloys*” was originally accorded ToR on 31/07/2015 and subsequently amended on 18/07/2017. Public hearing was held on 25/05/2018 and application for grant of EC was submitted on 29/06/2020. The maximum extended validity period of the ToR is for a period of four years i.e., till 30/07/2019. As per the Ministry’s O.M. dated 29/08/2017, if the proposal for EC has not been submitted within the validity period of ToR, the process shall be started de-novo. In view of this, the proposal was returned to the PP with a request to start the process de-novo.

22.6.3 M/s. Bhaskar Steel and Ferro Alloy Private Limited, proposes expansion of its existing manufacturing unit producing 0.096 MTPA Sponge Iron & 0.105 MTPA steel Billets & 12MW power to 2,40,000 TPA sponge Iron, 0.26 MTPA steel billet & 28 MW Power. It is proposed to set up 1x350TPD & 1x100 TPD DRI kiln, 4x12T,1x3T IF, 1x16T LF, 25 TPH RM & 16 MW CPP based on Indigenous Technology.

22.6.4 The existing project was accorded environmental clearance vide letter no. J-11011/491/2008-IA II (I), dated 11/11/2008. Consent to Operate was accorded by Odisha State Pollution Control Board vide letter No-3662/IND-I-CON-5237, dated 20/03/2020 and validity of CTO is up to 31/03/2021.

22.6.5 The proposed unit will be located at-Badtumkela in Sundergarh District of State: - Odisha.

22.6.6 The land area acquired for the proposed plant is 33.99 ha. No/forestland involved. The entire land has been acquired for the project. Out of the total area 11.22ha (33%) land will be used for green belt development.

22.6.7 No National park /wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

22.6.8 Total project cost is approx. Rs.270 Crore rupees. Proposed employment generation from proposed project will be 360 direct employments and 640 indirect employments.

22.6.9 The targeted production capacity of the unit is 0.26 MTPA steel billet. The ore for the plant would be procured from OMC vide long term agreement dt.1.04.2016. The ore transportation will be done through Rail & Road.

22.6.10 The details of the existing and proposed production capacities of different units is given as below:

Facility	Existing Configuration	Existing Capacity in TPA	Proposed Configuration	Proposed Capacity (TPA)	Final Configuration	Final capacity (TPA)	Product
DRI Kilns	1x300 TPD	96,000	1x350TPD & 1x100 TPD	1,44,000	1X300 + 1X350 + 1X100 TPD	2,40,000	Sponge Iron
IF with LF	4x8TIF, 1x20T & 1x15T LF	1,02,400	4x12T,1x3T IF, 1x16T LF	1,63,200	4x8 T+4x12 T+1x3 T IF with 1x20 T +1x15T +1x16 T LF	2,65,600	Hot metal
CCM	4/7, 2 strand	1,00,000	6/11, 3 strand	1,60,000	4/7 2 strand +6/11 3 strand	2,60,000	Billet
RM	Nil	nil	25 TPH	1,32,000	25 TPH	1,32,000	TMT rods
CPP(WHR B)	1x8MW	8 MW	1x10MW	10MW	1x8 MW+1 x10 MW	18 MW	Power
CPP(AFB C)	1X4MW	4 MW	1X6 MW	6MW	1x4M W+ 1x6M W	10MW	Power
Dry coal separator	1x50 TPH	Installed Not commissioned	-	-	1x50 TPH		
Coal sizer with Truck tipper	1X200 TPH	Nil	-	-	1x200 TPH		
Mobile crusher	1x100TPH	Nil	-	-	1x100 TPH		
Slag crusher	1x10 TPH	Nil	-	-	1x10 TPH		

22.6.11 The electricity load of 28 MW will be generated from own CPP has also proposed to install 4x500 KVA DG set.

22.6.12 Proposed raw material and fuel requirement for project are 3,58,000 TPA Iron Ore, 30,000 TPA Pig, 20,000TPA sponge iron, 10,000 Lime stone and 3,50,000 TPA coal.

- 22.6.13 The requirement would be fulfilled by long term agreement with OMC as well as local purchase. Fuel consumption will be mainly for generation of power and DRI kiln heat support.
- 22.6.14 Water Consumption for the proposed project will be 1400 m³/day and waste water generation will be 83 m³/day Domestic wastewater will be treated in STP and industrial waste water generated will be treated in ETP and will be used for dust suppression and green belt.
- 22.6.15 The proponent has mentioned that there is no court case or violation under EIA.
- 22.6.16 Name of the consultant: GLOBALTECH Enviro Experts Pvt. Ltd., [S.No. 5, ACOs in process of complying as on August 2020].

Observations of the Committee

- 22.6.17 The Committee noted the following:
- i. The existing project was accorded environmental clearance vide Itr. E.C F.No.-11011/491/2008-IA II (I), dated 11/11/2008. Consent to Operate was accorded by Odisha State Pollution Control Board vide letter No-3662/IND-I-CON-5237 dated 20/03/2020 and validity of CTO is up to 31.03.2021.
 - ii. The land area acquired for the proposed plant is 33.99 ha. No/forestland involved. The entire land has been acquired for the project. Out of the total area 11.22 ha (33%) land will be used for green belt development.
 - iii. Total project cost is approx. Rs.270 Crore rupees. Proposed employment generation from proposed project will be 360 direct employments and 640 indirect employments.
 - iv. Fresh BL data collected from March 2019 to May 2019.
 - v. TOR was granted for the project in July, 2015. Validity expired in July, 2019.
 - vi. PH conducted on 25.5.2018.

Recommendations of the Committee

- 22.6.18 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:
- i. EMP Matrix indicating; EMP details: Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology shall be furnished in EIA report.
 - ii. PM level from chimneys shall be maintained at <30 mg/Nm³ and Power plant emission norms of SO₂ and NO_x shall be less than 100 Mg/Nm³.
 - iii. Only surface water shall be used. No GW abstraction is permitted.
 - iv. 100 % water consumed annually shall be recharged through water harvesting.
 - v. All Plant roads and approach road to plant shall be made paved and industrial vacuum cleaners shall be used to keep the plant clean and free of fugitive emissions. The dust collected from roads, plant floors and APCDs shall be recycled.
 - vi. 100 % of solid waste generated shall be utilized.
 - vii. 100% dolo char generated shall be used in CPP. Dumping of dolo char is not permitted.
 - viii. Plant shall operate on ZLD.

- ix. 85-90 % hot charging shall be practiced in RM. RHF shall be used in emergency to run only on LDO. Use of FO/Pulverized coal is not permitted.
- x. 3 T IF should be replaced with larger sizes to have better energy efficiency.
- xi. 40 % of the plant area shall be under green belt.
- xii. All CER Activities shall be completed within three years.
- xiii. Air cooled condensers shall be used.
- xiv. Energy conservation measures like use of VFD, Slip power recovery etc shall be adopted.

22.7 Revised configuration of Modernization-cum-expansion (3.5 MTPA to 2.7 MTPA Gross Hot Metal) by **M/s. Steel Authority of India Limited (SAIL), Durgapur Steel Plant** located at **Durgapur, West Bengal** [Online Proposal No. IA/WB/IND/157866/2020; File No. J-11011/492/2007-IA-II(I)] – **Prescribing of Terms of Reference (ToR) – regarding.**

22.7.1 **M/s. Steel Authority of India Limited (SAIL), Durgapur Steel Plant** has made application vide online proposal no. IA/WB/IND/157866/2020 dated 11/08/2020 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 & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

22.7.2 M/s. Steel Authority of India Limited (SAIL) - Durgapur Steel Plant (DSP) proposes to install (i) New 4th Stove in Blast Furnace-4, (ii) New Bar Mill, (iii) New stamp charge Coke Oven Battery by replacing old battery (iv) New Coke Oven Gas Holder replacing old gas holder, (v) Installation of 7th Boiler in Old Power Plant replacing old boiler, (vi) Online Heat Treatment facility at Wheel & Axle Plant, (vii) Increase in Gross Hot Metal production of Blast Furnace from BF # 2 and BF # 3, (viii) Increase in gross sinter production from SP # I and SP #2, (ix) Bringing back of Section Mill and (x) Increase in production Capacity of Merchant Mill within existing premises of Durgapur Steel Plant (DSP). It is proposed to achieve the existing plant configuration for finished steel production based on conventional BF-BOF route technology. The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 18.06.2020 vide Online Application No. IA/WB/IND/157866/2020.

Details of the present proposal involve followings

- Installation of new 4th Stove in Blast Furnace-4
- New Bar Mill (1.0 MTPA capacity) in place of EC 2007 stage envisaged Wire Rod Mill (0.5 MTPA) and Bar & Merchant Mill (0.8 MTPA)
- New stamp charge Coke Oven Battery (COB) of higher capacity along with generation of 10 MW Green Power through CDCP.
- New Coke Oven Gas (COG) Holder of higher capacity
- Installation of 7th Boiler of higher capacity in Old Power Plant
- Online Heat Treatment facility at Wheel & Axle Plant
- Increase in Gross Hot Metal (GHM) production of BF # 2 and BF # 3 from 1.61 to 1.755 MTPA. No change in GHM production from BF # 4 (0.945 MTPA). No reconstruction of BF#1 (0.945 MTPA). Thus reduction in GHM from BF Complex from 3.5 MTPA (EC 2007) to 2.7 MTPA.

- Increase in gross sinter production SP # I from 1.299 to 1.5 MTPA and SP # II from 1.71 to 1.9 MTPA. Dropping down of SP # III (3.029 MTPA) envisaged in EC 2007. Hence, overall reduction in Gross sinter production from 4.739 MTPA (EC 2007) to 3.4 MTPA.
- Bringing back of Section Mill in operation (0.207 MTPA) till stabilization of Medium Structural Mill.
- Increase in production Capacity of Merchant Mill from 0.33 MTPA to 0.4 MTPA through operational optimization.

- 22.7.3 The existing project was accorded environmental clearance vide letter no. J-11011/492/2007-IA II(I) dated 10.09.2007. Consent to Operate was accorded by West Bengal State Pollution Control Board vide letter no. 1097-dr_co_s/11/1952 dated 02.07.2020 validity of CTO is up to 31.07.2023.
- 22.7.4 The proposed unit will be located within the already existing Durgapur Steel Plant at Durgapur in Faridpur-Durgapur Block under Durgapur Sub-division of Paschim Burdwan District in West Bengal.
- 22.7.5 The envisaged proposal is planned within the existing plant premises of Durgapur Steel Plant. The land area acquired for the proposed plant is 600 ha which is an industrial land. No/forest land involved. The entire land has been acquired for the project. Since 2007, the green belt has been developed in an area of 428 ha (1,058 acres) by DSP by planting 7,61,500 trees.
- 22.7.6 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 22.7.7 Total project cost is approx. Rs. 3324 Crore. Proposed employment generation from proposed project will be 667 direct employment and 1350 indirect employment.
- 22.7.8 The targeted production capacity of gross hot metal is 2.7 million TPA Gross Hot Metal. The iron ore for the plant would be taken from captive iron ore mines of SAIL, coal from ECL / BCCL, Chasnala and other materials from private suppliers as well as imported from Bhutan (Dolomite). The ore transportation will be done through rail/road.
- 22.7.9 The proposed capacity /configuration for different units w.r.t to earlier EC and vis-a-vis final configuration as given below.

S N	Plant Configuration EC 2007 (with amendments)	Proposed Project (ToR requested)	Final Configuration
1.	Coke Oven Complex		
a)	Composition / Availability :		
	Coke Oven Battery (COB) No. # I (78 Ovens; 4.5 m tall; Top Charge; Wet Quenching Facility)	Change - Existing COB # I to be replaced with New COB # I (2x44 Ovens, height 5.5m, Stamp Charge; CDCP).	COB # I (88 Ovens, height 5.5m; Stamp Charge; CDCP)
	COBs # II, # III, # IV, #V, # VI (Each 78 Ovens, height 4.45m; Wet Quenching).	No Change	COBs # II, # III, # IV, #V, # VI (Each 78 Ovens, height 4.45m;

S N	Plant Configuration EC 2007 (with amendments)	Proposed Project (ToR requested)	Final Configuration
			Wet Quenching).
	Batteries Available : Six (COB #I, #II, #III, #IV, #V & #VI)	No Change	Battery Available : Six (COB #I, #II, #III,#IV, #V & #VI)
b)	Operation Regime :		
	Battery in Operation : Five	Change – Four Battery Operation	Battery in Operation : Four Battery Operation
	Battery under Rebuilding / Repair Cycle: One	Change - Two Battery under rebuilding / repair	Two Battery under Rebuilding / Repair Cycle
	Gross Coke Production : 1.7 MTPA	No Change	Gross Coke Production 1.7 MTPA
c)	CDCP Green Power : 10 MW	Change : CDCP Extraction Turbine 12MW; Power Generation 10MW	CDCP Green Power : 10 MW
2.	Byproducts Plant		
a)	Benzol Plant : Crude Benzol Production 16800 TPA	No Change	Benzol Plant : Crude Benzol Production 16800 TPA
b)	Ammonium Sulphate Plant : Production 19200 TPA	No Change	Ammonium Sulphate Plant : Production 19200 TPA
c)	Tar Plant : Crude Tar Production 72000 TPA	No Change	Tar Plant : Crude Tar Production 72000 TPA
3.	Sinter Plant Complex :		
a)	Sinter Plant SP # I (2X143.2 m ² , 330d/yr Operation); Production: 1.299 MTPA - To be phased out.	Change - Increase in Gross Sinter Production from 1.299 to 1.5 MTPA	Sinter Plant SP # I (2X143.2 m ² , 330d/yr Operation); Production: 1.5 MTPA
b)	Sinter plant SP # II (1X198m ² , 330d/yr Operation); Production : 1.71MTPA	Change - Increase in Gross Sinter Production from 1.71 to 1.9 MTPA	Sinter Plant SP # II (1X198m ² , 330d/yr Operation); Production : 1.9 MTPA
c)	Sinter plant SP # III New : (1X296m ² , 330d/yr Operation). Production : 3.029 MTPA	Change - Not Installed	-
d)	Total Gross Sinter Production : 4.739 MTPA	Change in Gross Sinter Production from 4.739 MTPA to 3.4 MTPA	Gross Sinter Production 3.4 MTPA
4.	Blast Furnace :		
a)	BF# 1 : Reconstructed (1x1400 m ³); GHM Production 0.945 MTPA	Change – New not Reconstructed & Not Under operation.	-
b)	BF# 2 & BF# 3 : 2x1400 m ³ , CDI & Oxygen Enrichment; GHM Production 1.61 MTPA	Change - Increase in GHM Production from 1.61 MTPA to 1.755 MTPA	BF# 2 & BF# 3 (2x1400 m ³ , CDI & Oxygen Enrichment);

S N	Plant Configuration EC 2007 (with amendments)	Proposed Project (ToR requested)	Final Configuration
			GHM Production 1.755 MTPA
c)	BF# 4 : 1 x 1800 m ³ ; CDI & Oxygen Enrichment; GHM Production 0.945 MTPA	Change - Installation of new 4th Stove;	BF# 4 [1 x 1800 m ³ ; CDI & Oxygen Enrichment; 4 stoves (3W+1S)]; GHM Production 0.945 MTPA
d)	Total GHM Production 3.5 MTPA	Change in GHM Production from 3.5 MTPA to 2.7 MTPA	GHM Production 2.7 MTPA.
e)	BF Gas Cleaning Plant (GCP) : BF #2, #3 & BF #4	No Change	BF Gas Cleaning Plant (GCP) : BF #2, #3 & BF #4
f)	Slag Granulation Plant (SGP): Slag Generation / Granulation: 0.89 MTPA	No Change	Slag Granulation Plant (SGP): Slag Generation / Granulation: 0.89 MTPA
g)	Pig Casting Machine : Pigs Production 214000 TPA	No Change	Pig Casting Machine : Pigs Production 214000 TPA
5. Steel Melting Shop & Associated Facilities			
a)	Mixer : 2 x 1300t	No Change	Hot Metal Mixer 2 x 1300t
b)	Hot Metal De-sulphurisation Unit : 1.4 MTPA	Change - Not installed	-
c)	Charging Ladles 140t for Hot Metal supply from Mixers to BOFs.	No Change	Charging Ladles 140t.
d)	Basic Oxygen Furnaces (BOFs) 3x120t (3x110 m ³): 3/3 Convertor Operation.	No Change	Basic Oxygen Furnaces (BOFs) 3x120t (3x110 m ³): 3/3 Convertor Operation.
e)	Ladle Furnace (LF) 2x130t (Existing) + 1x130t (New)	No Change	Ladle Furnace: 3x130t
f)	RH de-gassing unit 1X130t (new envisaged)	Change - Not installed	-
g)	Secondary Refining : Vacuum Arc Degassing (VAD, 1X130t)	No Change	Secondary Refining : Vacuum Arc Degassing (VAD, 1X130t)
h)	Gas Cleaning Plant (GCP) : 83000 Nm ³ /hr	No Change	Gas Cleaning Plant (GCP) : 83000 Nm ³ /hr
6. Casting Facilities			
a)	Billet Caster : 2X6 strand	No Change	Billet Caster : 2X6 strand
b)	Bloom Caster : 1X4 strand	No Change	Bloom Caster : 1X4 strand
c)	Bloom-cum-Round Caster : 1X4 Strand	No Change	Bloom-cum-Round Caster : 1X4 Strand
d)	Ingot Casting: 100% Continuous	Change	Bottom Pouring Ingot

S N	Plant Configuration EC 2007 (with amendments)	Proposed Project (ToR requested)	Final Configuration
	casting replacing Ingot casting – blooming mill route.		Casting for 2.5% liquid steel (for high grade steel for wheels) & rest through continuous casting.
	Total Crude Steel Production : 3.0 MTPA	Change in Crude Steel Production from 3.0 MTPA to 2.5 MTPA	Crude Steel Production : 2.5 MTPA
7.	Rolling Mills		
a)	Existing Merchant Mill ; Capacity 0.33 MTPA	Change - Increase in Production Capacity from 0.33 MTPA to 0.4 MTPA	Merchant Mill : Capacity 0.4 MTPA
b)	New Bar & Rod Mill: a. Wire Rod Mill; Capacity 0.5 MTPA. a. New Merchant Mill; Capacity 0.8 MTPA	Change - Not installed	-
c)	New Bar Mill	Change : New Bar Mill Production Capacity : 1 MTPA	New Bar Mill : Production Capacity 1 MTPA
d)	Wheel & Axle Plant : Capacity 0.16 MTPA	Change - Addition of Online Heat Treatment Facility for wheels in Wheel Plant.	Wheel & Axle Plant (with Online Heat Treatment Facility) Production Capacity 0.16 MTPA.
e)	Skelp Mill: Capacity 0.22 MTPA.	Change - Not in Operation	-
f)	Section Mill : Capacity 0.207 MTPA – To be kept out of Operation	Change - Bring Back in Operation (Capacity 0.207 MTPA) till Full Capacity Utilization of Medium Structural Mill.	Section Mill: Capacity 0.207 MTPA in Operation till Full Capacity Utilization of Medium Structural Mill,
g)	New Medium Structural Mill (MSM) : Capacity 1.0 MTPA	No Change	Medium Structural Mill : Capacity 1.0 MTPA
h)	20 Nos. Soaking Pits Ingot-Stripping Facilities & Blooming Mills : Phased Out	No Change	-
i)	Billet Mill ; Producing 0.23 MTPA. Phased out	No Change	-
	Total Finished Steel / Saleable Steel Production : 2.832 MTPA	Change in Finished Steel / Saleable Steel Production from 2.832 MTPA to 2.4104 MTPA.	Total Finished Steel / Saleable Steel Production : 2.4104 MTPA
8.	Old Power Plant (OPP)		
	Boiler No. 1, 2, 5 & 6; Dual Fired Gas & Coal (68 TPH each) replaced with Dual Fired (Coal & Gas) Boiler 3X125TPH.	Change - Dual Fired (Gas & Coal) Boilers No. 1, 2, 5 & 6 (68 TPH each) continues.	Dual Fired (Gas & Coal) Boilers No. 1, 2, 5 & 6 (68 TPH each).

S N	Plant Configuration EC 2007 (with amendments)	Proposed Project (ToR requested)	Final Configuration
	Three Gas Fired Boiler Nos. 3, 4 & 7 (68 TPH each).	Change - Replacement of 7 th 68 TPH Gas Fired Boiler with 100 TPH Gas Fired Boiler	Three Gas Fired Boilers: No. 3 & 4 (68 TPH each) & New No. 7 (100 TPH).
	Four Steam driven Turbo-Alternators 4X5 MW. Max. Power Generation 4x5 MW of Category –I Load; To be replaced with 3X20MW (2W+1S) Turbo-Alternator to produce 2x20MW Category –I Power	Change - Steam driven Turbo-Alternators 4X5 MW continues.	Four Steam driven Turbo-Alternators 4X5 MW operates with Max. Power Generation 4x5 MW (Category –I Load).
9. Associated Facilities			
a)	Calcined Lime Plant 3X300t/d, 330d/yr., Operation. Calcined Lime Production 0.2485 MTPA	No Change	Calcined Lime Plant 3X300t/d, 330d/yr. Operation; Production 0.2485 MTPA
b)	Calcined Dolomite Plant (1X300t/d), 330d/yr., Operation. CalcinedDolo Production 0.0694 MTPA.	No Change	Calcined Dolomite plant (1X300t/d), 330d/yr, Operation; Production 0.0694 MTPA.
c)	Oxygen Plant (2x350t/day)	No Change	Oxygen Plant (2x350t/day)
d)	Oxygen Plant : BOO basis <ul style="list-style-type: none"> • 1x700 TPD • 1x350 TPD 	Change <ul style="list-style-type: none"> • 1x350 TPD - BOO Basis Not Installed 	Oxygen Plant (1x700 TPD) on BOO Basis
e)	Foundry shop with EAF (Furnace 6t)	No Change	Foundry shop with EAF (Furnace 6t)
f)	Raw material Handling Complex : Raw Material Handling Capacity Enhancement to 9.1138 MTPA.	Change in Handling Capacity from 9.1138 MTPA to 7.5321 MTPA	Raw material Handling Complex : Handling Capacity 7.5321 MTPA
g)	Coke Oven Gas Holder : Capacity 56,000 m ³	Change - To be replaced with New Gas Holder of Capacity 70,000 m ³	New Coke Oven Gas Holder of Capacity 70,000 m ³
h)	BF Gas Holder : Capacity 1,00,000m ³	No Change	Capacity : 1,00,000m ³
i)	Existing BOF Gas Holder : Capacity 40,000m ³	No Change	Capacity : 40,000m ³
j)	Liquid Oxygen Holder : Capacity 2000t	No Change	Capacity : 2000t
k)	Propane Unit : Capacity 2x200t = 400t	No Change	Capacity : 2x200t
l)	LPG Storage Facility : Capacity 4X500t	Change - LPG Storage Facility of Capacity 4X500t not installed	-
10. EC Capacity			

S N	Plant Configuration EC 2007 (with amendments)	Proposed Project (ToR requested)	Final Configuration
a)	Gross Hot Metal (GHM) Production : 3.5 MTPA	Change from 3.5 MTPA to 2.7 MTPA	GHM Production : 2.7 MTPA
b)	Crude Steel Production : 3.0 MTPA	Change from 3.0 MTPA to 2.5 MTPA	Crude Steel Production : 2.5 MTPA
c)	Finished / Saleable Steel Production : 2.8325 MTPA	Change from 2.8325 MTPA to 2.4104 MTPA	Finished Steel / Saleable Steel Production : 2.4104 MTPA
d)	Cold Pigs Production Production: 214000 TPA	No Change	Cold Pig Production : 214000 TPA

22.7.10 The electricity load of 245.5 (MVA) will be taken from DVC / NSPCL agreement. No DG Set is proposed to be installed.

22.7.11 Proposed raw material requirement for project are Iron Ore (4400000 TPA), Lime stone (688103 TPA), Dolomite (394778 TPA), Ferro Manganese/ Ferro Silicon/ Ferro Alloys (51200 TPA), Quartzite (13000 TPA) Coal for CDI (214000 TPA), Coking Coal (2675450 TPA), Coal for Power Plant (42000 TPA), Total: 8478531 TPA. The requirement would be fulfilled by captive iron ore mines of SAIL at Bolani / Gua/ Kuteswar etc., coal from ECL / BCCL, Chasnala etc. other materials from private suppliers as well as imported from Bhutan (Dolomite). Proposed fuel requirement for project are BF/BOF/LD gas (534724 Nm³/hr.) and CO gas (79160 Nm³/hr.). The fuel requirement will be fulfilled from within plant itself.

22.7.12 Water Consumption for the proposed project will be 2644 m³/hr and waste water generation will be about 900 m³. Domestic waste water will be treated in the existing Sewage Treatment Plant and industrial waste water generated will also be treated and reused.

22.7.13 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

22.7.14 Name of the consultant: Name of the EIA consultant: Mecon Limited, Ranchi, having [S.No. 105, List of Accredited Consultant Organizations as on August, 2020].

Observations of the Committee

22.7.15 The Committee noted the following:

- i. The project is located at Durgapur wherein Comprehensive Environmental Pollution Index (CEPI) score is 65.76, which indicated the severely polluted area.
- ii. All conditions of CEPI shall be complied with, to contain the pollution further.
- iii. DSP proposes to reduce their HM production capacity from 3.5 MTPA to 2.7 MTPA.
- iv. Baseline monitoring got suspended due to Covid – 19.

Recommendations of the Committee

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

- i. EMP Matrix indicating; EMP details: Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology shall be furnished in EIA Report.
- ii. Green Belt shall be 40%.
- iii. Action plan for CER shall be submitted as per the MoEF&CC O.M. dated 1/05/2018 and 31/10/2019.
- iv. PM emissions shall be less than 30 mg/Nm³ for entire plant operations.
- v. Only surface water shall be used. No ground water abstraction is permitted.
- vi. Plant shall operate on ZLD.
- vii. 100 % Solid waste generated shall be reused.
- viii. All plant roads shall be paved and cleaned regularly using industrial vacuum cleaners. Dust collected from roads and shop floors shall be recycled.
- ix. Online monitoring arrangement shall be provided for PLL, PLD, PLO on all six batteries using time lapse rate cameras with recording facilities.
- x. CDQ shall be provided with new battery and scheme to provided CDQ in all batteries shall be submitted with EIA with time bound program.
- xi. Sinter cooler waste heat recovery system shall be incorporated.
- xii. Stove gas waste heat recovery system and TRT shall be provided in all working blast furnaces.
- xiii. Dog houses shall be provided on all LD Converters for secondary emission control.
- xiv. Integrated HIRA using QRA techniques shall be presented with detailed DMP in the EIA.
- xv. GHG inventory and scheme to reduce GHG emissions shall be prepared and submitted with EIA report.
- xvi. In order to complete the baseline monitoring that got suspended due to Covid-19 the PP is permitted to take one more month's data starting 15/09/2020 to 15/10/2020.

22.8 Proposed 5 x 9 MVA Submerged Electric Arc Furnace (Production: Ferro Manganese – 1,25,000 TPA or Silico Manganese – 1,00,000 TPA or Ferro Silica – 70,000 TPA) by **M/s. Berry Alloys India Limited** at Plot No.1426,1428 to 1434 Khatian No.786 JL No.014, Plot No.1426,1428 to 1434 Khatian No.786 JL No.014, village Chausal, Tehsil-Gangajalghati, **District Bankura, West Bengal** [Online Proposal No. IA/WB/IND/162146/2020; File No. J-11011/175/2020-IA-II(I)] – **Prescribing of Terms of Reference (ToR) – regarding.**

22.8.1 **M/s. Berry Alloys India Limited** has made application vide online proposal no. IA/WB/IND/162146/2020 dated 01/08/2020 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 & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

22.8.2 M/s. Berry Alloys India Ltd. proposes to install a new manufacturing unit for Ferro Manganese or Silico Manganese or Ferro Silica. It is proposed to set up the plant for Ferro Manganese – 1,25,000 TPA or Silico Manganese – 1,00,000 TPA or Ferro Silica – 70,000 TPA based on Submerged Electric Arc Furnace technology.

22.8.3 The proposed unit will be located at Plot No.1426,1428 to 1434 Khatian No.786 JL No. 014, village Chausal, Tehsil-Gangajalghati, District Bankura, State West Bengal.

- 22.8.4 The land area acquired for the proposed plant is 8.65 ha. There will not be change in land use as the land already has converted in Industrial use. No/forestland involved. The entire land has been acquired/ not acquired for the project. Of the total area 3.1 ha (35.8%) land will be used for green belt development.
- 22.8.5 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 22.8.6 Total project cost is approx. 100 Crore rupees. Proposed employment generation from proposed project will be 180 direct employment and 500 indirect employment.
- 22.8.7 The targeted production capacity is Ferro Manganese – 1,25,000 TPA or Silico Manganese – 1,00,000 TPA or Ferro Silica – 70,000 TPA . The ore for the plant would be procured from local market. The ore transportation will be done through Road. The proposed capacity for different products for new site area as below:

Name of Unit	No. of Units	Capacity of Each Unit	Production Capacity
Submerged Electric Arc Furnace	5 Nos.	9 MVA	Ferro Manganese – 1,25,000 TPA or Silico Manganese – 1,00,000 TPA or Ferro Silica – 70,000 TPA

- 22.8.8 The electricity load of 50 MVA will be procured from State Electricity Board. Company has also proposed to install 2 x 500 kVA DG Set.
- 22.8.9 Proposed raw material requirement for project are Manganese Ore, Dolomite and Quartz, Coke and Coal. The requirement would be fulfilled by local market.
- 22.8.10 Water Consumption for the proposed project will be 90KLD and waste water generation will be 6.0 KLD Domestic waste water will be treated in STP and reused for greenbelt development.
- 22.8.11 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 22.8.12 Name of the EIA consultant; Paramarsh Servicing Environment and Development [S.No. 117, List of Accredited Consultant Organizations as on August, 2020].

Observations of the Committee

- 22.8.13 The Committee noted the following:
- i. It is an expansion project. Originally it was with Durgapur Castings and was under construction. Plant was taken over by current PP in Jan 2020. Earlier EC expired. Hence fresh TOR is applied for.
 - ii. 90 KLD GW abstraction is proposed. Bankura has several surface water sources that need to be explored.
 - iii. Project cost is Rs. 100 Cr

Recommendations of the Committee

- 22.8.14 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:
- i. EMP Matrix indicating; EMP details: Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology shall be furnished in EIA Report.
 - ii. Fourth hole extraction system with waste heat recovery shall be incorporated.
 - iii. Ferro Chrome production without EC shall not be permitted.
 - iv. PM emissions shall be less than 30 mg/NM³ for entire plant operations.
 - v. Only surface water shall be used. No ground water abstraction is permitted.
 - vi. Plant shall operate on ZLD.
 - vii. 100 % Solid waste generated shall be reused.
 - viii. All plant roads shall be paved and cleaned regularly using industrial vacuum cleaners. Dust collected from roads and shop floors shall be recycled.
 - ix. 33 % Green belt shall be developed. 2500 trees shall be planted per ha area.
 - x. RWH and GW recharge shall be carried out to recharge more than 100 % of annual water consumption.
 - xi. All shop floor employees shall be provided with safety shoes, helmets and masks to project against various health hazards at the shop floor

22.9 Proposed Pandalgudi Lime Kankar Beneficiation Plant (Stand Alone; Throughput Capacity 2.00 MTPA; Production - Clean Kankar 1.15 MTPA & other Recovery Materials 0.50 MTPA) by **M/s. Ramco Cements Limited** located at Village Thummakkundu, Taluk Aruppukottai, **District Viridunagar, Tamil Nadu** [Online Proposal No. IA/TN/IND/167155/2020; File No. J-11011/176/2020-IA-II(I)] – **Prescribing of Terms of Reference (ToR) – regarding.**

22.9.1 M/s. Ramco Cements Limited has made application vide online proposal no. IA/TN/IND/167155/2020 dated 07/08/2020 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. 2(b) Mineral Beneficiation under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

- 22.9.2 M/s. The Ramco Cements Limited (RCL) proposes to install a new unit (Stand Alone) for Lime Kankar Beneficiation. It is proposed to set up the plant for throughput capacity 2.00 MTPA ROM based on both Dry & Wet Process Separation technology.
- 22.9.3 The proposed unit will be located at in Survey Nos. Parts of 75, 76 & 77 of Thummakkundu Village, Taluk Aruppukottai, District Virudhunagar of Tamil Nadu State.
- 22.9.4 The land area acquired for the proposed plant is 7.085 ha which is a own Patta Land. No/forestland is involved. The entire land has been acquired for the project. Of the total area, 2.40 ha (33.87%) land will be used for green belt development.
- 22.9.5 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. Schedule-I Species Indian

Pea Fowl (*Pavo cristatus*) is commonly found in the region. The Conservation Plan for Indian Pea Fowl will be prepared in consultation with the Forest Department and will be submitted.

22.9.6 Total project cost is approx Rs.72.00 Crores. Proposed employment generation from proposed project will be 30 direct employment and 50 indirect employment.

22.9.7 The targeted production capacity of the Lime Kankar Beneficiation Plant is Clean Kankar (1.15 MTPA) and other Recovery Materials 0.50 MTPA. The ore for the plant would be sourced from RLC's proposed Lime Kankar Quarry Leases in the Region located at a distance of 3.5-15.3 km. The ore transportation will be done through existing own Haulage Road by 40 Tons Tippers.

22.9.8 The proposed capacity for different products for new site area as below:

Name of Unit	No. of Units	Capacity of each Unit	Production Capacity
Lime Kankar Beneficiation Plant	Lime Kankar ROM 2.00 MTPA Throughput Capacity	Dry Screening @ 300-350 TPH Wet Beneficiation @ 200-250 TPH	Clean Kankar 1.15 MTPA and other Recovery Materials 0.50 MTPA

22.9.9 The electricity load of 1.25 MW will be procured from own source at nearby Crusher. Company has also proposed to install no DG Set.

22.9.10 Proposed raw material and fuel requirement for project are Lime Kankar @ 2.00 MTPA and no fuel demand. The requirement would be fulfilled by proposed own Lime Kankar Quarry Leases in the Region. There will be no Fuel consumption.

22.9.11 Water Consumption for the proposed project will be 1,510 KLD (fresh water) and waste water generation will be Nil as entire 843 KLD Trade Effluent from the Thickener will be mixed with the Dry Screen Rejects for its further utilization and disposal. Domestic waste water (9 KLD) will be treated biologically in a Septic Tank followed by Dispersion Trench and industrial waste water generated will be treated in a Thickener with Flocculants to settle the Rejects and about 5,190 KLD Treated Effluent will be recycled (86.02% Recovery) and reused in the Process.

22.9.12 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

22.9.13 Name of the EIA consultant; ABC Techno Labs India Private Limited [S.No. 3, List of Accredited Consultant Organizations as on August, 2020].

Observations of the Committee

22.9.14 The Committee noted the following:

- i. Land available is 7 ha which is sufficient.
- ii. Site is near mine and conventional deshalling technology has been used to remove gangue material.
- iii. Water shall be drawn from abandoned quarry reservoirs. No ground water abstraction has been proposed.
- iv. Tailings shall be dewatered and sludge used to reclaim mined out quarries.

Recommendations of the Committee

- 22.9.15 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP studies in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:
- i. EMP Matrix indicating; EMP details: Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology shall be furnished in EIA Report.
 - ii. Only Surface water (1510 KLD) shall be used and ground water abstraction shall not be permitted.
 - iii. Tailing shall be dewatered in filter press and sludge shall be used for mined out quarry reclamation. 50% of the tailings shall be used to manufacture pozzolana cement.
 - iv. Plant road shall be paved and cleaned regularly using industrial vacuum cleaners.
 - v. PM level from stacks shall be less than 30 mg/Nm³.
 - vi. Domestic waste water shall be treated and used in the plant.
 - vii. Plant shall operate on ZLD.
 - viii. 100 % Solid waste generated shall be reused.
 - ix. 33 % Green belt shall be developed. 2500 trees shall be planted per ha area.
 - x. RWH and GW recharge shall be carried out to recharge more than 100 % of annual water consumption.

22.10 Expansion of the cement plant capacity from 2.16 to 4.71MMTPA and establishment of captive power plant capacity 2 x 20 MW **by M/s. The India Cements Ltd** located at Sy. No 29 - 34, 35P, 36P, 37P, 38P, 39P, 40, 41, 43, 45P, 47P, 48, 49P, 50 Part of Alathiyur Village & 413P, 414P, 415P, 431P, 433 - 436, 438P, 448P, 449P, 450 Part of Dalavoi village, Sendurai Taluk, **Ariyalur district, Tamil Nadu** [Online Proposal No. IA/TN/IND/165329/2020; File No. J-11011/79/2012-IA-II(I)] – **Validity extension of Environment Clearance – regarding.**

22.10.1 M/s. India Cements Limited has made online application vide proposal no. IA/TN/IND/165329/2020 dated 27/07/2020 along with Form 6 and sought for validity extension of the Environment Clearance accorded by the Ministry vide letter no. J-11011/79/2012- IA-II(I) dated 27/09/2013.

Details submitted by the project proponent

22.10.2 M/s. India Cements Limited has been granted Environment Clearance by the Ministry for a project titled “Expansion of the cement plant capacity from 2.16 to 4.71MMTPA and establishment of captive power plant capacity 2 x 20 MW at Sy. No 29 - 34, 35P, 36P, 37P, 38P, 39P, 40, 41, 43, 45P, 47P, 48, 49P, 50 Part of Alathiyur Village & 413P, 414P, 415P, 431P, 433 - 436, 438P, 448P, 449P, 450 Part of Dalavoi village, Sendurai Taluk, Ariyalur district, Tamil Nadu” vide letter no. J-11011/79/2012-IA.II(I) dated 27/09/2013. As per the EC accorded, the existing and proposed production capacities are as follows:

S. No	Name of Product	Existing Capacity (MMTPA)	Proposed Capacity (MMTPA)	Total Capacity after Expansion (MMTPA)
1	Clinker Production	1.24	1.53	2.77
2	Cement (OPC/PPC)	2.16	2.55	4.71

S. No	Name of Product	Existing Capacity (MMTPA)	Proposed Capacity (MMTPA)	Total Capacity after Expansion (MMTPA)
3	Captive Power Plant		2 x 20MW	2 x 20MW

**MMTPA – Million Metric Tonnes per Annum*

22.10.3 The expansion activity envisaged above could not be taken up within the validity period of EC due to the following;

- i. Unassured supply of raw material
- ii. Poor marketing conditions.
- iii. While applying for Environmental Clearance for expansion, the inter linked mine for granted of Mining lease. However, by the time Govt of Tamil Nadu took action on the applications, the new MMDR ACT, 2015 came into force and all the pending applications were cancelled.

22.10.4 Now, the project proponent has obtained Environment Clearance from MoEF&CC vide letter no. J-11015/8/2017-IA.II (M) dated 27/03/2018 for Periyathirukonam Limestone Mine over an extent of 74.81 ha for peak production capacity of 2.34 MTPA of ROM Limestone located in Periyathirukonam, Reddipalayam and Edaiyathangudi Villages of Ariyalur Taluk and District, Tamil Nadu which will be dedicatedly used as a raw material for the aforesaid expansion of cement plant.

22.10.5 Implementation schedule has been submitted for cement plant expansion activity. As per the schedule, the cement plant expansion activity would be completed by 31/12/2022.

Observations of the Committee

22.10.6 The Committee noted the following:

- i. Project proponent was unable to implement the facilities envisaged in the EC dated 27/09/2013 due to unassured supply of raw material and poor market conditions.
- ii. Limestone from Periyathirukonam Mine will be dedicatedly used as a raw material for the cement plant expansion.
- iii. Expansion project will be completed by Dec 2022 as per the implementation schedule.

Recommendations of the Committee

22.10.7 In view of above and after deliberations, the Committee recommended to extend the validity of the Environment Clearance for a period of three years beyond 27/09/2020, i.e., from 28/09/2020 to 26/09/2023 subject to environmental safeguards prescribed in the EC dated 27/09/2013.

22.11 Proposed change of product from 3.6MVA SAF (from 10500TPA C.I. Lumps/Balls to 9200 TPA Ferro Alloys), Proposed 5.4MVA Submerged Arc Furnace for production of 13,800 TPA Ferro Alloys, Proposed Rolling Mill - 18000 TPA for MS Strip/Round Bar/Square with Coal Gasifier 1750 Nm³/hr, Proposed 1x750 KW + 1x2250 KW Induction Furnace for 8400 TPA for Casting & Forging of Iron & Steel, Proposed 1x550 KW+1x750 KW+1x2250 KW Induction Furnace for 12000 TPA for Casting & Forging of Iron & Steel and Steel Billets/ Ingots and Proposed Iron Ore Washing of 50000 TPA capacity by **M/s. Earthstahl & Alloys Private Limited** located at Village Duldula, **Tehsil Simga, District Baloda Bazaar, Chhattisgarh** [Online Proposal No. IA/CG/IND/167037/2020; File No. J-11011/202/2016-IA-II(I)] – **Amendment in Terms of Reference – regarding.**

22.11.1 **M/s. Earthstahl & Alloys Private Limited** has made application vide online proposal no. IA/CG/IND/167037/2020 dated 07/08/2020 along with the Form 3, revised Form-I, copy of

pre-feasibility report and sought for amendment in the ToR accorded by the Ministry vide letter no. J-11011/202/2016-IA.II(I) dated 11/08/2016.

Details submitted by the project proponent

22.11.2 M/s. Earthstahl & Alloys Private Limited was accorded Terms of Reference vide letter no. J-11011/202/2006-IA.II(I) dated 11/08/2016. The product slate envisaged in the ToR dated 11/08/2016 is given as below:

Product /Activity (Capacity/Area)	Quantity as per approved ToR	Unit
Sub-merged Arc Furnace 3.6MVA-SAF	9200 TPA	TPA
Induction Furnace 1x550 KW –(0.5 T)	3600 TPA	TPA
Induction Furnace 1x750KW – (1 T) 1x2250KW – (5 T)	8400 TPA	TPA
Ferro Alloys Plant (Sub-merged Arc Furnace) 5.4 MVA	13800 TPA	TPA
Induction Furnace 1x550KW – (0.5 T)	12000 TPA	TPA
Induction Furnace 1x750KW – (1 T)		
Induction Furnace 1x2250KW – (5 T)		
Rolling Mill	18000 TPA	TPA
Coal Gasifier 1x1750Nm ³ /hr	1750 Nm ³ /hr	Nm ³ /hr
Iron Ore Washing Plant	500000TPA	TPA

22.11.3 The present proposal of PP is for seeking amendment in the ToR 11/08/2016 for withdrawal of the iron ore washing plant.

Observations of the Committee

22.11.4 The Committee noted the following:

- i. Originally ToR was accorded on 11/08/2016 and the validity of the same was extended by MoEF&CC on 4/9/2019 till 10/08/2020.
- ii. M/s. Earthstahl & Alloys Private Limited has submitted an online application vide proposal no. IA/CG/IND/107108/2016 dated 10/07/2019 which was considered by the EAC in its meeting held on 30-31st July, 2019 and the Committee recommended to return the proposal in present form

Recommendations of the Committee

22.11.5 In view of the foregoing and after deliberations, the Committee rejected the instant proposal as the ToR validity period was expired on 10/08/2020.

22.12 Iron Ore Beneficiation (1.2 MTPA) by **M/s. Vedanta Washery & Logistic Solutions Pvt Ltd** located at Village Kunkuni, Tehsil Kharsia, **District Raigarh, Chhattisgarh** [Online Proposal No. IA/CG/IND/168092/2020; File No. J-11011/164/2019-IA-II(I)] – **Amendment in Terms of Reference – regarding.**

22.12.1 M/s. Vedanta Washery & Logistic Solutions Pvt Ltd has made application vide online proposal no. IA/CG/IND/168092/2020 dated 17/08/2020 along with the Form 3, revised Form-I, copy of pre-feasibility report and sought for amendment in the ToR accorded by the Ministry vide letter no. J-11011/164/2019-IA.II(I) dated 20/05/2019.

Details submitted by the project proponent

22.12.2 M/s. Vedanta Washery & Logistic Solutions Pvt Ltd was accorded Terms of Reference vide letter no. J-11011/164/2019-IA.II(I) dated 20/05/2019 for the project titled “Iron Ore Beneficiation (1.2 MTPA) located at Village Kunkuni, Tehsil Kharsia, District Raigarh, Chhattisgarh”. Draft EIA/EMP Report is under preparation and baseline study was carried out during 1st October, 2019 to 31st December 2019.

22.12.3 The amendment sought in the ToR dated 20/05/2019 is given as below:

Details as Per ToR Granted	Proposed	Final configuration after amendment
Iron Ore Beneficiation (1.2 MTPA)	Pellet Plant (0.9 MTPA)	Iron Ore Beneficiation (1.2 MTPA) and Pellet Plant (0.9 MTPA)

22.12.4 The other amendments sought in the ToR dated 20/05/2019 is given as below:

Particulars	As per ToR dt. 20/05/2019	Total (for Rev. TOR)	Change in rev. TOR wrt 20/05/2019
Subject matter	Iron Ore Beneficiation (1.2 MTPA) by M/s. Vedanta Washery & Logistic Solutions Pvt Ltd located at Village Kunkuni, Tehsil Kharsia, District Raigarh, Chhattisgarh	Iron Ore Beneficiation (1.2 MTPA) and Pellet Plant (0.9 MTPA) by M/s. Vedanta Washery & Logistic Solutions Pvt Ltd located at Village Kunkuni, Tehsil Kharsia, District Raigarh, Chhattisgarh	Change in subject matter
Project Area, ha	4.79	14.119	Increase in land area
Power requirement MW	0.25	6	Increase in power requirement
Staff	65	85	Increase in staff requirement

22.12.5 There is no court case or violation under EIAs Notification to the project or related activity.

22.12.6 Name of the EIA consultant: Grass Roots Research and Creation India (P) Ltd. [S.No. 80, List of Accredited Consultant Organizations as on August, 2020].

Observations of the Committee

22.12.7 The Committee noted the following:

- i. Addition of 0.9 MTPA Pellet Plant
- ii. Project cost is now Rs. 125 Cr.

Recommendations of the Committee

- 22.12.8 In view of the foregoing and after detailed deliberations, the Committee recommended for amendment in the ToR dated 20/05/2019 as mentioned above, the addition of 0.9 MTPA pellet plant is recommended to be permitted subject to the stipulation of following additional specific ToRs:
- i. EMP Matrix indicating; EMP details: Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology shall be furnished in EIA Report.
 - ii. Producer gas plant of 4x6000m³/hr. capacity shall be of closed circuit type without any generation of phenolic water and tar/tar sludge shall be managed in environmentally sound manner.
 - iii. All shop floor employees shall be provided with safety shoes, helmets and masks to protect against various health hazards at the shop floor.

27th August, 2020

- 22.13 Expansion of Integrated Steel Plant from 6 to 8 MTPA Crude Steel and 9 MTPA Finished Steel by **M/s. Tata Steel Limited** located at Kalinganagar Industrial Complex, Duburi, **District Jajpur, Odisha** - [Online Proposal No. IA/OR/IND/128148/2016, File No. J-11011/7/2006-IA-II(I)] – **Environment Clearance - regarding.**
- 22.13.1 M/s. Tata Steel Limited has made an online application vide proposal no. IA/OR/IND/128148/2016 dated 13/06/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.
- 22.13.2 The aforesaid proposal was considered in the 20th EAC meeting held on 25-26th June, 2020. The EAC proceedings of the said meeting is reproduced as below:

Proceedings of the EAC meeting held on 25-26th June, 2020

The project proponent originally submitted the application for EC for the project cited above through PARIVESH on 19/12/2019. Subsequently, Essential Details were sought by the Ministry on 8/01/2020. In response to this, project proponent resubmitted their application on 13/06/2020 along with essential details sought by the Ministry.

Before considering the instant expansion proposal under consideration, the EAC asked the representatives of M/s. Tata Steel Limited and their EIA consultant namely M/s M. N. Dastur & Co. (P) Limited to present on the existing EC granted and its implementation status as the project proponent has stated in their records submitted to the Ministry that some construction activities are still ongoing at the project site.

In this regard, the details furnished by the project proponent are summarized as below:

- A. The existing project of M/s Tata Steel Limited for setting up of 6 MTPA Integrated Steel Plant located at Kalinganagar located in Duburi Village, Sukinda Tehsil, Jajpur District, Odisha was originally accorded EC vide letter no. J/11011/7/2006 – IA.II (I) dated 07/11/2006 under the provisions of the EIA Notification, 2006
- B. The project proponent intended to execute the 6 MTPA Integrated Steel Plant in

two phases.

- C. Following EC amendments and validity extension of EC was obtained from MoEF&CC subsequent to the grant of EC dated 7/11/2016.

S.No.	Date of letter	Details
i.	10/10/2012	Amendment in the EC dated 7/11/2006 was accorded for change in configuration of blast furnace/coke oven battery/lime calcining plant/captive power plant, conversion of 2 nos of sinter plant into 1 no of sinter plant & 1 no. of pellet plant and addition of Cold Roll Mill.
ii.	13/05/2015	Amendment in the EC dated 7/11/2006 was accorded for (i) installation of 24x7 air and water monitoring devices to monitor the air emission and effluent discharge; (ii) Use of wet quenching till the CDQ is stabilized by June, 2016 and thereafter maintain wet quenching as standby; (iii) Use of LDO for generation of power in power plant and DG sets till the Blast furnace gas is available and thereafter maintain LDO as standby.
iii.	13/05/2015	The validity period of the EC was extended till 6/11/2016.
iv.	20/12/2016	Amendment in the EC dated 7/11/2006 was accorded for using wet quenching till the CDQ is stabilized by November, 2016 and thereafter maintain wet quenching as standby.

- D. The units along with the production capacity envisaged in the EC dated 7/11/2006 and its subsequent amendments is given as below:

Sl.	Production Facilities	6.0 MTPA as per existing EC	
		Phase 1	Phase 2
1	Coke Ovens & Byproducts Recovery Plant (COBP)	2 X 88 ovens, 5 m tall	2 X 88 ovens, 5 m tall
2	Sinter/Pellet Plant	1 No. Sinter Plant (496 m ²)	1 No. Pellet Plant
3	Blast Furnace	1 No x 4300 m ³	1 No x 4300 m ³
4	Lime Calcining Plant (LCP)	2 x 600 TPD Vertical Shaft Kiln	1 x 600 TPD vertical shaft kiln
5	Steel Melt Shop (SMS)	2x300 Nos. of Convertors 1x310 t CAS-OB, 1X twin Strand Slab caster	1 x 300 t Converter 1x 310 t twin RH, 1X twin Strand Slab caster
6	Mills	Hot Strip Mill 5.5 MTPA-1 No	Cold Rolling- 1 No 2.2 MTPA
7	Captive Power Plant	2 x 67.5 MW byproduct gas based	1 X 67.5 MW byproduct gas based

- E. Project proponent has started commercial production in June 2016 based on completion of Phase 1 facilities, planned as part of 6 MTPA Crude Steel Plant. Phase 2 of 6 MTPA crude steel capacity is under implementation.
- F. Since the Phase 2 of 6 MTPA crude steel capacity was under implementation and further intended to expand the ISP capacity, project proponent submitted an online application vide proposal no. IA/OR/IND/53158/2016 dated 21/09/2016 seeking the following:
- i. Extension of the validity of the existing EC dated 7/11/2006 so that construction of auxiliary and balance facilities can continue and
 - ii. Prescribed ToR for the expansion to 8 MTPA crude steel capacity.
- G. The aforementioned proposal was considered in the 12th meeting of EAC held on 27-28th October, 2016 and the EAC has recommended for grant of ToR for the following unimplemented portion of the work along with the proposed expansion. Accordingly, the ToR was accorded by the Ministry on 14/03/2017.

S.No.	Production Facilities	6.0 MTPA as per existing EC		Final Configuration at 8 MTPA Crude Steel & 9 MTPA Finished Steel
		Phase 1 (Operational)	Phase 2 (Balance)	
1	Coke Ovens & Byproducts Recovery Plant	2 X 88 ovens, 5 m tall	2 X 88 ovens, 5 m tall	<ul style="list-style-type: none"> • 2 X 88 ovens, 5 m tall • 3 X 62 ovens, 6.25 m tall
2	Sinter/Pellet Plant	1 No. Sinter Plant (496 m ²)	1 No. Pellet Plant	<ul style="list-style-type: none"> • 1 no. Sinter Plant (496m²) • 1 no. Pellet Plant (744m²)
3	Blast Furnace	1 No x 4300 m ³	1 No x 4300 m ³	<ul style="list-style-type: none"> • Two BF (1x4330m³ & 1x5870m³)
4	Lime Calcining Plant	2 x 600 TPD Vertical Shaft Kiln	1 x 600 TPD Vertical shaft kiln	<ul style="list-style-type: none"> • 4 x 600 TPD vertical shaft kiln
5	Steel Melt Shop (SMS)	2x300 Nos. of Convertors 1x310 t CAS-OB, 1X twin Strand Slab caster	6.0 MTPA 1 x 300 t Converter 1x 310 t twin RH, 1X twin Strand Slab caster	<ul style="list-style-type: none"> • 8.0 MTPA Crude Steel • 3 x 310 t BOF converters • 1 x 310 t CAS-OB • 1 x 310 t twin RH • 2 x 310 tons LF • 2 x twin Strand Slab caster • 1 Multi Strand Billet Caster
6	Mills	Hot Strip Mill 1 X 5.5 MTPA	Cold Rolling 1 X 2.2 MTPA	<ul style="list-style-type: none"> • Hot Strip -1 No. 7 MTPA • Cold Rolling- 1 No. 2.2 MTPA • LP Mill – 2.0 MTPA

S.No.	Production Facilities	6.0 MTPA as per existing EC		Final Configuration at 8 MTPA Crude Steel & 9 MTPA Finished Steel
		Phase 1 (Operational)	Phase 2 (Balance)	
7	Captive Power Plant	2 x 67.5 MW by-product gas based	1 X 67.5 MW by product gas based	<ul style="list-style-type: none"> • 3 x 67.5 MW by product gas based • 1 x 67.5 MW by product gas cum coal tar firing

- H. The project proponent has gone ahead with the unimplemented portion of the work i.e., construction of Phase 2 of 6 MTPA crude steel capacity beyond the validity period of the EC dated 7/11/2006 i.e., 6/11/2016 which was also a part of the ToR dated 14/03/2017. Presently the construction of various facilities like CRM, Pellet Plant, Blast Furnace and Coke Plant is underway. The present status of construction is given in the chapter 2 of the EIA report and also furnished as below:

Sl.	Production Facilities	Phase 2	Ongoing construction activities at site at present for balance facilities
1.	Pellet Plant	1 No. Pellet Plant	Area development, foundation and erection in progress.
2.	Blast Furnace	1 No x 4300 m ³	Area development, foundation and erection in progress.
3.	LD Converter	1 x 300 Ton	All facilities are already constructed. Only converter needs to be erected.
4.	CRM	2.2 MTPA	Foundation and erection in progress.
5.	Lime Calcining Plant (LCP)	1 x 600 TPD vertical shaft kiln	Area development in Progress.

- I. The project proponent claimed during the discussion that they have gone ahead with the construction of Phase 2 of 6 MTPA crude steel capacity beyond the validity period of the EC dated 7/11/2006 i.e., 6/11/2016 based on the preamble stated in the EC amendment letter dated 26/12/2016 and the ToR letter dated 14/03/2017 issued by MoEF&CC.
- J. The project proponent has requested the EAC to consider the issue in totality and take an appropriate view in the matter.

Besides above, the EAC has gone through the following records:

A. Compliance Status of existing EC from Regional Office, Bhubaneswar

The status of compliance of existing EC was obtained from Regional Office, Bhubaneswar vide Lr. No. 101/208/06/EPE, dated 10/12/2019 wherein it is stated that project proponent is in the process of installation of pellet plant and blast furnace.

B. Public representation

The EAC has taken cognizance of the issues raised in the public representation dated 13/11/2019 of Shri.R.Jarika alleging several shortcomings in the aforesaid public hearing inter-alia including non-availability of EIA report for perusal, inadequate publicity of public hearing and non-addressal of queries raised during the hearing by the public etc.,.

C. Report of District Magistrate and the RO factual report on public representation

As per the District Magistrate report dated 5/02/2020, the public hearing for the instant project was conducted on 25/10/2019 as per the procedure laid down in the EIA Notification, 2006. Further, noted from the report that reasonable opportunity was given to the public to express their views and suggestions during the hearing held on 25/10/2019 and no public was prevented to participate in the said hearing. As per the RO factual report dated 18/06/2020, the foundation/RCC construction activities were in progress for the pellet plant and blast furnace. In this regard, the photographs are also submitted.

Observations of the Committee meeting held on 25-26th June 2020

The Committee noted the following:

- i. It is an established fact from the records submitted by the proponent and report of the Regional Office that project proponent has gone ahead with the construction of Phase 2 of 6 MTPA crude steel capacity beyond the validity period of the EC dated 7/11/2006 i.e., 6/11/2016 which was also a part of the ToR dated 14/03/2017 without obtaining prior Environment Clearance as mandated under the provisions of EIA Notification, 2006. Thus, proponent has violated the provisions of the EIA Notification, 2006.
- ii. Claim of the project proponent regarding mentioning of phase 2 facilities under implementation in the EC amendment letter dated 20/12/2016 and the ToR letter dated 14/03/2017 are untenable for going ahead with construction of phase 2 facilities.
- iii. As per the Ministry's notification S.O. 804 (E) dated 14/03/2017, the projects or activities requiring prior Environment Clearance (EC) under EIA Notification, 2006 from the concerned Regulatory Authority are brought for EC after starting the construction work, or have undertaken expansion, modernization, and change in product- mix without prior environmental clearance, these projects shall be treated as cases of violations. Further, the projects or activities which are in violation as on date of this notification only will be eligible to apply for EC under this notification
- iv. As per the Ministry's O.M. dated 9/9/2019, proposals involving violation can be considered as per the notification no. S.O. 804 (E) dated 14/03/2017 only, if it is applied during the window period 14/03/2017 to 13/09/2017 and 14/03/2018 to 13/04/2018 (or) prior to the violation window period. These proposals were termed as "lateral entry proposals" and considered as per the provisions laid down in the Notification dated 14/03/2017.
- v. In the instant proposal under consideration, application for ToR was made on 21/09/2016 which was prior to the violation window period. Hence, this proposal can be referred to EAC – Violation through lateral entry basis for appropriate consideration as per the provisions laid down in S.O. 804 (E) dated 14/03/2017.

Recommendations of the Committee meeting held on 25-26th June 2020

In view of the foregoing, the Committee after deliberations recommended to laterally refer the proposal to EAC – Violation Sector in accordance with the MoEF&CC O.M. dated 9/9/2019 as the application for ToR was made on 21/09/2016 which was prior to the violation window period.

22.13.3 Based on the EAC recommendations, the file was processed wherein the Competent Authority of MoEF&CC directed to adopt the following principle in all cases where violation is suspected or alleged.

- i. Send the matter to the Sector EAC for consideration of the case on merit.
- ii. Take action against the alleged violation as per law.
- iii. Do not wait for either the evidence of action having been started or violation proceedings to finish before taking up the case on merit.
- iv. The EC if given after consideration on merit would be valid from the date it is given and not with retrospective effect. For the period before it, if violation is established by the court or the competent authority, the punishment/penalty as per law would be imposed.

22.13.4 In pursuance to the aforesaid directions of the Competent Authority, the proposal was placed before the EAC in its 22nd meeting held on 27/08/2020 for considering the instant expansion proposal on merit. Accordingly, the proposal was considered by EAC on merit.

Details submitted by the project proponent

22.13.5 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
21/09/2016	12 th meeting held on 27 th - 28 th October, 2016	Terms of Reference	14/03/2017

22.13.6 As per the amendment to the EIA Notification, 2006 issued vide S.O. 751(E) dated 17/02/2020, the Terms of Reference for the projects or activities issued by the regulatory authority concerned, shall have the validity of four years from the date of issue. Accordingly, the validity of the aforesaid ToR is till 13/03/2021.

22.13.7 The project of M/s Tata Steel Limited at Kalinganagar located in Duburi Village, Sukinda Tehsil, Jajpur District, Odisha is for enhancement of production of crude steel from six (6) MTPA to eight (8) MTPA and nine (9) MTPA finished steel.

22.13.8 The existing project was accorded environmental clearance vide Ir.no. J/11011/7/2006 – IA.II (I) dated 07/11/2006 under the provisions of the EIA Notification, 2006. Following EC amendments and validity extension of EC was obtained from MoEF&CC subsequent to the grant of EC dated 7/11/2016.

S.No.	Date of letter	Details
i.	10/10/2012	Amendment in the EC dated 7/11/2006 was accorded for change in configuration of blast furnace/coke oven battery/lime calcining plant/captive power plant, conversion of 2 nos of sinter plant into 1 no of sinter plant & 1 no. of pellet plant and addition of Cold Roll Mill.
ii.	13/05/2015	Amendment in the EC dated 7/11/2006 was accorded for (i) installation of 24x7 air and water monitoring devices to monitor the air emission and effluent discharge; (ii) Use of wet quenching till the CDQ is stabilized by June, 2016 and thereafter maintain wet quenching as standby; (iii) Use of LDO for generation of power in power plant and DG sets till the Blast furnace gas is available and thereafter maintain

S.No.	Date of letter	Details
		LDO as standby.
iii.	13/05/2015	The validity period of the EC was extended till 6/11/2016.
iv.	20/12/2016	Amendment in the EC dated 7/11/2006 was accorded for using wet quenching till the CDQ is stabilized by November, 2016 and thereafter maintain wet quenching as standby.

It has been reported that the Consent to Operate from the State Pollution Control Board, Odisha was obtained vide Lr. No. 3938/IND-I-CON-6447 dated 27/03/2020 and consent is valid up to 31/03/2021.

22.13.9 The existing and proposed expansion unit details is given as below:

Sl	Production Facilities	6.0 MTPA as per existing EC		Final Configuration at 8 MTPA Crude Steel & 9 MTPA Finished Steel
		Phase 1 (Operational)	Phase 2 (Balance)	
1	Coke Ovens & Byproducts Recovery Plant	2 X 88 ovens, 5 m tall	2 X 88 ovens, 5 m tall	<ul style="list-style-type: none"> 2 X 88 ovens, 5 m tall 3 X 62 ovens, 6.25 m tall
2	Sinter/Pellet Plant	1 No. Sinter Plant (496 m ²)	1 No. Pellet Plant	<ul style="list-style-type: none"> 1 no. Sinter Plant (496m²) 1 no. Pellet Plant (744m²)
3	Blast Furnace	1 No x 4300 m ³	1 No x 4300 m ³	<ul style="list-style-type: none"> Two BF (1x4330m³ & 1x5870m³)
4	Lime Calcining Plant	2 x 600 TPD Vertical Shaft Kiln	1 x 600 TPD Vertical shaft kiln	<ul style="list-style-type: none"> 4 x 600 TPD vertical shaft kiln
5	Steel Melt Shop (SMS)	2x300 Nos. of Convertors 1x310 t CAS-OB, 1X twin Strand Slab caster	6.0 MTPA 1 x 300 t Converter 1x 310 t twin RH, 1X twin Strand Slab caster	<u>8.0 MTPA Crude Steel</u> <ul style="list-style-type: none"> 3 x 310 t BOF converters 1 x 310 t CAS-OB 1 x 310 t twin RH 2 x 310 tons LF 2 x twin Strand Slab caster 1 Multi Strand Billet Caster
6	Mills	Hot Strip Mill 1 X 5.5 MTPA	Cold Rolling 1 X 2.2 MTPA	<ul style="list-style-type: none"> Hot Strip -1 No. 7 MTPA Cold Rolling- 1 No. 2.2 MTPA LP Mill – 2.0 MTPA
7	Captive Power Plant	2 x 67.5 MW by-product gas based	1 X 67.5 MW by-product gas based	<ul style="list-style-type: none"> 3 x 67.5 MW by product gas based 1 x 67.5 MW by product gas cum coal tar firing

22.13.10 The total land required for the project is 1250 ha (This is part of 1405 ha available as part of MOU with Govt of Odisha). This is industrial land and presently utilized by project proponent. No forestland is involved. The entire land has been acquired for the project and is in possession of proponent. It has been reported that no water body exists around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

22.13.11 The topography of the area is moderately undulating and reported to lie between 85° 59'43" to 86° 02'39" N Latitude and 20° 56'55" to 20° 58'53" E Longitude in Survey of India topo sheet Nos. F45T13, F45O4, F45N16 & F45U1 at an elevation of 120 m AMSL. The ground water table reported to ranges between 0.92 to 4.58 m below the land surface during the post-monsoon season and 3.05 – 8.38 m below the land surface during the pre-monsoon season. Further, the stage of groundwater development is reported to be around 27.48% in core zone and 27.48% & 33.82% in the buffer zone and thereby these are designated as safe area.

22.13.12 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to for corridor for Schedule-I fauna.

22.13.13 The targeted production capacity of the Integrated Steel Plant is 8 million TPA crude steel and 9 MTPA finished steel. The ore for the plant would be procured from own mines, imported and multiple domestic sources (open market). The ore transportation will be done through Rail with 5% road transport for exigencies.

22.13.14 The raw material requirement for the proposed project is given as below:

	Incoming raw materials/ additives	Annual consumption, MT	Source	Mode of transport	Distance of source from project site, km
1	Iron Ore (Fines)	12.13	Own Mines/Import/ Multiple domestic Source	Rail- 100%(exigency 5% by Road)	400
2	Coking Coal	5	Import/Own Mines/Multiple domestic Source	Rail- 100%(exigency 5% by Road)	600
3	Lump Ore/External Pellet	1.5	Domestic	Rail- 100%(exigency 5% by Road)	400
4	Anthracite	0.1	Import/Multiple domestic Source	Rail- 100%(exigency 5% by Road)	300
5	PCI Coal	1.6	Own Mines/Import/ Multiple domestic Source	Rail- 100%(exigency 5% by Road)	600
6	Limestone	2.41	Import/Multiple domestic Source	Rail- 100%(exigency 5% Road)	300

	Incoming raw materials/ additives	Annual consumption, MT	Source	Mode of transport	Distance of source from project site, km
7	Bentonite	0.056	Import/Multiple domestic Source	Rail- 100%(exigency 5% Road	300
8	Pyroxenite/Olivine/Quartzite	0.351	Import/Multiple domestic Source	Rail 50%	300
9	Ferro Alloys	0.06	Import/Multiple domestic Source	Road-100%	300
10	DRI	0.432	Multiple domestic source	Rail- 100%(exigency 10 % by road	300
11	Scrap	0.1	Multiple domestic source	Rail 50% & Road 50 %	300

22.13.15 The water requirement of the project is estimated at 112,704 m³/day, which will be obtained from Kharsua river. The permission for drawl of surface water is obtained from Dept. of Water resources, Govt. of Odisha vide Lr. No. 24977/WR dated 7/11/2019.

22.13.16 The power requirement of the project is estimated as 664 MW, out of which 270 MW will be obtained from captive power plant, 44 MW from CDQ, 51 MW from BF TRT, 220 MW from Grid and balance through open market.

22.13.17 Baseline Environmental Studies

Period	22/12/2016 to 27/03/2017
AAQ parameters at 8 locations	PM _{2.5} = 36.1 to 67.2 µg/m ³ PM ₁₀ = 66.6 to 105.5 µg/m ³ SO ₂ = 5.2 to 25.4 µg/m ³ NO _x = 22.1 to 40 µg/m ³
AAQ modelling	PM ₁₀ = 1 µg/m ³ SO ₂ = 0.5 µg/m ³ NO _x = 3.4 µg/m ³
Ground water quality at 8 locations	pH: 6.16 to 7.08, Total Hardness: 110 to 370.67 mg/l, Chlorides: 18.64 to 139.31 mg/l, Fluoride 0.1 mg/l. Heavy metals are within the limits
Surface water quality at 8 locations	pH: 7.1 to 7.2; DO: 5.4 to 6.2 mg/l and BOD: 3 to 10.3 mg/l. COD from 9.6 to 37.8 mg/l.
Noise levels	7.5 to 73.3 dBA for daytime and 38.0 to 67.4 dBA for night time.

22.13.18 It has been reported that a total of 40,88,800 tons per year of waste will be generated due to the project, which will be reused in process or sold to external agency. Hazardous waste like chrome sludge would be transferred to HWTSDf for safe disposal. The details of the solid waste generation and its utilization is given as below:

Solid wastes	Indicative composition	Expected generation	Re-utilisation Measures
	% w/w	TPD	
BF Slag	Granular solid Fe ₂ O ₃ - 10-15 CaO= 25-28 Al ₂ O ₃ =10-15 SiO ₂ = 30-35 Mg O- 5-8	5,000-6,500	Abt. 95% would be granulated and sold to cement manufacturers ; balance 5% as dry slag would be used for land reclamation and road construction. The MoU for sale of BF slag is given in Appendix 2 -5
Steelmaking Slag (BOF & LF)	Lumps Fe ₂ O ₃ - 30-33 CaO= 45-50 SiO ₂ = 10-15 Mg O- 2-5	3,500-3,650	20% of the metallics in the slag would be recovered and reused in BOF. A portion of non-metallic part would be used as flux in sinter plant & in soil conditioning. Balance would be utilised as railway ballast, concrete, road making etc. after proper weathering
DE Systems and BF Flue dusts, sludges	Fine dusts Fe(T)= 35-40 CaO= 5- 6 C= 30-40 SiO ₂ =8-10	450-500	Recycling in sinter plant
Mill Scales/ Sludge	Solid flakes Fe(T)= 72-75 Oil= 8-10 SiO ₂ <0. 5 Mn O <0. 5	1,000 - 1, 100	100% utilisation within the plant
Scrap		1,150-1,200	100% reuse within the plant
Mill Scrap		600-620	100% reuse within the plant
Lime fines		400-450	100% reuse within the plant
Coal tar sludge & BOD sludge		280-300	Recycled back in Coke ovens
Chrome sludge		0.01 - 0.014	Transferred to authorized agency

22.13.19 It has been envisaged that an area of 464 ha will be developed as green belt (including existing greenbelt) around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

22.13.20 The Public hearing of the project was held on 25th October, 2019 at JDCL Complex, Pankapal under the chairmanship of ADM (Kalinganagar, Jajpur). The issues raised during public hearing are local employment, health, drinking water, periphery development, training, plantation and environment protection. An amount of 42.75 Crore (0.2 % of Project cost) has been earmarked for CER based on public hearing issues and needs assessment.

22.13.21 The capital cost of the project is Rs 21000 Crores and the capital cost for environmental protection measures is proposed as Rs 2620 crore. The annual recurring cost towards the environmental protection measures is proposed as Rs 50 crore. The detailed CER plan has been provided in the EIA Report (June 2020) in its page No. 7-187 to 7-188. The employment generation from the proposed project is 19000.

- 22.13.22 Greenbelt will be developed in 464 ha in around plant area which is about 33% of the total plant area, including existing greenbelt (365 ha). Local and native species will be planted with a density of 1600 trees per hectare. Total no. of 160,000 saplings will be planted and nurtured in 99 hectares in 5 years.
- 22.13.23 The proponent has mentioned that there is no court case under EIA Notification to the project or related activity.
- 22.13.24 EIA Consultant engaged for the EIA-EMP Report is M/s M. N. Dastur & Co. (P) Ltd. (Accredited EIA Consultant Organizations as on August 2020).

Compliance Status from Regional Office, Bhubaneswar

- 22.13.25 The status of compliance of existing EC was obtained from Regional Office, Bhubaneswar vide Lr. No. 101/208/06/EPE, dated 10/12/2019 wherein observations have been made with respect to usage of excess water, discharge of water outside the plant premises and drains at raw material storage yard is filled with silt. The project proponent has submitted the action taken report to RO on 6/01/2020 and subsequently RO issued a report on 04/02/2020 stating that surface water withdrawal is within the permissible quantity and study has been commissioned by proponent for improvement in surface run-off management. Further, corrective action has been taken by proponent for de-siltation of drains at raw material storage yard.

Public representation

- 22.13.26 Meanwhile, Ministry was in receipt of a public representation dated 13/11/2019 of Shri.R.Jarika alleging several shortcomings in the aforesaid public hearing inter-alia including non-availability of EIA report for perusal, inadequate publicity of public hearing and non-addressal of queries raised during the hearing by the public etc.,. Also alleged that M/s. Tata Steel Limited has started construction prior to obtaining EC and causing pollution. The said public representation was forwarded to District Magistrate, Odisha Pollution Control Board and Regional Office by the Ministry on 20/01/2020 with a request to submit the factual status. In response to this, report from District Magistrate and Regional Office was received by the Ministry. The said representation and the report of District Magistrate and Regional Office was placed before the EAC for consideration.

Observations of the Committee

- 22.13.27 The Committee noted the following:
- i. Taken cognizance of the issues raised in the public representation and observed that as per the District Magistrate report public hearing for the instant project was conducted on 25/10/2019 as per the procedure laid down in the EIA Notification, 2006. Further, noted from the report that reasonable opportunity was given to the public to express their views and suggestions during the hearing held on 25/10/2019 and no public was prevented to participate in the said hearing. The committee was satisfied with the DM reply.
 - ii. Public hearing proceedings highlighting both positive and negative feedback from stakeholders along with PPs response has not been furnished.
 - iii. The committee noted that baseline data collected by the project proponent is already more than three years and needs to be revalidated as several developmental activities has took place in that area in the last four years. The AAQ parameters relevant to the project activity such as Benzo- α -Pyrene, and VOC has not been monitored.

- iv. Action plan for maintaining ZLD for the existing and proposed expansion has not been furnished.
- v. Scheme for, control of Dioxins/Furan emissions from sinter plants, charging and pushing emissions from Coke Ovens and mercury emissions from power plans has not been furnished.

Recommendations of the Committee

22.13.28 In view of the foregoing and after deliberations, the Committee deferred the consideration of the proposal cited above and sought the following additional information:

- i. Summary of the public hearing proceedings highlighting both positive and negative feedback from stakeholders along with PPs response for both.
- ii. Revalidate the base line data by monitoring the physical environment (Air, water, soil and Noise) for of one month starting 15/09/2020. All 12 parameters shall be monitored in Ambient Air as per MoEF&CC requirements.
- iii. AAQ modelling shall be done based on worst case scenario.
- iv. Risk Assessment shall be carried out based on QRA for the existing plant.
- v. Please Submit the EMP Matrix indicating; EMP details, Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology.
- vi. Actions initiated to achieve ZLD in existing plant and post implementation of the expansion proposal.
- vii. Additional plantation scheme in the vacant land to increase greenery and to control fugitive emissions as the PM₁₀ and PM_{2.5} levels in the study area are higher than the NAAQ norms. 2500 trees shall be planted per ha.
- viii. Scheme for upgradation of Pollution control systems to achieve less than 30 mg/Nm³ particulate matter emissions. Further, the estimated reduction in pollution load shall be furnished as the CEPI score for the area is 49.62.
- ix. CER table based on PH proceedings and SIA conducted shall be furnished. CER expenditure as per capex indicated in EIA shall be Rs 56.5 Cr and CER activities shall be completed in 4 years.
- x. Scheme for, control of Dioxins/Furan emissions from sinter plants, charging and pushing emissions from Coke Ovens and mercury emissions from power plans.
- xi. The data acquired through CEMS, shall be used for control of processes in order to control the stack emissions. This should include the MIS for closing the non-conformity loop.
- xii. Confirmation is sought on the following points:
 - PP shall install a state-of-the-art Waste Recycling Plant (WRP) to process various types of slags and wastes generated in the plant to recover and recycle metallics, fluxes, aggregates and boulders.
 - PP shall use SMS Slag as soil conditioner in watershed management area to supplement micro nutrients.
 - PP shall recover and recycle unburnt carbon from BF flue dust and GCP sludge.
 - PP shall use steam and CO₂ to age and fix the SMS slag for use as concrete for road making.
 - Confirmation that PP shall practice 100 percent waste utilization.
- xiii. Scheme for improvement in drainage pattern of the plant area.
- xiv. Details of health center proposed including skin care for employees and neighboring community.

- xv. Power saving by implementation of Slip Power Recovery System (SPRS) for the large motors shall be practiced in the plant.
- xvi. PP shall provide details of specific water and power consumption details pre and post operation.

22.13.29 In addition to the above, the Committee also recommended that the Ministry may take action against the M/s. Tata Steel Limited for carrying out the construction activities beyond the expiry of the validity of the EC by sending a letter to State Government of Jharkhand with a request to initiate legal action against PP under section 15 read with section 19 of the Environment (Protection) Act, 1986. Further, PP may also be directed to stop the ongoing construction activities till the EC is obtained from MoEF&CC.

22.14 Greenfield integrated clinker/ cement manufacturing unit (5.28 MTPA Clinker; 6.0 MTPA Cement) and captive power plant including waste heat recovery plant and Power generation thorough WHRB (80 MW FBC; 30 MW WHRB) and a township of **M/s. Jaykaycem (Central) Ltd** located at village Devra, Hardua, Puraina, Sotipura & Madaiyan, tehsil Amanganj (old Pawai), **Dist. Panna, Madhya Pradesh** [Online Proposal No. IA/MP/IND/127881/2016; MoEF&CC File No. J11011/224/2016-IA.II(I)] - **Reconsideration for grant of Environment Clearance based on ADS reply – regarding.**

22.14.1 The aforesaid proposal was earlier considered in 18th, 20th & 21st meetings of Re-constituted EAC (Industry-1) held during 29-30th April 2020, 25-26th June 2020 and 30th July – 1st August 2020. The relevant portion of the minute of the meeting is given as below:

22.14.2 M/s Jaykaycem (Central) Ltd made online application vide proposal no. IA/MP/IND/127881/2016 on 31.03.2020 in the prescribed Form 2, EIA Report and other documents for seeking Environmental Clearance (EC) for the project mentioned in the subject. The proposed project activity is listed at Sl. No. 3(b) Cement Plants in the schedule under Category “A” in the EIA Notification, 2006 and the proposal is appraised at Central Level.

22.14.3 The project proposal of greenfield integrated cement plant for production of clinker (5.28 MTPA) and cement (6.0 MTPA) along with captive power plant (80 MW) and waste heat recovery system (30 MW) of M/s Jaykaycem (Central) Limited, is located at villages Harduaken, Puraina, Sotipura & Madayyan, Tehsil Amanganj, District Panna (M.P.). The proposal was initially received in the Ministry on 10th September 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry-I) during its 11th meeting held on 26 to 27th September 2016 and prescribed ToRs to the project for undertaking detailed EIA study. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on 18th April 2017 vide letter No. J-11011/224/2016-IA.II (I) .

22.14.4 Based on the ToR prescribed to the project, the project proponent made an application for EC through online application vide proposal no. IA/MP/IND/127881/2016 dated 31.03.2020.

Details submitted by the project proponent

22.14.5 The proposed project of integrated cement plant by M/s Jaykaycem (Central) Ltd will be implemented in two equal phases. The proposed configuration and capacity of integrated cement plant are as given below:

Name of Unit	No of Unit	Capacity of each Unit	Production Capacity
Clinker Production Unit	02	2.64 MTPA	5.28 MTPA
Cement Production Unit	02	3.00 MTPA	6.00 MTPA
Captive Thermal Power Generation Unit	02	40 MW	80 MW
WHRS	02	15 MW	30 MW
DG Set	01	500 kVA	500 kVA

- 22.14.6 The total land required for the project is 199.84 ha. out of which 191.90 ha. is private land, and 7.94 ha. is government land. No forestland is involved.
- 22.14.7 Total area is approximately 155 ha. land has been acquired till date. Ken River passes 900 mtrs. away from the project area. It has been reported that for water bodies nearby viz., Ken River, Sonar River, Devra Nala, Jonaro Nadi, Karhawani Nala. Modification/diversion in the existing natural drainage pattern around the project at any stage has not been proposed.
- 22.14.8 The topography of the area is flat and reported to lies between latitude 24°19'2.99"N - 24°20'2.02"N and Longitude 79°57'30.02"E - 79°58'42.25"E in Survey of India topo sheet No. 54 P/15 & 63D at an elevation of 308-318m AMSL. The ground water table reported to ranges between 12 meters below the land surface during the post-monsoon season and 24 below the land surface during the pre-monsoon season. Based on the hydro-geological study the stage of groundwater development is reported to be 27 %. and thereby the area was designated as safe area.
- 22.14.9 No National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve etc. are reported to be located in the study area of the project. Schedule-I species of fauna in Amanganj Range are found in the study area, viz., Black Buck, Indian Gazelle, Sloth Bear, Panther or Leopard, Jungle Cat & Indian Pangolin for which Wildlife Conservation Plan was prepared and was also approved by Chief Wildlife Warden of the Govt. of MP. (Annexure C of EIA report)
- 22.14.10 Proposed plant will be sustained on Kakra-Panna limestone mining lease admeasuring 1,594.34 ha. (Production Capacity 4.08 MTPA). The northern boundary of proposed site of the plant adjoins the southern boundary of granted Limestone mining lease. The required fuel Coal/ Pet Coke (0.7/0.3 MTPA) will be procured from Linkage/e-auction/purchase. It is dry process which involve crushing of limestone, pre-blending, drying-cum-grinding of raw materials, homogenization, clinkerisation in a rotary kiln with pre-heater and pre-calcliner, clinker grinding, cement storage and packing.
- 22.14.11 Targeted production capacity of cement is 6.0 MTPA in two phases. The limestone for the cement plant would be procured from the Kakra - Panna limestone mining lease and ore transportation will be done through OLBS system
- 22.14.12 Water requirement of the project is estimated as 5826 KLD for both phases. The water requirement for phase-I is 2875 KLD out of which domestic water requirement of 195 KLD will be met through ground water abstraction, whereas the industrial water requirement of 2680 KLD will be met from Mine Water Storage Tanks (MWST). The permission for drawl of groundwater water is obtained from CGWA vide Letter. No. CGWA/NOC/IND/ORIG/2020/7350 issued by CGWA, New Delhi.
- 22.14.13 The power requirement of the project is estimated as 86 MW, out of which will be obtained from the captive power plant (CPP) of 80 MW and Waste Heat Recovery System (WHRS) of 30 MW.

- 22.14.14 Baseline environmental studies were conducted during summer season i.e., from March 2017 to May 2017. Ambient air quality monitoring has been carried out at sixteen locations and the data submitted indicated as: PM₁₀ (98th percentile) concentrations are reported in the range of 44.3 to 60.0 µg/m³; that of PM_{2.5} (98th percentile) in the range of 20.4 to 35.7 µg/m³; that of SO₂ (98th percentile) in the range of 10.0 to 19.9 µg/m³ and that of NO_x (98th percentile) in the range of 15.1 to 32.1 µg/m³. Results of the prediction modeling study indicates that the maximum incremental concentrations of GLC for the proposed project is 19.74 µg/m³ with respect to the PM₁₀, 1.97 µg/m³ with respect to the PM_{2.5}, 14 µg/m³ with respect to the SO₂ and 34.7 µg/m³ with respect to the NO_x.
- 22.14.15 Ground water quality has been monitored at sixteen locations in the study area and analysed as pH: 6.9 to 7.7 pH, Total Hardness: 72.0 to 688 mg/l, Chlorides: 6.0 to 91.3 mg/l, Fluoride 0.3 to 0.7 mg/l, Heavy metals are within the limits. Surface water samples were analyzed from eleven locations for pH: 7.0 to 8.1 pH; DO: 5.4 to 6.8 mg/l and BOD: 2.0 to 10 mg/l. COD: 4 to 30 mg/l.
- 22.14.16 Noise levels are in the range of 41.8 to 49.4 dB(A) in daytime and 39.4 to 42.8 dB(A) in nighttime.
- 22.14.17 No habitations are in the project area. Thus, R&R is not applicable for the project. However, project proponent made provision for compensation and other benefits for 898 project affected families in terms of land losers {(764 (mines) + 134 (Plant))} in line with LARR 2013 which cost around Rs. 470.92 Cr.
- 22.14.18 It has been reported that a total of 240 TPD of fly ash in each phase will be generated which will be recycled within the process. Other solid waste will be stored in scrap yard and will be disposed of to a scrap vendor. The Hazardous waste shall be disposed of at TSDF or to authorized recyclers. It has been proposed that an area of 66 ha. will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.
- 22.14.19 Consent to Establish/Consent to Operate shall be obtained from State Pollution Control Board / Pollution Control Committee after obtaining EC for the project.
- 22.14.20 Public hearing of the project was held on 17.07.2019 at village Devra, Tehsil Amanganj, Dist. Panna (MP) under the Chairmanship of Shri JP Dhurwe (ADM-Panna) for production of 5.28 MTPA clinker and 6 MTPA cement along with 80 MW captive power plant and 30 MW waste heat recovery system. The issues raised during public hearing are employment, drinking water facility, land compensation and land rate issues, development aspects of the area, development of green belt, pollution control, displacement of people and compensation package, hospital and medical assistance and health related issues. An amount of Rs 30.80 Cr has been earmarked for Corporate Environment Responsibility (CER) based on public hearing issues.
- 22.14.21 The capital cost of the cement plant is Rs. 5586.95 Cr (for Phase-I Rs. 2774.34 Cr & Phase-II Rs. 2812.61 Cr) and the capital cost for environmental protection measures for Cement, TPP & WHRB is proposed as Rs. 199.56 Cr for both phases. The annual recurring cost towards the environmental protection measures is proposed as Rs. 11.92 Cr for both phases. Detailed CER plan has been provided in the EMP in its page No. 10.58.
- 22.14.22 Direct employment generation from the proposed project is envisaged as 820 during operation stage.
- 22.14.23 Greenbelt will be developed in 66 ha. which is about 33% of the total acquired area. A 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will

be planted with a density of 1500 trees per ha. Total Nos. of 99,000 saplings will be planted and developed in 66 ha in 4 years.

- 22.14.24 A litigation is pending towards the proposed project and land at Lok Adalat, Panna (MP) in notice dated 09.08.2019, through Public Court, Panna (MP) from local person, challenging the Public hearing dated 17.07.2019, conducted by RO – MPPCB, Sagar and ADM, Panna. Notice served to MPPCB, DM-Panna & PP. Copies of replies by MPPCB, DM & PP available for ready reference.

Observations of the Committee (EAC meeting held during 29-30th April 2020)

- 22.14.25 The committee made the following observations during discussions.
- i. A trial case is pending in Lok Adalat of Panna regarding the project.
 - ii. Required land for the project is 199.84 ha. Project proponent has been procured 155 ha (77.5%) so far.
 - iii. Water is proposed to be abstracted from groundwater, while Ken River is flowing only 900 m away from project site.
 - iv. Total project cost including mining is Rs 6160 Cr. CER expenditure is not in accordance with the Ministry's OM dated 1st May 2018, i.e., Rs. 38.8 Cr. The activities suggested are not based on the SIA recommendations (Page 130/131 of SIA Report) and public hearing proceedings. Activities envisaged under the CER are mostly related to CSR/ Philanthropy. Project proponent should have included the activities related to COVID-19 also on priority.
 - v. Specific energy consumption in the proposed plant (725 Kcal/kg of Clinker; OPC - 95 kwh/t and PPC- 70 kwh/t) is very high compared to other cement plants in India (670 kcal/kg; OPC- 85 kwh/t and PPC- 65 kwh/t).
 - vi. Only 99000 Nos of trees have been considered for plantation in 66 ha land.
 - vii. Project proponent did not furnish the information related to SO_x and NO_x generation and their control in the process description.
 - viii. There is no commitment to use alternate fuels in the proposed Plant.

Recommendations of the committee (EAC meeting held during 29-30th April 2020)

- 22.14.26 In view of the foregoing, and after detailed deliberations, the Committee sought the following additional information for further consideration of the proposal.
- i. Current status of the pending case at Lok Adalat, Panna shall be furnished.
 - ii. Project proponent should submit documents in support of 100% land acquisition, i.e, for 199.84 ha, in accordance with this Ministry's Office Memorandum vide F.No. 22-76/2014 –IAIII dated 07.10.2014.
 - iii. Project proponent should submit action plan to draw water from Ken River which is 900 m away from project site.
 - iv. CER shall be revised in accordance with the observations and its implementation mechanism also be furnished.
 - v. Project proponent shall furnish action plan for optimization of specific energy consumption for production of both clinker and cement. Process plant design parameters shall be revisited, and energy balance shall be furnished.

- vi. Recharge water calculations indicate that the amount of rainwater harvested is less than 100 % of the annual consumption. The recharge shall be minimum 100 % of the annual consumption.
- vii. Use of Alternate Fuel and Raw Materials (AFR) and corresponding project design and provisions shall be included in the EIA report.
- viii. AAQ modelling for accidental releases shall also be carried out. Based on the results, emergency response shall be furnished.
- ix. Details of process to control SO₂ and NO_x and corresponding APCD to meet latest emission standards for cement and power plants shall be furnished. .
- x. CEMS shall be included in the Environment Management Plan (EMP) to integrate with main plant control center for process as well as emission control as per CPCB Norms.
- xi. Scheme for railway siding and the status of the same shall be furnished.
- xii. For greenbelt development, 2500 trees per ha shall be taken into consideration in accordance with CPCB guidelines.

22.14.27 Project proponent has replied to ADS on 4th June,2020 on PARIVESH portal. the reply is as given below:

i. Current Status of the pending cases at LokAdalat Panna shall be furnished.

Reply:

Background of the Case: A Mediation Proceeding has been initiated by Advocate Chandrabadan Tiwari of Village Devra, Tehsil Amanganj, District Panna (MP) before the Permanent LokAdalat, Panna against (i) the District Collector, Panna, (ii) R.O., MPPCB, Sagar, (iii) The Member Secretary, MPPCB and (iv) Project Proponent.

The Petitioner alleged that Proper procedure was not followed by the Member Secretary and RO of MPPCB while conducting Public Hearing. He had alleged that no intimation was given for the Public hearing and coercion was used during the public hearing, as well as there is a differentiation in the land rate.

All the Non-Applicant Parties (Respondents) have filed their replies before the Permanent LokAdalat and rebutted all allegations with the contention that Prescribed procedure has been followed at all stages for conducting the Public Hearing on 17.07.2019 after giving intimation of Public Hearing. The Public Hearing was conducted by the Additional Collector of Panna and RO, MPPCB. Total 222 number of persons, out of which 157 were land sellers, actively participated in the Public Hearing and shared their appreciation, comments, requirements and concerns. Further, no coercion was used and every participant presented his views freely. It is pertinent to mention that except the Petitioner, no other Participant / Land seller has expressed any kind of grievance. In fact, the Petitioner had also welcomed the Project during his more than 1 hour long speech, at the Public Hearing. In short, all allegations are frivolous and intended for extracting undue benefits from the Project Proponent.

Current Status: The Mediation Proceeding is pending before the Permanent LokAdalat, Panna presided by the Additional District Judge (Chairperson), Panna and lastly the matter was listed/fixed for Mediation on 28.03.2020. However, the proceedings could not be taken up till date due to COVID-19 pandemic precautions being followed by the Courts/Permanent LokAdalat. The next date of hearing has not been fixed as yet and will be notified once the LokAdalat resumes its functioning. We

are confident that this case will be decided in our favor during next hearing as this matter is devoid of any merit.

- ii. Project proponent should submit documents in support of 100% land acquisition, i.e. for 199.84 ha in accordance with this Ministry's Office Memorandum vide F.NO 22-76/2014-IA III dated 07.10.2014.**

Reply:

Very humbly, we would like to submit that the Cement Plant project area of 199.84 ha. comprises of township area 44.122 ha. and open land area 15.98 ha. The land deciphered for plant & colony is being purchased through direct negotiation from land owners. Before the declaration of the Lockdown due to Covid-19 Pandemic, about 155 ha. i.e. 77% of land had been purchased/ allotted. During the period of Lockdown, Consent Letters have been provided by the owners of most essential land making it a contiguous block, on which the Plant can be constructed. List of Khasra numbers for which consent letters have been obtained, making the purchased land contiguous are submitted. With this, the total land purchased / secured is approx. 161 ha. i.e. 81% of the total land required. The purchase process would have been completed if the current Lock down situation, due to COVID 19 pandemic, would not have been necessitated and the process is at stand still since March 2020.

It is to mention that the land use breakup of the project site wherein about 60 ha. is designated to township and open land area. Township of the project area will be constructed a year after the date of start of the construction and further open land of 15.98 ha. will remain open in near future.

As the Bundelkhand region is industrially very backward, people of the area are supportive of the project for their livelihood and to secure a better future for their families.

Considering these facts, the purchased / secured land of 161 ha. will not be a constraint for the construction of the plant. We request the committee to recommend for grant of EC and we wish to assure that -

“We shall start plant construction activity only after 100% land is purchased by us after duly informing the Ministry. This may take 4 to 6 months from the date of start of land registration by Registrar office, with no restriction on age limit for land sellers visiting Registrar's office (Covid-19 guidelines)”.

Plant Layout super imposed on Khasra map showing the Purchased / Secured Land and yet to be Purchased Land is submitted.

- iii. Project proponent should submit the action plan to draw the water from Ken River which is 900 m away from the project site.**

Reply:

Kindly recall the discussion held during the presentation of case before the committee, wherein we had explained the following:

- A. The project is integrated project along with the limestone mining project over 1594 ha. of lease area. The mining operation will intersect the water table during 2nd year of operation and the same will have to be dewatered to carry out mining operations. We shall use this water for industrial use in Plant and Mines, for which we have already obtained NOC from CGWA.

- B. Further, no extraction of ground water is proposed for any industrial use. The ground water extraction of 195 KLD is proposed for domestic use only, for which CGWA has granted permission.
- C. Water is available in KEN River for about 6 months only. Also a dam is constructed approx. 50 km upstream of the plant location and one more dam is also proposed on the upstream side. **Considering that surface water from Ken River is available for a limited period and the fact that seepage water has to be dewatered from the mines, we have not considered use of surface water.**

The above explanations were submitted by us before the committee during our presentation on 29th April'20 and thereafter committee has given consent for withdrawal of ground water for domestic use purposes only.

iv. CER shall be revised in accordance with the observation and its implementation mechanism also be furnished

Reply:

- A. The activities covered in revised CER budget presented below, are based on recommendations of SIA report (Page130/131) and public hearing proceeding. As advised by the Committee, budget has been created for activities related to Covid-19 also.
- B. The activities involving recurring expenditure e.g. Mobile Clinic, Medical Camps, Maternal and Child health, Skill training, Revolving fund for SHGs, Agriculture extension services, Awareness programs etc. have been separately budgeted under CSR head, over and above the CER budget of Rs. 38.80 Cr.
- C. Proposed Capital Budget for Corporate Environment Responsibility (CER) of Cement Plant & Mines (Amount in Rs. Lakhs) On the basis of Public Hearing (PH) Issues, Need Based Assessment (NBA) & Recommendations in SIA Report as given below:

S. No.	Activities	Total (in Rs.Cr)
1.	Health (infrastructure for primary health center, mobile health clinic, veterinary hospitals/ dispensaries)	4.65
2.	Actions for COVID-19 (supply of hospital beds, ventilator, sanitation equipment, ppe kits, body temperature scanner, etc.).	3.50
3.	Education (construction/ extension/ additional facilities e.g. laboratory, library, computer class, toilets, drinking water facilities etc. for village schools)	3.88
4.	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.)	4.27
5.	Sanitation (construct community toilets, construct drainage system, solid waste management etc.).	4.27
6.	Activity Centre for SHGs. SHGs planned for tailoring, production of daily need items, etc. Same facility shall be	2.72

S. No.	Activities	Total (in Rs.Cr)
	used for Skill Development Training for women as well. e.g. beautician course, handicraft etc.	
7.	Infrastructure (concrete roads, electrification including solar power, panchayat bhawan, community centers, etc.)	6.98
8.	Greenery Development Nearby Area -Free distribution of Saplings or seedlings for fruit or non-fruit bearing trees. Community Plantation drive in surrounding villages and schools.Expert guidance to local farmers for adoption of improved agriculture practices to increase of yield of crops & Fodders, Cattle Farming etc.	2.72
9.	Others Local Social Needs	5.82
Total		- 3880
Note: Total Project Cost Plant & Mines is Rs. 6160 Crores, on which the above CER budget has been prepared common for Plant & Mines		

Mechanism of Implementation:

To execute the CER activities, the District Collector, Panna will be requested to constitute the committee comprising of suitable members of the project affected villages along with the representative of Jaykaycem management. The Jaykaycem management shall release the CER funds in coordination with District Collector Panna.

- v. Project proponent shall furnish action plan for optimization of specific energy consumption for production of both clinker and cement. Process plant design parameters shall be revisited, and energy balance shall be furnished.*

Reply:

Energy consumption on production of Clinker, OPC, PPC and heat consumption on clinker production mostly depends on the quality of various inputs like limestone, fly ash, coal etc. Heat of reaction, chemical composition and grindability of the raw material have a large impact on total fuel and power consumed in producing clinker and cement.

With an aim to produce cement with low specific power consumption, selection of technology and equipment shall be done with energy consumption as one of the major deciding factors. Efficient pyro system for clinker production, roller presses and vertical grinding mills for raw material, coal and cement grinding, high efficiency fans, high efficiency HT & LT motors and energy conserving devices such as SPRS and variable frequency drives shall be deployed to reduce the energy consumption.

With the above, we are committed to a specific power consumption of 55.0 Kwh/MT for clinker, 65.0 Kwh/MT for PPC and 85.0 Kwh/MT for OPC and a specific fuel consumption of 705 Kcal/kg clinker. Efforts shall be made to further optimize the energy requirements.

The specific power consumption for the main sections is expected to be as under:

<u>Clinkerization Section</u>		
S.No.	Area	Sp. Power Consumption in kWh/t Clinker
1.	Mines & Crusher	2.5
2.	Raw Material Grinding & Aux.	23.0
3.	Pyro-Section & Aux.	21.0
4.	Coal Mill & Aux.	5.0
5.	Misc. (Utilities & Lighting)	3.5
	Total	55.0

<u>Cement Grinding & Packing Section</u>			
S.No	Raw Material	Cement Grinding (in %)	
		OPC	PPC
1.	Clinker	95	65
2.	Gypsum	5	5
3.	Fly Ash	-	30
	Total	100	100

S.No	Area	Sp. Power Consumption in kWh/t	
		OPC	PPC
1.	Clinkerisation	52.0	36.0
2.	Cement Mill with auxiliaries	30.0	26.0
3.	Packing Plant including conveying & other misc.	3.0	3.0
	Total	85.0	65.0

vi. Recharge water calculation indicate that the amount of rain water harvested is less than 100% of the annual consumption. The recharge shall be minimum 100% of the annual consumption.

Reply:

The total fresh water requirement for the proposed project is

Industrial use in Plant = 2174 m³/ day

Industrial use in Mines = 210 m³/day

The water requirement for industrial use will be met from dewatering of mines.

Domestic use in Plant = 195 m³/day

Domestic use in Mines = 20 m³/day

The water requirement for domestic use will be sourced from proposed bore wells (3 nos. in Plant + 1 no. in Mines)

Thus, annual requirement for industrial and domestic is **948,635 m³ / Annum**

Ground Water Recharge Arrangement					
S.No	Recharge Structure Description	Nos.	m ³ / Day	m ³ / Year	Remarks
1.	Recharge through borewells (all proposed borewells will have a filter pit)	3	259	31,104	Considering 40 Raining days. Rain water falling on roof tops will be collected in drains which are

Ground Water Recharge Arrangement					
S.No	Recharge Structure Description	Nos.	m ³ / Day	m ³ / Year	Remarks
					directed to filter pits of the bore wells.
2.	Recharge through recharge pits (3.0 m x 3.0 m x 2 m filled with filter media of coarse sand, gravel and pebble)	12	259	124,416	40 Rainy days considered. In the open areas and paved areas rain water will be drained through lined drains and collected in the pit to recharge aquifer.
3.	Constructed Pond Bore recharge (1 in Plant area + 2 in Mines Area) 1. MWST -1 (Area - 66616.46 m ²) Near plant boundary in mines 2. MWST-2 (Area 26860.86 m ²) - Mines 3. MWST-3 (Area 25514.39 m ²) - Plant	3	259	31,104	Ponds get filled during rainy days by rain water runoff from its catchment area and mine seepage water through pipeline from mine pit to pond. Each pond shall also be drilled with a bore well of 30-35 m depth for the recharge of deeper aquifer in the rainy season.
4.	Constructed 2 Rain water harvesting ponds 1. RWHP -1 (Area 50,000m ²) - Plant area 2. RWHP -2 (Area 50,000m ²) - Mines area	2	1,603	585,000	Total reservoir volume is 900,000 m ³ cumulative for both RWHP considering 3 m head and water penetration to ground considered 65%
A.	Total Rain water recharge in Plant	20		771,624	Adding 1+2+3+4
5.	Constructed 4 Rain water harvesting ponds in mines 1. RWHP -1 (Area 82,555.23 m ²) 2. RWHP -2 (Area 51,956.29m ²) 3. RWHP -3 (Area 51,956.29m ²) 3. RWHP -4 (Area 9,968.04 m ²)	4		943,262	Same is mentioned in CGWA permission
6.	Mine Water recharge pond MWRP-1	1	1,562	570,259	Available mine water after industrial use

Ground Water Recharge Arrangement					
S.No	Recharge Structure Description	Nos.	m ³ / Day	m ³ / Year	Remarks
B.	Total Rain water recharge through recharge ponds in mines	5		1,513,521	
C.	Total rain water recharge plant and mines (A+B)	25		2,285,145	
D.	Total fresh water required for industrial and domestic use		2,599	948,635	
Hence, We are recharging 2.4 times i.e. 240% of the water that will be used from ground water					

Therefore, total water consumption is estimated as 9,48,635 m³ / annum and total recharge is projected as 22,85,145 m³ / annum which is 240% of the fresh water requirement.

vii. *Use of alternate fuel and raw material (AFR) and corresponding project design and provisions shall be included in EIA report.*

Reply:

Use of high calorific hazardous waste in proposed cement plant has been mentioned in EIA/ EMP Report Chapter-2, Para No. 2.12.

Experience of using AFR at group's existing cement plants at Rajasthan and Karnataka, wherein, the company currently using various types of solid and liquid wastes, shall be greatly beneficial in utilizing AFR at the proposed project at Panna. The company currently using RDF from nearby municipal bodies, at our integrated Plants located in Rajasthan and Karnataka. In addition, the company also procuring other solid and liquid industrial wastes from pharma /fast moving commodity goods/chemical industries, through designated waste collection & disposing agencies, under a long term agreement, at a negative cost. Covered storage& conveying as well as calibrated dosing facilities have been installed to use different types of such wastes for co-processing.

Based on the above mentioned experience, the proposed project has already been envisaged to co-process various solid as well as liquid wastes, as per their availability, in the nearby areas of the project. The plant has been conceptualized with proper AFR storage, handling, conveying, dosing and firing of AFR in calciner. Facilities shall be created for storage and consumption of AFR material such as spent sludge, waste polythene, RDF etc. All necessary safety guidelines shall be followed for AFR handing, storage and conveying inside the plant.

viii. *AAQ modeling for accidental release shall also be carried out. Based on the result emergency response shall be furnished.*

Reply:

Accidental release of pollutant may be attributed to the following scenarios which may be considered as **worst** case scenario as detailed below:

1. Raw Mill + Kiln Bag House (RMBH) - Although there are enough safety interlocks, still the Worst case will be an explosion due to CO. In that case, the RMBH fan will

trip instantaneously, say after 10 Sec. of event occurrence and finally come to a standstill in 2 minutes. The dust load in the BH will be equivalent to max 4 minutes of normal operational dust load. This is the quantity that will get released to atmosphere through damaged casing and not through main stack.

2. Coal Mill Bag House - Although there are enough safety interlocks, still the Worst case will be an explosion. In that case, the BH fan will trip instantaneously, say after 10 Sec. of event occurrence and finally come to a standstill in 2 minutes. The dust load in the BH will be equivalent to max 4 minutes of normal operational dust load. This is the quantity that will get released to atmosphere through damaged casing and not through main stack.
3. CPP ESP - Although there are enough safety interlocks, still the worst case will be an Explosion. In that case, the ESP fan will trip instantaneously, say after 10 secs of event occurrence and finally come to a standstill in 2 minutes. The dust load in the BH will be equivalent to max 4 minutes of normal operational dust load. This is the quantity that will get released to atmosphere through damaged casing and not through main stack.
4. Cement Mill Bag House- No possibility of accidental release of dust and hence not to be considered in modeling. In Cement Mill Bag filter, very few bags can fail leading to higher emission. This is sensed by CEMS and immediately corrective action taken after stopping the Cement Mill.
5. Limestone Crusher Bag Filter - No possibility of accidental release of dust and hence not to be considered in modeling. In Limestone Crusher filter, very few bags can fail leading to higher emission. This is sensed by CEMS and immediately corrective action taken after stopping the Limestone crusher.
6. Apart from above, two accident scenarios can take place in storage silos –
 - a) Collapse of Clinker Silo roof - This has happened in few Plants due to faulty erection / overheating of structural roof members etc. However, no dust escapes to atmosphere and hence there will not be any effect on AAQ.
 - b) Collapse of Blending silo - This has also happened in few cases, the only reason being faulty construction of silo. Silo being a concrete cylindrical tank, if this happens, then the stored raw meal powder material which in our case will be around 12,000 MT, drops and disperses in an area of around 300 to 500 mtrs. all around the silo. Thus, this also remains confined to a large extent in Plant area only.
7. On the basis of that total dust load to disperse has been calculated and modeling has been done through AERMOD. The situation considered for this AAQ modeling is with the assumption that all major pollution control equipment will totally fail at once during full production of the Plant. This is a hypothetical situation and can occur only in a natural calamity. **However, in such a situation the whole plant will in any case be stopped immediately and hence, these emission levels will never occur.** All the major stacks of the plant are provided with CEMS. CEMS of all the stacks are connected to plant central control room for online display of emission values and alert messages. **Suitable interlocks will be provided for tripping of the Plant in case emission values exceed pre-set values.**

ix. Details of process to control SO₂ and NO_x and corresponding APCD to meet latest emission standards for cement and power plants shall be furnished

Reply:

A. Cement Plant:

To control the NO_x emission in the cement plant, following technologies shall be used:

- i. Low NO_x Burner - To control the thermal NO_x, Low NO_x burner utilizes very less amount of primary air, thus reducing the availability of N₂ for converting to NO_x.
- ii. Pre Heater with Low NO_x Calciner - The NO_x concentration generated through fuel & thermal NO_x are reduced through creating localized reducing zone in the Calciner with the help of air split & secondary burner location.
- iii. Meal Split - A small amount of un-calcined material from upper stages of Pre-heater is diverted to specific temperature zone at kiln riser & Calciner to convert NO_x back to N₂ with the help CO₂.
- iv. The Maximum daily mean concentration of NO_x, expressed as NO₂ will not exceed **600 mg/Nm³** in the main stack.
- v. To control the SO_x emission following shall be used:
- vi. Fuel SO_x - It will be minimized with proper raw mix design to control the sulphur & alkalis present in the raw material. Additional alkali source may be used if in case raw material is in-efficient to provide control in the desirable range.
- vii. The Maximum daily mean concentration of SO_x, expressed as SO₂ will not exceed **100 mg/Nm³** in the main stack.

B. Captive Power Plant:

- i. The Circulating Fluidized Bed Combustion (CFBC) boilers are the most advanced steam generator technology. Among many distinguishable advantage of CFBC boilers, they achieve low NO_x & SO_x emission by capturing Sulphur contents of the Fuel during the burning process.
- ii. The high concentration of bed material in CFBC boilers along with staged air supply ensures that bulk combustion temperature do not exceed 850-900 °C making it environment friendly (lesser production of NO_x) means of utilizing coal.
- iii. The Maximum daily mean concentration of NO_x, expressed as NO₂ will not exceed **95 mg/Nm³** in the main stack.
- iv. Flue gas desulphurization (FGD) is the process where SO₂ gases are absorbed from the exhaust gases by using alkali reagent & clean gases are exhausted from chimney into atmosphere.
- v. Limestone/lime powder shall be injected into combustion furnace and/or in the conversion zone of the boiler for SO₂ absorption. Limestone/lime powder reacts with SO₂ and forms a mixture of calcium sulphites, calcium sulphates and reacted reagents.
- vi. The Maximum daily mean concentration of SO_x, expressed as SO₂ will not exceed **100 mg/Nm³** in the main stack.
- x. ***CEMS shall be included in the environment management plan to integrate with main plant control center for process as well as emission control as per CPCB norms.***

Reply:

It has already been provisioned and further assured that CEMS shall be integrated with main Plant control center for process as well as emission control as per CPCB norms.

xi. Scheme for railway siding and the status of the same shall be furnished

Reply:

Presently Amanganj does not have any railway connectivity. However, the development of new Railway Line between Jabalpur – Damoh – Amanganj – Panna having approximate distance of 120 km is in the future plan of Indian Railways. Once this proposed Railway Line between Jabalpur – Damoh – Amanganj – Panna is developed, our Company will also get connected with Railway network, through its Railway Siding in accordance with its business requirement.

xii. For green belt development 2500 trees per ha. shall be taken into consideration accordance with CPCB guideline.

Reply:

It is submitted that the soil of the area is sandy loamy type. Therefore, plantation at the rate of 2,500 number per ha. is difficult. After the detailed discussion in the previous EAC meeting, Honorable Chairman has permitted the green belt plan with 2,000 Number per ha., and therefore, we hereby provide our commitment that instead of 99,000, we shall develop the green belt with 1,32,000 number over 66 ha of area.

Green Belt Development			
Year	Area in ha.	%	Number @ 2000
1 st	15	22.73	30,000
2 nd	20	30.30	40,000
3 rd	20	30.30	40,000
4 th	11	16.67	22,000
Total	66	100.00	132,000

Observations of the committee (EAC meeting held during 25-26th June 2020)

22.14.28 During discussion on the ADS reply, the committee made the following observations.

- i. The court case before Lok Adalat is still pending.
- ii. The complete land, 199.84 ha has not been acquired. Out of total land, 160.99 ha (approx.80.5) land is available (purchased land 155ha + obtained consent from farmers for land 10.99ha). Several land patches adjacent to the plant, which are owned by farmers, are yet to be acquired or to be obtained consent.
- iii. Rs. 38.8 Cr is allocated for CER activities based on issues raised in the public hearing and need based social assessment. District collector will be requested to constitute the committee for implementation.
- iv. Optimization of plant and process parameters for minimizing the specific power consumption is satisfactory.
- v. Rain Water Harvesting plan is satisfactory.

Recommendations of the committee (EAC meeting held during 25-26th June 2020)

22.14.29 In view of the foregoing, after deliberations, the committee deferred the consideration of the proposal in view of (i) non-availability of part of the project land to the project

proponent in compliance with the Ministry's OM dated 7th October 2014 and (ii) pending court case in Lok Adalat, Panna.

22.14.30 Project proponent has submitted additional details on 12.07.2020 as given below.

i. Non-availability of part of the project land to the Project proponent in compliance with the Ministry's Office Memorandum vide F. No. 22-76/2014-IA III dated 07.10.2014:

- As on date, company purchased/allotted 150.41 ha land and secured 5.08 ha land through consent letter duly obtained from the landowners. The total purchased/secured land is 155.49 ha. The certified copies of revenue records (140.98 ha), Govt. land allotment letter (7.44 ha), recent Sale Deeds (1.99 ha), consent letters for the balance land (5.08 ha) were obtained.
- Out of purchased/secured land, 123.25 ha is contiguous land which is sufficient for the proposed cement plant capacity of 2.64 MTPA X 2 Phases along with optimized township, truck parking as well as 33% greenbelt area i.e. 40.67 ha.
- Remaining purchased land area is kept reserved for the future expansion of the Company.
- The purchased / secured contiguous block of land of 123.25 ha land shall not be a constraint for the construction and operation of the existing proposal of Plant.

ii. Pending Court case before Lok Adalat, Panna:

Current Status: The Mediation Proceeding is pending before the Permanent Lok Adalat, Panna presided by the Additional District Judge (Chairperson), Panna and lastly the matter was listed/fixd for Mediation on 28.03.2020. However, the proceedings could not be taken up till date due to COVID-19 pandemic precautions being followed by the Courts/Permanent Lok Adalat. The next date of hearing has not been fixed as yet and will be notified once the Lok Adalat resumes its functioning.

Observations of the committee (EAC meeting held during 30th July -1st August 2020)

22.14.31 Complete land as proposed, 199.84 ha is not available. At present, a contiguous block of 123.25 ha is secured for plant construction.

22.14.32 Case in the Lok Adalat pertaining to various issues has not been resolved. The Committee also noted that one of the issues raised in Lok Adalat was related to the Public Hearing that the due process was not observed. The committee noted that the Public hearing proceedings and action thereon are part of the EIA report which the Committee is expected to examine.

Recommendations of the committee (EAC meeting held during 30th July-1st Aug 2020)

22.14.33 In view of the foregoing, after deliberations, the committee deferred the consideration of the proposal in view of (i) non-availability of part of the project land to the project proponent in compliance with the Ministry's OM dated 7th October 2014 and (ii) pending court case in Lok Adalat, Panna.

22.14.34 The project proponent represented the Ministry vide email dated 5th August 2020. The Ministry examined the representation and referred the proposal to committee for consideration.

Observations of the Committee

22.14.35 The Committee noted the following:

- i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing.
- ii. Additional information submitted by the project proponent was found to be satisfactory, and addressing the concerns of the Committee.

Recommendations of the Committee

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

A. Specific conditions

- i. Project proponent shall comply with the outcome of the court case pending before the Lok Adalat, Panna.
- ii. Following points shall be complied.
 - a. Residential colony as proposed by PP in North East direction of the plot is not permitted. PP shall not construct any residential accommodation inside the project area.
 - b. CPP shall be relocated in the area allocated for colony to reduce dust and noise impact on village in south west area of the proposed site.
 - c. A 100 m wide green belt shall be provided on south west side of the plant to protect the village from pollution.
 - d. Revised lay out map to this effect shall be furnished within 15 days to the Ministry and its Regional Office for records.
- iii. No further addition of plant and machinery shall be permitted in the present plot for capacity expansion.
- iv. Only surface water shall be used and ground water abstraction shall not be permitted.
- v. CER expenditure shall be Rs. 38.8 Crores and all CER activities shall be executed in three years.
- vi. Health checkup center for Employees and Community shall be arranged with Health cards to neighboring community dwellers.
- vii. Particulate emission shall be restricted to 20 mg/Nm³ instead of 25 mg/Nm³ as proposed by PP. PP had agreed for the revised PM levels as the site has dwellings and agriculture land just within 200 m from plant boundary.

- viii. Energy consumption in proposed plant (Thermal- 725 Kcal/kg Clinker; OPC 95 kwh/t and PPC- 70 kwh/t) is very high in comparison to other cement plants in India (Thermal- 670 kcal/kg; OPC- 85 kwh/t and PPC- 65 kwh/t). PP shall install state of the art technology to conserve energy and meet GOI's targets for GHG emissions.
- ix. 2-3 % Alternate fuels shall be used. Monitoring of emissions shall be carried out as per MoEF&CC notifications applicable to use of alternate fuels.
- x. Greenbelt shall be provided in the villages on southern side of the plant area. This will in addition to normal green belt of 33 % inside the plant using 2500 trees per ha.
- xi. Plant shall operate on ZLD.
- xii. 100 % Solid waste generated shall be reused.
- xiii. All plant roads shall be paved and cleaned regularly using industrial vacuum cleaners. Dust collected from roads and shop floors shall be recycled.
- xiv. RWH and GW recharge shall be carried out to recharge more than 100 % of annual water consumption.

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 (CEMS) at process stacks to monitor stack emission as well as 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 labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- iv. Ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;
- v. Provide wind shelter fence and chemical spraying on the raw material stock piles; and

- vi. 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
- vii. Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, cement bagging plants.

III. Water quality monitoring and preservation

- i. 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 recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- ii. Adhere to 'Zero Liquid Discharge'.
- 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 minimise water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

- i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc to minimize the energy consumption.
- ii. Maximize utilization of alternate fuels and Co-processing to achieve best practice norms

VI. Waste management

- i. 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 a 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 programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

- iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

22.15 Transfer of 18MW Captive Power Plant (CPP) to M/s JSW Energy Ltd from the integrated cement plant (Clinker- 2.5 MTPA; Cement – 4.8 MTPA) of **M/s JSW Cement Ltd** located at village Gudivemula, **District Kurnool, Andhra Pradesh** [Online Proposal No. IA/AP/IND/168526/2020; MoEF&CC File No. J-11011/889/2007-IA.II(I)] - **Amendment in Environmental Clearance- regarding.**

- 22.15.1 M/s. JSW Cement Limited has made an online application vide proposal no. IA/AP/IND/168526/2020 dated 17/08/2020 along with Form 4 and sought for amendment in the Environment Clearance accorded by the Ministry vide letter no. J-11011/889/2007-IAII(I) dated 09/03/2016 regarding the partial transfer of 18 MW CPP in the name of M/s. JSW Energy Limited.

Details submitted by the project proponent

- 22.15.2 JSW Cement Limited (formerly M/s Gayathri Cements), village Gadivemula, Distt. Kurnool, Andhra Pradesh has obtained Environment Clearance for manufacture of 2.0 MTPA Clinker, 1.1 MTPA Portland Slag cement & 1.1 MTPA Ordinary Portland Cement and setting up of 36 MW (2x18 MW) Captive Power Plant from MoEF&CC vide letter J-11011/889/2007-IA II (I) dated 25/08/2008. The EC was subsequently amended for expansion of cement grinding unit from 2.2 MTPA to 4.8 MTPA vide letter ref. J-11011-/159/2010-IA-II (I) dated 13/05/2011 and again for enhancement of clinker production capacity from 2.0 to 2.5 MTPA and change in product mix from 4.8 MTPA (1.1 MTPA OPC & 3.7 MTPA PSC) to 4.8 MTPA (1.1 OPC + 3.7 PSC/GGBS) vide letter ref. J-11011/889/2007-IA-II (I) dated 09/03/2016.

S.No	EC Letter No.	Dated	Capacities mentioned in EC
1	F.No J-11011/889/2007-IA II (I)	25/08/2008	Clinker – 2.0 MTPA, PSC – 1.1 MTPA, OPC – 1.1 MTPA, CPP – 36 MW
2	F.No J-11011/159/2010-IA-II (I)	13/05/2011	Cement Grinding - 4.8 MTPA
3	F.No J-11011/889/2007-IA II (I)	9 th March 2016	Clinker – 2.5 MTPA, Cement / GGBS – 4.8 MTPA, CPP – 36 MW

Reason for transfer:

- 22.15.3 Now, JSW Cement Limited intends to transfer 1 x 18 MW Captive Power Plant to JSW Energy Limited, who have expertise and technical knowhow in the construction, operation and maintenance of Power Plants.

Observations of the Committee

- 22.15.4 The Committee noted the following:
- i. JSWCL want to transfer their 18 MW CPP to JSWEL along with 10 ha land.
 - ii. Reason for transfer is to bring synergy in the group companies. JSWEL is specialized in power business.

Recommendations

- 22.15.5 The committee deliberated on the proposal and recommended to return the proposal in present form due to the following:
- i. PP shall obtain permission from concerned authority to retain captive status of CPP while ownership rests with the third party.
 - ii. On receipt of the above, PP shall apply for amendment of Cement Plant EC and simultaneously for EC from concerned competent authority for the 18 MW CPP.

- 22.16 OA No. 110(THC)/ 2012, OA No. 73/2014, OA No.13/2014, OA No.186/2014 and OA No. 287/2017 in the Matter of Threat to Life Arising out of Coal mining in South Garo Hills District vs State of Meghalaya & Ors etc. - **Action plan for restoration of environment in areas affected by coal mining in Meghalaya based on NGT Committee recommendations - regarding.**

- 22.16.1 This has reference to the NGT order dated 31.08.2018 OA No. 110(THC)/ 2012 regarding

illegal coal mining in the state of Meghalaya. An independent committee was constituted by NGT in aforementioned order for restoration of environment and rehabilitation of victims. The committee in its 21st meeting held on 14.02.2020, reviewed the action plan on the following agenda.

- Review the action plan prepared by the NGT Committee for restoration of environment in coal mine affected areas in Meghalaya.
- Review the status of implementation of the Action plan prepared by the NGT Committee

22.16.2 One of the point regarding prevention of Acid Mine Drainage (AMD) was discussed by the committee. Generation of AMD from coal dumps of cement factories and their captive power plants is the subject pertaining to Industry-1 sector of IA -II division of the Ministry.

22.16.3 The committee mentioned that relating to action plan for amendment of environment clearance (EC) already granted to the cement plants and captive power plants to stipulate additional conditions in such ECs to provide for mitigation measures , covering of dumps by permanent sheds/water proof tarpaulin and construction of garland drains along with AMD storage tanks and treatment of the same, have not been stipulated, a status report on the implementation in this regard shall be furnished by SEIAA Member Secretary/ RO MoEF&CC, Shillong.

22.16.4 In this regard, RO Shillong informed the Ministry vide letter even no. dated 18/02/2020 by forwarding the aforementioned NGT order and action plan. Further, RO Shillong requested for action taken for stipulating additional conditions in the ECs granted to seven cement industries operating in the state of Meghalaya on 02.03.2020, 22.06.2020 and 24.07.2020 along with proceedings of 23rd sitting of the committee on 01.07.2020 was also forwarded. In the meeting, DDG, MoEF&CC, RO Shillong was requested to issue a reminder to MoEF&CC to do needful within four weeks.

22.16.5 The Ministry examined minutes of the NGT committee and decided to implement the action plan in the all the cement plants as given below which was accorded EC by MoEF&CC by stipulating additional condition in their respective ECs.

Sl. No.	Name of the Company	EC No. and Date	Production Capacity
1.	Cement Clinker Unit (1.75 MTPA) and CPP (30MW) at Lumshnong. Taluka Khiliehriat. JaintiaHils. Meghalaya by M/s Star Cement Ltd.	J-11011/754/2007-IA.II (I) dated 28.10.2009	Cement Clinker Unit (1.75 MTPA) CPP (30MW)
2.	Proposal Modernization and Expansion of Cement Production Capacity (0.795 MTPA to 0.990 MTPA) by installation of pre-grinder (Roller Press/vertical Roller Mill) with existing Cement ball mill (no increase in clinker production) at LumshnongKhliehriat. East Jaintia Hills by M/s Star Cement Ltd.	J-11011/225/2016-IA. II (I) dated 23.02.2017	Clinker (0.792 MTPA). Cement (0.990 MTPA)
3.	Cement (1.5 MTPA). Clinker (1.3 MTPA) along with CPP (25MW) at Thangskai. Jaintia Hills Meghalaya	J-11011/190/2007-IA.II (I) dated 19.06.2008 and	Cement (1.5 MTPA). Clinker (1.3 MTPA) CPP

Sl. No.	Name of the Company	EC No. and Date	Production Capacity
	by M/s Adhunik Cement Ltd.	04.05.2010	(25MW)
4.	Cement Plant (Clinker (1.65 MTPA; Cement 2.54 MTPA) along with Captive Thermal Power Plant (2x20MW) at MusiangLamare (old) P.O. ChiruphiJaintia Hills Meghalaya by M/s Goldstone Cements Ltd.	J-11011/851/2008IA.II (I) dated 30.09.2010	Clinker (1.65 MTPA). Cement (2.54 MTPA). Captive TPP (2x20MW)
5.	Cement Plant (Clinker1.42; cement 1.5 MTPA) along with Captive Power Plant (25MW) near VilageUmlaper. Jaintia Hills Meghalaya by M/s Amrit Cement Industries Ltd	J-11011/75/2009-IA.II (I) Dated 17.03.2010 and 24.07.2012	Clinker (1.42 MTPA) Cement (1.5 MTPA) PPP (25MW)
6.	Integrated Cement Plant (Cement 3000 TPD & Clinker 2500 TPD) coal based Captive TPP (10MW) near 116 Km Stone NH-44. Village Mynkre. P.O. Khliehriat. Jaintia Hills. Meghalaya by M/s Hill Cement company Ltd.	J-11011/762/2007-IA.II (I) dated 03.06.2009	Cement (3000 TPD). Clinker (2500 TPD) coal based Captive TPP (10MW)
7.	Modernization and expansion of cement plant (Clinkerisation) from 2.84.000 TPA to 3.96.000 TPA at Mawmluh by M/s MCCL.	J-11011/111/2008-IA.II (I) dated 26.07.2006	Expansion of cement Plant (Clinkerisation) from 2.84.000 TPA to 3.96.000 TPA

22.16.6 Ministry has issued OM No. 22-34/2018-III dated 09.08.2018 for standard EC conditions for integrated cement plant. Wherein as part of **Water quality monitoring and preservation**, the following condition is being prescribed for all integrated cement plants which are recommended for EC.

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.

22.16.7 The above condition is being prescribed for storm water management only. Collection tanks for AMD and its treatment was not considered till date for handling stock piles of high sulphur coal. Therefore, the Ministry has referred the matter to EAC (Industry-1) for deliberations in order to prescribe a standard condition to handle the issue of AMD.

Observations of the Committee

22.16.8 The Committee noted the following:

- i. Leachate from the stock piles of high Sulphur coal was not dealt in the standard conditions prescribed by the committee.
- ii. Though the stock piles are recommended to stack in the covered sheds, the humidity in the north eastern coal will lead to leachate formation. This leachate contain high sulphur in the form of sulphides, sulphates/sulphites and other mineral compounds/acids.
- iii. The leachate shall be stored in storage tanks for further treatment which needs a quantity estimation of leachate, physic-chemical characteristics of coal to assess treatability and to design treatment process.

- iv. In view of above, there should be advisory and supervisory mechanism for implementation of the treatment of leachate.

Recommendations of the Committee

22.16.9 In view of foregoing, after deliberations, the Committee recommended to stipulate the following additional Specific condition in ECs referred above;

“Storage areas/ stockpiles for coal in the unit shall be covered and shall have impervious flooring. Garland drains shall be provided around the storage area/ Stockpiles to arrest the seepage water from coal yard. The seepage water thus collected shall be treated to meet industry specific / general discharge norms for water quality as applicable.” In this regard, the compliance status shall be furnished to the Regional Office periodically along with the six monthly compliance report.

22.17 Manganese Ore Beneficiation Plant (Capacity - 0.5 MTPA) by **M/s Badebaba Mining and Consultancy LLP** located at village Selwa, tehsil - Katangi, **District - Balaghat, Madhya Pradesh** [Online Proposal No. IA/MP/IND/165208/2020; MoEF&CC; File No. IA-J-11011/177/2020-IA-II(I)] – **Prescribing Terms of Reference (ToR) – regarding.**

22.17.1 M/s Badebaba Mining and Consultancy LLP has made online application vide proposal No. IA/MP/IND/165208/2020 dated 25.07.2020 in prescribed Form -1 and other documents for proposing Terms of Reference (ToR) for undertaking detailed EIA study for the proposed project mentioned in the subject. The proposed activity listed in the schedule of EIA Notification 2006 at Sl.no.2 (b) Mineral beneficiation under category ‘A’ and is appraised at the central level.

Details submitted by the project proponent

22.17.2 M/s Badebaba Mining and Consultancy LLP has proposed to set up a Manganese Ore Beneficiation Plant (Capacity - 0.5 MTPA) by located at village Selwa, tehsil - Katangi, District - Balaghat, Madhya Pradesh.

22.17.3 The land area acquired for the proposed plant is 3.06 ha. No forestland is involved. The entire land has been taken on lease for the project. 1.0 ha (33%) land will be used for green belt development.

22.17.4 No national park/wildlife sanctuary/biosphere reserve/tiger reserve etc. are reported to be located in the study area of the project. The area also does not report to form corridor for Schedule-I fauna.

22.17.5 Total project cost is approx. Rs 5.0 Crore. Proposed employment generation from proposed project will be for 38 nos. of people through direct and indirect employment.

22.17.6 The targeted production of the plant is 0.5 MTPA. The ore for the plant will be procured Private manganese mines, Manganese Ore India Private Limited (MOIL) of Balaghat District. The ore transportation will be done through Road.

22.17.7 Based on annual installed capacity of the plant; Total requirement of power for the unit is 500 KW. The total power demand of the plant will be met from MPEB.

22.17.8 The details of raw materials, production and waste generation is as given below:

Input		Output		Utilization
Material	Qty	Material	Qty (MTPA)	

1	Mn Ore	0.5	Beneficiated Ore	0.375	All final Product will be supplied to ferro alloys unit
2	-	-	Tailing	0.125	All tailing will be used as backfill material in abandoned Mn mines.
	Total	0.5	Total	0.5	

22.17.9 Total process water requirement for the proposed project will be 296 KLD which include 292 KLD for industrial use and 4 KLD for domestic and other use. Domestic wastewater will be treated in septic tank and all industrial waste water generated will be reused in the process.

Observations of the committee

22.17.10 The Committee noted the following:

- i. The project cost is 5 Crores.
- ii. Gravity concentration techniques and Mag separation are being adopted to upgrade Mn Ore.

Recommendations of the committee

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

- i. EMP Matrix indicating; EMP details: Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology shall be furnished in the EIA report.
- ii. Chandan River is nearby (1 KM), hence PP may explore for surface water usage only.
- iii. Rejects shall be used for back filling
- iv. Plant shall operate on ZLD.
- v. 100 % Solid waste generated shall be reused.
- vi. All plant roads shall be paved and cleaned regularly using industrial vacuum cleaners. Dust collected from roads and shop floors shall be recycled.
- vii. Green belt shall be developed in 33 % of plant area.
- viii. RWH and GW recharge shall be carried out to recharge more than 100 % of annual water consumption.
- ix. Regular Health Checkup for Mn poisoning shall be carried out on employees.

22.18 Production of 45,000 TPA M.S. Billets; 76,200 TPA TMT Bars; Total 76,200 TPA M.S. Billets; 76,200 TPA TMT Bars by **M/s New Steel Trading Pvt. Ltd.**, at Survey No. 5/1 (pt), 6/3, 4, 5, 13 and 46/1, village Vasuri (Kd), Tal – Wada, **District – Palghar, Maharashtra.** [Online Proposal No. IA/MH/IND/82035/2018; MoEF&CC; File No. IA-J-11011/326/2018-IA-II(I)] - **Re-consideration for ToR based on order of NGT dated 27.02.2019- regarding.**

22.18.1 The aforesaid proposal was considered by the EAC at its 3rd meeting held on 9-11th January, 2019 wherein the Committee has recommended for grant of ToR for undertaking EIA study.

22.18.2 Based on the EAC recommendations, the file was processed. During the processing, the Hon'ble National Green Tribunal vide its order dated 27/02/2019 in O.A 105 of 2018, Indian Council for Enviro-Legal Action Vs MoEF&CC directed the following:

“.....operation of all the brick kilns, Commercial Mining, Stone quarrying and Crushing units, setting of industries causing pollution, use of production or processing of any hazardous substances will be prohibited within 10 km Eco-sensitive zone of Tansa Wildlife Sanctuary. We, therefore, direct all the concerned Authorities to immediately take action to completely stop operation of all the brick kilns and polluting industries in Tansa Valley falling within 10 km distance from the boundary of the Tansa Wildlife Sanctuary forthwith.”

22.18.3 In view of the above, the proposal was referred back to EAC for taking appropriate view in the matter. Meanwhile, PP vide letter 25/08/2020 requested the Ministry to grant the ToR for the project cited above.

Observations of the committee

22.18.4 The Committee noted the following:

- i. Taken cognizance of the Hon'ble National Green Tribunal order dated 27/02/2019 in O.A 105 of 2018, Indian Council for Enviro-Legal Action Vs MoEF&CC and observed that all the concerned Authorities to immediately take action to completely stop operation of all the brick kilns and polluting industries in Tansa Valley falling within 10 km distance from the boundary of the Tansa Wildlife Sanctuary.
- ii. ToR for the instant proposal shall not be accorded in pursuance of the Hon'ble NGT order dated 27/02/2019.

Recommendations of the committee

22.18.5 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in present form in light of the Hon'ble NGT order dated 27/02/2019 and also opined that recommendations made in the EAC meeting 9-11th January, 2019 for the instant proposal stands withdrawn.

22.19 Addition of wood in the existing raw material mix (Bagasse or Wheat straw, imported soft wood Pulp/Imported waste paper, soap stone powder by **M/s Mohit Paper Mills limited** located at 9th Km stone, Nagina Road, Village Abdullpur Munna, Tehsil and **District Bijnor (Uttar Pradesh)** - [Online Proposal No. IA/UP/IND/110895/2019, File No. J-11011/130/2017-IA II (I)]- **Amendment in Environmental Clearance-** regarding

22.19.1 Consideration of the proposal was deferred as the Project Proponent did not attend the meeting.

22.19.2 The Member Secretary requested the EAC to carry out the due-diligence based on the documents submitted by the PP on PARIVESH.

22.19.3 EAC noted that as per the provisions of the EIA Notification, 2006 which states that “Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative”. In this regard, after deliberations, the EAC is of the considered view that participation of applicant in person (or) authorized representative is very much essential due to facilitate the following:

- To conduct the meetings in a transparent manner.
- To get consent of the PP while prescribing the conditions for which the proposal is considered by the EAC.
- To clarify the technical queries/concerns of EAC which might emerge during the appraisal.

22.19.4 In view of the foregoing and deliberations, the Committee deferred the consideration of the proposal.

22.20 Proposed Modernization and Expansion Plan (MEP) of Existing Paper/Board Manufacturing Plant by **M/s JK Paper Limited located** at JKPL Unit: CPM, Fort Songadh, P.O Central Pulp Mills, **District Tapi, Gujarat** – [Proposal No. IA/GJ/IND/138412/2020, MoEF&CC File No.J-11011/416/2008-IAII(I)] – **Amendment in EC conditions pertaining to water consumption, energy consumption and coal consumption** - regarding.

22.20.1 The aforesaid proposal was listed for consideration before the EAC in its 17th meeting held on 9/04/2020 and 18th meeting held on 29-30th April, 2020. The requisite VC link was sent to the registered email of project proponent. However, project proponent did not participate in the VC meeting no intimation was received till date from the project proponent.

22.20.2 The Member Secretary requested the EAC to carry out the due-diligence based on the documents submitted by the PP on PARIVESH and as per the provisions of the EIA Notification, 2006 which states that “Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative”. In this regard, after deliberations, the EAC is of the considered view that participation of applicant in person (or) authorized representative is very much essential due to facilitate the following:

- To conduct the meetings in a transparent manner.
- To get a mutual consent of the PP while prescribing the conditions for which the proposal is considered by the EAC.
- To clarify the technical queries/concerns of EAC which might emerge during the appraisal.

22.20.3 In view of the foregoing and deliberations, the Committee deferred the consideration of the proposal.

22.21 Proposed enhancement of clinker production from 3.043 to 3.5 MTPA by optimizing process operation in the existing units by **M/s. My Home Industries Pvt Ltd** located at village & mandal Mallacheruvu, **District Suryapet, Telangana** –[Online Proposal No. IA/TG/IND/156240/2020, File No. J-11011/215/2013-IA-II(I)]- **Amendment in Environmental Clearance** – regarding.

22.21.1 M/s. My Home Industries Pvt Ltd has made online application vide proposal No. IA/TG/IND/156240/2020 dated 15.06.2020 in prescribed Form -4 and other documents for seeking amendment in Environmental Clearance (EC) for the project mentioned above.

Details submitted by the project proponent

22.21.2 M/s My Home Industries Pvt Ltd was granted EC vide letter F.No. J-11011/215/2013–IA.II (I) dated 21.01.2020.

22.21.3 A factual Correction in the EC dated 21.01.2020 has to be made as given below.

For	Read as
EC dated 21.01.2020	EC dated 21.01.2020
<p>This refers to the application of M/s My Home Industries Pvt Ltd made vide proposal No. IA/TG/IND/102408/2019 dated 16.04.2019 along with Form -2 along with addendum EIA report and sought for environmental clearance for enhancement in the clinker production from 3.043 MTPA to 3.5 MTPA through process optimization in the existing kilns under para 7(ii) of EIA Notification 2006. The proposed activity is listed at Sl.No.3(a) Metallurgical Industries (Ferrous and Non-ferrous) under category A of EIA Notification 2006 and the project is appraised at central level.</p>	<p>This has reference to your online application vide proposal No. IA/TG/IND/102408/2019 dated 16.04.2019 in prescribed Form -2 along with addendum to the EIA report and other documents for seeking enhancement of clinker production in the project mentioned in the subject. The proposed activity listed in the schedule of EIA Notification 2006 at Sl.no.3 (b) Cement Plants under category A and is appraised at central level.</p>

Observations and Recommendations of the committee

22.21.4 The committee noted that correction sought by the PP is factual in nature.

Recommendations of the committee

22.21.5 In view of the foregoing and after deliberations, the Committee recommended that Ministry shall issue corrigendum to the EC dated 21/01/2020 as mentioned above.

22.22 Proposed Standalone Cement Grinding Unit by installation of 2x300 TPD Ball Mill with production capacity of 0.183 MTPA by **M/s. Devanadan Banarasi Private Limited** located at Village- Belsipah, Pargana- Garwar, Tehsil & **District- Ballia, Uttar Pradesh** [Online proposal No. IA/UP/IND/121374/2019; MoEF&CC File No. J-11011/63/2020-IA.II (I)] – **Prescribing of Terms of Reference (ToR)** – regarding

22.22.1 The aforesaid proposal was listed for consideration before the EAC in its 17th meeting held on 9/04/2020 and 18th meeting held on 29-30th April, 2020. The requisite VC link was sent to the registered email of project proponent. However, project proponent did not participate in the VC meeting no intimation was received till date from the project proponent.

22.22.2 The Member Secretary requested the EAC to carry out the due-diligence based on the documents submitted by the PP on PARIVESH and as per the provisions of the EIA Notification, 2006 which states that “Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative”. In this regard, after deliberations, the EAC is of the considered view that participation of applicant in person (or) authorized representative is very much essential due to facilitate the following:

- To conduct the meetings in a transparent manner.
- To get a mutual consent of the PP while prescribing the conditions for which the proposal is considered by the EAC.

- To clarify the technical queries/concerns of EAC which might emerge during the appraisal.
- 22.22.3 In view of the foregoing and deliberations, the Committee deferred the consideration of the proposal.
- 22.23 Proposed Iron ore beneficiation plant – 1000 TPD; pellet plant – 2000 TPD; sponge iron plant – 3000 TPD; Induction Melting Furnaces and /or Electric Arc Furnaces – 4X 25 TPD and CPP of 50 MW by **M/s. K.B. Steels Private Limited** located at Harovanahalli Village & Basavandurga Village, Chilakanhatti Post, Hosapete Taluk, **Bellary District, Karnataka** [Online proposal No. IA/KA/IND/146496/2020; MoEF&CC File No. J-11011/65/2020-IA.II (I)] – **Prescribing of Terms of Reference (ToR)** – regarding.
- 22.23.1 The aforesaid proposal was listed for consideration before the EAC in its 17th meeting held on 9/04/2020. The requisite VC link was sent to the registered email of project proponent. However, project proponent did not participate in the VC meeting no intimation was received till date from the project proponent.
- 22.23.2 The Member Secretary requested the EAC to carry out the due-diligence based on the documents submitted by the PP on PARIVESH and as per the provisions of the EIA Notification, 2006 which states that “Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative”. In this regard, after deliberations, the EAC is of the considered view that participation of applicant in person (or) authorized representative is very much essential due to facilitate the following:
- To conduct the meetings in a transparent manner.
 - To get a mutual consent of the PP while prescribing the conditions for which the proposal is considered by the EAC.
 - To clarify the technical queries/concerns of EAC which might emerge during the appraisal.
- 22.23.3 In view of the foregoing and deliberations, the Committee deferred the consideration of the proposal.
- 22.24 Integrated Cement plant (1.5 MTPA of clinker; 1.875 MTPA of cement) by **M/s TNE Cement Pvt. Ltd.**, located at Village Mynkree, Tehsil Khliehriat, **District. East Jaintia Hills, Meghalaya** [Proposal No. IA/ML/IND/160173/2020; MoEF&CC File No. J11011/162/2020-IA.II(I)] - **Prescribing of Terms of Reference**-regarding.
- 22.24.1 M/s. TNE Cement Pvt. Ltd has made application vide online proposal no. IA/ML/IND/160173/2020 dated 30/06/2020 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.

Details submitted by the project proponent

- 22.24.2 M/s. TNE Cement Private Limited proposes to install a new manufacturing unit for 1.5 MTPA clinker and 1.875 MTPA of cement capacity. It is proposed to set up the plant for producing OPC and PPC based on Dry technology. The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 30th June 2020 vide Online Application No. IA/ML/IND/160173/2020
- 22.24.3 The proposed unit will be located at Latitude: 25°13'36.94"N to 25°13'13.20"N, Longitude: 92°23'3.22"E to 92°23'18.85"E, Village: Mynkree, Tehsil: Khliehriat District: East Jaintia Hills, State: Meghalaya.
- 22.24.4 The land area acquired for the proposed plant is 12.1406 ha. The entire land is barren land. No forest land is involved.
- 22.24.5 The Narpuh WildLife Sanctuary is located at a distance of 8.76 Km SE direction and ESZ boundary is located at 7.61 km in SE direction. 9 Schedule I species are reported to be present in the Study area for which conservation plan will be prepared.
- 22.24.6 Total project cost is approx Rs. 651.11 Crores rupees. The direct employment for the proposed plant will be 150 besides indirect employment in the field of transportation, ancillary industries, security etc. Priority in employment will be given to local people as per their skills.
- 22.24.7 The targeted production capacity of the plant is 1.5 MTPA clinker and 1.875 MTPA of cement. The ore for the plant would be procured from the own mine as well as from the open market. The Ore transportation will be done through the road. The proposed capacity for different products for new site are as below:

Name of Product	No. of units	Production Capacity
Ordinary Portland Cement (OPC)	1	1100 TPD
Portland Pozzolana Cement (PPC)	1	4580 TPD

- 22.24.8 The electricity load of the proposed plant is 16 MVA. The power will be sourced from the Meghalaya State Electricity Board (SEB). For backup one DG set of 4.75 MW will be installed

- 22.24.9 Proposed raw material and fuel requirement for project are given in the table below

Sl No	Name of Raw Material	Proposed Quantity	Source with distance	Mode of Transportation
1.	Limestone	5738 TPD	Meghalaya, 20 km	Road
2.	Shale	473 TPD	Meghalaya, 50 km	Road
3.	Clay	540 TPD	Meghalaya, 20 km	Road
4.	Coal	675 TPD and additional 32 TPD for HAG Generator	Indegenous and imported coal, 100 Km	Road

Sl No	Name of Raw Material	Proposed Quantity	Source with distance	Mode of Transportation
5	Gypsum	55 TPD	Bhutan,400 Km	Road
6	Fly Ash	1650 TPD	Assam and other State within 500 Km	Road

22.24.10 Total water Consumption for the proposed project plant will be 1250 KLD and waste water generation will be 128KLD. The wastewater will be treated in a STP. Treated wastewater will be utilized for sprinkling & green belt development.

22.24.11 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

22.24.12 Name of the consultant: M/s. Perfact Enviro Solutions Private Limited [S.No. 119, Accredited EIA Consultant Organizations as on August 2020].

Observations of the Committee

22.24.13 The Committee noted the following:

- i. It is green field project of 1.5 MTPA Clinker and 1.875 MTPA Cement capacity in Meghalaya.
- ii. 1250 KLD water shall be abstracted from Ground, through the River is only 3 KM away.
- iii. There are WL sanctuaries and Reserve forests surrounding the project site.
- iv. CER cost calculated at 6.51 Cr is wrong. It should be Rs 9.51 Cr.
- v. Green Belt is proposed in 36 % of plant area.
- vi. Energy Consumption at – Thermal- 720 Kcal/Kg of Clinker and Power @ 86 kwh/t for OPC and 71 kwh/t for PPC are very high.

Recommendations of the Committee

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

- i. EMP Matrix indicating; EMP details: Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology shall be furnished.
- ii. Scheme to withdraw water from River shall be prepared. GW abstraction is not permitted.
- iii. Green Belt shall be developed in 50% of the plant area and plantation shall be done by planting 2000 trees per ha.
- iv. Guaranteed Energy Consumption, Thermal and Power shall be furnished
- v. APCD shall be used in CPP to control SO₂ emission.
- vi. PM level from stacks shall be less than 30mg/Nm³.
- vii. 100% solid waste generated shall be utilized.
- viii. Plant shall operate on ZLD.

- ix. A plan for safeguarding and conserving forest, wild life and wildlife habitat (including wildlife movement corridors) as approved by the Chief Wildlife Warden of the state shall be prepared and included in the EIA report.
- x. STP water shall be reused and recycled.
- xi. Public hearing shall be conducted.
- xii. Scheme for the treatment of the seepage water from Coal stockyard to meet industry specific / general discharge norms for water quality as applicable shall be furnished.

28th August, 2020

22.25 Expansion-cum-modernization of Bokaro Steel Plant from 4.5 MTPA hot metal to 5.77 MTPA hot metal by **M/s. Steel Authority of India Limited (SAIL)** located at Bokaro Steel City, **Jharkhand** [Proposal No. IA/JH/IND/168412/2018; File No. J-11011/99/2007-IA.II(I)] – **Environment Clearance - regarding.**

22.25.1 M/s. Steel Authority of India Limited has made online application vide proposal no. IA/JH/IND/168412/2018 dated 17/08/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at 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.

Details submitted by the project proponent

22.25.2 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
22/02/2018	29 th meeting held on 12-14 th March, 2018	Terms of Reference	10/04/2018
20/05/2020	20 th meeting held on 25-26 th June, 2020	Amendment in ToR	13/07/2020

22.25.3 The proposal cited above was originally considered during the 7th meeting of Reconstituted Expert Appraisal Committee [REAC] (Industry-I) held on 29-31st May, 2019 wherein the Committee deferred the consideration of the proposal the project proponent had not clearly presented the salient aspects of the implementation status of the existing EC, associated conditions thereof and status of compliance of the conditions. The Committee further noted the mismatch between plant configuration and contents of the ToRs. Moreover, ToRs points have not been adequately addressed in the EIA/EMP report. The project proponent requested for more time to address the lacunae in the present proposal, and sought additional time to review and revise its proposal. In view of this, the proposal was returned in present form. The revised proposal was submitted to the Ministry on 17/08/2020.

22.25.4 The project proposal of M/s. Steel Authority of India Limited – Bokaro Steel Plant (SAIL-BSP) located at Bokaro Steel City, Chas Tehsil, Bokaro District, Jharkhand, is for expansion-cum-modernization of existing Bokaro Steel Plant from 4.5 MTPA to 5.77 MTPA hot metal production. The existing project was accorded Environment Clearance (EC) vide letter no. J-11011/99/2007-IA-II(I) dated 16/10/2008. However, SAIL-BSP was not able to complete the expansion-cum-modernization within the EC validity period of 15/10/2018. In view of this, ToR was obtained from MoEF&CC on 10/04/2018 in order

to obtain a fresh EC for going ahead with the implementation of balance facilities envisaged under the EC dated 16/10/2008 along with expansion-cum-modernization of existing plant.

22.25.5 It has been reported that the Consent to Establish (CTE) from the Jharkhand State Pollution Control Board (JSPCB) for the existing plant has been obtained vide Memo No. LN-113 dated 19.11.2009. The recent Consent to Operate (CTO) from the JSPCB for the existing plant has been obtained vide Lr. No. JSPCB/HO/RNC/CTO-6549991/2020/1 dated 01/01/2020 and the consent is valid up to 31/12/2020.

22.25.6 The summary of facilities envisaged as per existing EC, status of implementation as well as changes proposed as part of the present expansion-cum-modernization programme is presented in table below.

S N	UNITS/ PRODUCTS	CAPACITY OF UNITS AT 4.5 MTPA HOT METAL STAGE	CAPACITY OF UNITS AFTER EXPANSION FROM 4.5 TO 5.77 MTPA HOT METAL (AS PER EXISTING ECs)	STATUS OF IMPLEMENTATION (At 5.77 Hot metal stage)	CHANGES PROPOSED AS PER REVISED CONFIGURATION	FINAL CONFIGURATION AFTER EXPANSION CUM MODERNIZATION (At 5.77 MTPA hot metal stage)
1.	Coke Oven Complex	3.442 MTPA	3.442 MTPA	Completed.	Addition of 0.77 MTPA Coke oven battery .	4.212 MTPA
2.	Blast Furnace Complex	4.5 MTPA	5.77 MTPA	Completed.	NO CHANGE FROM EXISTING EC	5.77 MTPA
3.	SMS Complex	SMS-1: 1.5 MTPA SMS-2: 2.7 MTPA <u>Total: 4.2 MTPA</u>	SMS-1: 1.306 MTPA SMS-2: 3.3 MTPA <u>Total: 4.606 MTPA</u>	SMS-I up-gradation delayed. SMS-2 expansion completed.	NO CHANGE FROM EXISTING EC SMS-2 proposed to be upgraded to 3.35MTPA	4.656 MTPA
4.	Slabbing Mill	- Slabbing Mill with 7 no. soaking pits	- Slabbing Mill with 7 no. soaking pits to be phased out after SMS-1 upgradation	Universal Slabbing Mill with 7 no. soaking pits retained	NO CHANGE FROM EXISTING EC	Universal Slabbing Mill with 7 no. soaking pits.
5.	Sinter Plant Complex	6.9 MTPA	Existing plant: 5.0 MTPA	New sinter plant of 3.7 MTPA delayed.	NO CHANGE FROM EXISTING EC	8.7 MTPA

S N	UNITS/ PRODUCT S	CAPACIT Y OF UNITS AT 4.5 MTPA HOT METAL STAGE	CAPACITY OF UNITS AFTER EXPANSIO N FROM 4.5 TO 5.77 MTPA HOT METAL (AS PER EXISTING ECs)	STATUS OF IMPLEMENTA TION (At 5.77 Hot metal stage)	CHANGES PROPOSED AS PER REVISED CONFIGURATI ON	FINAL CONFIGURATI ON. AFTER EXPANSION CUM MODERNIZATI ON (At 5.77 MTPA hot metal stage)
			New Sinter plant: 3.7 MTPA Total: 8.7 MTPA			
6.	Pellet Plant	-	-	-	Addition of 2.0 MTPA Pellet plant	2.0 MTPA
7.	Lime-Dolo Kiln	0.2449 MTPA	Existing: 0.2449 MTPA Expansion units: 0.2909 MTPA Total: 0.5358 MTPA	Expansion deferred.	New Kiln of 0.1642 MTPA (Part of New Sinter Plant Package)	0.4091 MTPA
8.	Hot Strip Mill	3.2 MTPA	4.5 MTPA	Completed	NO CHANGE FROM EXISTING EC	4.5 MTPA
9.	CRM complex	1.2 MTPA	2.4 MTPA	Completed	Increase by 0.46 MTPA by debottlenecking	2.86 MTPA
10.	Oxygen Plant	-	Tot. Capacity: 3950 TPD (1450 TPD captive plant + 2x1250 TPD BOO plant)	2700 TPD (1450 TPD captive & 1x1250 TPD BOO) already installed. Other 1250 TPD BOO plant not installed.	Installation of earlier proposed 1250 TPD Oxygen Plant on BOO Basis	3950 TPD
11	Water supply system	-	Tenu Canal along with alternate water pipeline system	-	Project Included	Tenu Canal along with alternate water pipeline

- 22.25.7 No additional land is required for the proposed expansion-cum-modernization project. The total existing project area is 6973.68 ha, which is completely industrial land within Bokaro Steel Plant's premises and no agricultural land or grazing land falls within the project site. No forestland is involved within the project site. The entire land is under the possession of SAIL-Bokaro. No river passes through the project area. It has been reported that no water body exists within the project site and no modification/diversion in the existing natural drainage pattern at any stage has been proposed.
- 22.25.8 The topography of the project area is flat and reported to lie between 23.6459° N to 23.7174° N Latitude and 86.0671° E to 86.1439° E Longitude in Survey of India topo sheet Nos. F45C1, F45C2, F45B13 and F45B14 at an elevation of 215 to 243m AMSL. The ground water table reported to ranges between 3.2 m to 8.7 m below the land surface during the post-monsoon season and 3.54 m to 11 m below the land surface during the pre-monsoon season.
- 22.25.9 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through the Forest Offices of the Forest Division of the district reporting presence of no schedule-I fauna in the study area.
- 22.25.10 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process is detailed as below:

Basic Raw Material requirement:

The major raw material requirement for Bokaro Steel plant after proposed expansion-cum-modernization plan at 5.77 MTPA hot metal stage are iron ore lump, iron ore fines, limestone, dolomite, coking coal, CDI coal and Bentonite. About ~18 MTPA of total raw material will be required for the plant at 5.77 MTPA Hot metal production.

Process involved:

The process of iron and steel production at BSL at present involves BF-BOF route. Coke is produced from metallurgical coal in coke ovens, which is charged into the BF along with Iron ore, sinter and fluxes to produce hot metal. Gases generated in Coke Oven and Blast Furnace are cleaned in Gas Cleaning Plant, which generate various by-products and wastes such as Tar, Naphthalene, Sulphur etc. Cleaned coke oven gas & blast furnace gas are used as fuel in the plant. Hot metal from BF is converted to steel in BOFs and a minor proportion of the hot metal from the BFs is cast into pigs, which is a saleable product. The slag from the BFs is granulated and sold off to cement manufacturers. Liq. Steel is cast into ingots and slabs through Continuous Casting route and further rolled in HSM to make hot rolled coils. Part of the HR Coils is sent to the Cold Rolling Mill (CRM) Complex for further processing into cold rolled products.

- 22.25.11 The targeted production capacity of Bokaro steel plant after implementation of the proposed expansion-cum-modernization plan is 5.77 million TPA of hot metal. The iron ore for the plant would be procured from captive iron ore mines of SAIL at Bolani, Kiriburu etc., limestone from both SAIL mines at Khanabanjari as well as open market purchase from Jaisalmer and dolomite also from SAIL's Tulsidamar mines and purchased from Bhutan in open market. Coking coal is purchased from BCCL. The ore transportation will be done through railways as well as in-plant covered conveyors.
- 22.25.12 The water requirement of the project for iron & steel production is estimated as 44400 m³/day (1850 m³/hr). No fresh water will be drawn from ground water. The permission for drawl of surface water from Damodar River via Tenu canal is obtained from Water

Resource Department (WRD), GoJ vide Agreement No. TDC/SAIL/RAGT-I/113/09-10 dated 23/03/2010. Of the estimated 52800 m³/day (2200 m³/hr) of wastewater generated, 36000 m³/day (1500 m³/hr) waste water will be treated and reused within the plant.

22.25.13 The additional power requirement of the proposed project is estimated as 63.8 MW, which will be obtained from the existing captive power plant of BPSCL and balance will be imported from DVC.

22.25.14 Baseline Environmental Studies

Period	March 2018 to May 2018 (Summer Season)
AAQ parameters at 8 locations (98 -percentile)	PM ₁₀ (84 µg/m ³ to 98 µg/m ³), PM _{2.5} (41 to 57 µg/m ³), SO ₂ (20 to 32.3 µg/m ³) NO _x (41.2 to 57.1 µg/m ³).
AAQ modelling	PM ₁₀ = 7.4 µg/m ³ SO ₂ = 8.9 µg/m ³ NO _x = 5.8 µg/m ³
Ground water quality at 8 locations	pH: 6.5 to 7.5, Total Hardness: 108 to 464 mg/l, Chlorides: 39 to 202 mg/l, Fluoride: 0.26 to 1.37 mg/l. Heavy metals are within the limits.
Surface water quality at 9 locations	pH: 7.3 to 7.8; DO: 5.2 to 6.6 mg/l and BOD: 1 to 3mg/l.
Noise levels	40.5 to 62.9 dB(A) for daytime and 40.3 to 43.4 dB(A) for night time.

22.25.15 It has been reported that a total of 2192750 TPA of BF slag as well as 512159 TPA of BOF slag as major solid waste will be generated due to the project, of which all of BF slag will be used for cement making and BOF slag will be used in sinter making as well as brick/road/cement making and sold through secondary market. The details of solid waste generation and its utilization are given as below.

Description	Solid Waste Quantity (in Tons)	Utilization (in tons)		Utilization envisaged (%)
		Recycled/Reused	Sold	
BF Slag	2192750	-	2192750	Will be 100% granulated in CHSGP and utilised in cement making
BOF slag	512159	409727	102432	~80% will be reused in sinter plant/SMS and used to make bricks by combining with Fly ash/road making and rest sold.
BF Flue Dust	64643	64643	-	100% will be reused in sinter plant
Mill Scale	85645	85645	-	100% will be reused in sinter plant
Waste Refractory	8151	8151	-	100% will be used for Refractory / mortar

Description	Solid Waste Quantity (in Tons)	Utilization (in tons)		Utilization envisaged (%)
		Recycled/Reused	Sold	
				production
Ferric Oxide	7557	-	7557	100% sold as scrap
ESP (RMP) dust	18972	18972	-	100% will be reused in sinter plant
BF Sludge	28850	-	28850	Will be sold in secondary market
BOF Sludge	37248	-	37248	
Coke Breeze	459784	459784	-	100% will be reused in sinter plant

22.25.16 The Public hearing of the project was held on 8/12/2018 for proposed expansion-cum-modernization of existing Bokaro Steel Plant from 4.5 MTPA to 5.77 MTPA hot metal production capacity, under the Chairmanship of Additional District Collector, Bokaro. The major issues raised during public hearing were pollution, education, drinking water, solid waste, sewage water treatment, roads, medical treatment. An amount of 17.22 Crores (~0.33% of a total project cost of Rs. 5219.1 Crores, as per Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018) has been earmarked for Corporate Environmental Responsibility (CER) based on the public hearing issues as well as need based socio-economic assessment.

22.25.17 The details of CER action plan proposed are as follows:

Sl. No	Major Activity heads	Amount to be spent (in Rs. lakhs)							
		1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Total
(A) Based on Need based Socio-economic assessment									
1	For education:								
i	Gyan Jyoti Yojana-Adoption of 15 of Birhor Children	8	8	8	8	8	8	8	56
ii	Scholarships under CSR to support technical education	1.5	1.5	1.5	1.5	1.5	1.5	1.5	10.5
iii	Repair & maintenance of BSL school buildings where more than 80% non-BSL students are studying	5	5	5	5	15	15	15	65
iv	Support to two Schools run under Mahila Samiti	5	5	5	5	10	10	10	50
v	Non-matriculate to Matriculation drive for girls/women	8	8	8	8	8	8	8	56
2	For Healthcare								
i	Sarva Swasthya Kendra, Sector- V	2.5	2.5	2.5	2.5	2.5	2.5	2.5	17.5
ii	Low- cost Sanitary Napkin project	2	2	2	2	2	2	2	14
3	For Livelihood generation								
i	Providing infrastructure and financial support to Bokaro Pvt ITI established CSR	25	25	25	25	30	30	30	190
ii	Silk Yarn Reeling project to provide skill development of women	3	3	3	3	3	3	3	21
4	For Sanitation								
i	Maintenance of 105 toilets under SVA	18.5	18.5	18.5	18.5	25.5	25.5	25.5	150

Sl. No	Major Activity heads	Amount to be spent (in Rs. lakhs)							
		1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Total
5	For Rural infrastructural development								
i	Miscellaneous civil work in peripheral villages and other sites	4	4	4	4	4	4	4	28
	SUB-TOTAL (A)	82.5	82.5	82.5	82.5	109.5	109.5	109	658
(B) Based on Public consultation issues									
6	Installation of hand-pumps in peripheral villages through CSR Dept.	10	10	10	10	10	10	5	65
7	Annual repair & maint. of hand-pumps installed in peripheral villages, construction of toilets through CSR	4.32	5.34	5.34	5	15	15	15	65
8	Repair of roads within the Bokaro Steel City by Town Administration dept.	50	50	50	50	50	50	50	350
9	Infrastructural development as well as financial support to Bokaro Balika Kalyan Vidyalaya as well as Bokaro Steel Kalyan Vidyalaya. Additionally funding and operation of 8 different schools in township as well as peripheral areas.	76	76	76	76	76	76	76	532
10	Repair & maintenance of roads in peripheral villages (both PCC & pre-mix types)	2	2	2	2	2	2	2	14
11	Greenbelt development in outside plant area (near Garga Basin)	4	4	4	4	4	4	4	28
12	Greenbelt development in peripheral villages (including Satanpura village)	1.75	1.75	1.75	1.75	1	1	1	10
	SUB-TOTAL (B)	148.07	149.09	149.09	148.75	158	158	153	1064
TOTAL (A+B) = 1722 lakhs (17.22 Crores)									

22.25.18 The capital cost of the project is Rs. **5219.1** Crores and the capital cost for environmental protection measures is proposed as Rs 365 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 91.4 Crores. The employment generation from the proposed project is 785 as permanent employment and ~2500 as temporary employment during construction phase. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Sn.	Description	Capital Cost (Rs. in Crores)	Recur. Cost/annum (In Cr.)
1.	Air & Noise Pollution Control Systems	185	42.7
2.	Water Conservation & Pollution Control	38	12.8
3.	Solid/ Waste Management System/Noise control/rainwater harvesting	140	35.8
4.	Green belt development	2	0.1
Total Cost for Environmental Protection Measures		365	91.4

- 22.25.19 Greenbelt has already been developed in 1923.99 ha in the existing plant premises comprising of 5773.69 ha (excluding water bodies), which is about 33.32% of the total area. Additionally, Greenbelt will be newly developed in 141.64 Ha and the existing plantation in 1923.99 ha will be maintained. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary is 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 215000 additional saplings (in 141.64 ha area) will be planted and nurtured in a period of 2 years.
- 22.25.20 The proponent has mentioned that there is no court case to the project or related activity.
- 22.25.21 Name of the EIA consultant: Mecon Limited, Ranchi, having [S.No. 105, List of Accredited Consultant Organizations as on August, 2020].

Certified compliance report from Regional Office

- 22.25.22 The status of compliance of existing EC was obtained from Regional Office, Ranchi vide Lr. No. 103-211/13/EPE/3873 dated 17/03/2020 wherein several observations have been made. The project proponent has submitted the action taken report to RO and subsequently RO issued a report on 12/05/2020. PP again submitted ATR on 11/08/2020 to RO. As per the said report, following are the non-compliances observed:

Following Conditions are partially complied:

- i. On-line Stack monitoring system has been installed in 21 stacks out of 23 process stack in operation (In 21 stack out of total 28 no. of process stack). PM emission in Sinter plants (05 of the 06 monitoring records) and Refractory Material plant (02 of the 03 monitoring records) were higher than the condition stipulated in Environmental Clearance. i.e. 100 mg/Nm³, however within the norms prescribed vide notification dated 31.03.2012 for the month of Sep19 (**Specific Condition i**).
- ii. As per the data submitted Gaseous emission levels including secondary fugitive emissions from blast furnace and sinter plant are within norms prescribed vide notification dated 31.03.2012. However, during visit, profuse dust emission observed from the crusher of sinter machine which is not channelized through the stack. It indicates malfunctions in the system for suction of fugitive dust and its conveyance to stack. Fumes also observed (not channelized through the stack) from the blast furnace as well as SMS-II. Further, covered shed not observed for raw material storage area (**Specific Condition iii**).
- iii. Currently 85% instead of prescribed 100 % of the water recycled through the cooling pond. It was informed that M/s SAIL BSL is recycling approximately 3000 m³/hr in the system out of 3500m³/hr through OF 1 and OF 2. The Project authority has assured to achieve 100% recycling by March 2020 (**Specific Condition v**).
- iv. During visit water was being discharged outside the premises and zero discharge has not been followed. It was informed that M/s SAIL BSL is recycling approximately 3000 m³/hr in the system out of 3500m³/hr. The percentage recycling in the system is approximately 85% through OF 1 and OF 2 as also stated herein above (**Specific Condition vi**).
- v. The old slag deposit has not been utilized till date. PP has submitted an action plan for eco- friendly disposal of air cooled slag (Old Slag Deposit) by 2022 (**Specific Condition viii**).

- vi. M/s Bokaro Steel Limited informed that in compliance to decision taken by EAC in its meeting held at 23.8.2019, a joint action plan has been prepared and got approved by SAIL and BPSCL board. As per the information provided around 1075 Hyva amounting to total 26875 tonne Fly ash has been transported to NHA I till 12.01.2020. However, Major amount remains to be disposed in environment-friendly manner. It was also informed that as per the discussion with JSPCB it has been decided to stabilize the ash mound by biological process with use of geo textile and vegetation growth with grass and plants over that. Ministry may take a view in the matter **(Specific Condition xi)**.
- vii. As per the Environmental Clearance accorded total area of the plant is 6973.68 ha. Project authority has reported total green cover as 1923.99 ha (4754.28 acre) which is less than 33% of the total area of the plant. It has been clarified that 1199 ha have been kept in abeyance for modernization for 12 years since 2008. This area should be covered with vegetation of appropriate tree species of short rotation and shrub etc. **(Specific Condition xii)**.
- viii. Corporate Responsibility for Environment Protection (CREP) recommendations are being implemented except hundred percent utilization of LD slag **(Specific Condition xiii)**.
- ix. Roads inside the premises are paved. However, profuse fugitive emission was observed from sinter plant, blast furnace and SMS area. Covered shed was not found in the raw material storage area **(General Condition v)**.
- x. As per the information provided Industrial waste water from Coke Oven, By Product Plant and CRM-III is collected and treated in ETP. All the pollutant level after treatment is well within stipulated norm. This water is being used for quenching of coke and in other processes. The effluents from all other plants are being treated prior to disposal **(General Condition vi)**.
- xi. Protection measure and safeguard recommended in EIA/EMP are already depicted in the Environmental Clearance Condition. However, the following conditions has not been satisfactorily implemented such as;
 - a. Replacement of battery cyclone by ESP in Sinter Plant,
 - b. Gases generated during steel making in the converter has not been used as fuel in the plant unit,
 - c. Township sewage water to treat and recycle for use in the plant
 - d. Recirculation of treated water,
 - e. Utilization of solid waste, etc.It was also stated that, Sewage treatment plant as planned for construction in future, the proposal has been initiated. However, STP yet to be implemented **(General Condition x)**.
- xii. On-line Stack monitoring system has been installed in 21 stack out of 23 process stack in operation (In 21 stack out of total 28 no. of process stack).

Other observation:

- xiii. The Google image as depicted in photo7 and photo 8 of the monitoring report are indicative of change in the project area dated 18.10.2018 and 10.01.2020 indicating

construction activity after the expiry of validity of EC. The EC was valid till dated 14.10.2018.

xiv. As per the data submitted PM₁₀ in ambient air exceeds the norms of annual average.

22.25.23 The Member Secretary apprised the EAC that in the instant proposal under consideration, violation has been reported by RO. RO report about the construction activities at the site after the expiry of the validity of the EC. This has been substantiated by RO by photographs taken during the visit and comparative Google Earth satellite image dated 18/10/2018 & 10/01/2020. It was suggested to adopt the following principle by the Competent Authority, in cases where violation is suspected or alleged.

- i. Send the matter to the Sector EAC for consideration of the case on merit.
- ii. Take action against the alleged violation as per law.
- iii. Do not wait for either the evidence of action having been started or violation proceedings to finish before taking up the case on merit.
- iv. The EC if given after consideration on merit would be valid from the date it is given and not with retrospective effect. For the period before it, if violation is established by the court or the competent authority, the punishment/penalty as per law would be imposed.

Observations of the Committee

22.25.24 The Committee noted the following:

- i. The certified compliance report issued by RO-Ranchi on 17/03/2020 indicates that the construction activities at the site after the expiry of the validity of the EC. This has been substantiated by RO by photographs taken during the visit and comparative Google Earth satellite image dated 18/10/2018 & 10/01/2020.
- ii. PP shall submit high resolution satellite imagery [atleast PAN 1m (cartostat-2) or equivalent] of the pre and post construction activity of the site specific to the observation made by RO in their report.
- iii. ATR submitted on 11/08/2020 to RO is required to be validated and verified by RO Ranchi.
- iv. TOR point # 9 has not been addressed adequately at right location in EIA report.
- v. CEMS data are not integrated with process control. PP shall submit the SOP and mechanism for such integration for process control.
- vi. Undertaking by PP stating that by wet quenching tower for new battery shall be of Modified Type with sampling facilities to monitor PM release from the tower.
- vii. Undertaking by PP stating that the APC devices shall be designed /modified (Existing) to meet the PM emission of <30Mg/Nm³.
- viii. Sinter cooler waste heat recovery shall be planned for new 360 m² Sinter Plant.
- ix. Provision of industrial vacuum cleaner to clean roads, shop floors and recycle the collected dust to pellet plant shall be made.
- x. BF Stove waste gas heat recovery shall be included.
- xi. Secondary fume extraction facility shall be provided in both SMSs.
- xii. Incinerator for oil scum and oily waste generated from CRM shall be provided.

- xiii. Commitment for Specific water and Specific energy consumption shall be indicated. Also furnish the scheme to reduce water and energy consumption in the plant including the scheme for reduction in greenhouse gases.
- xiv. Green belt area shall be calculated based on total plant area including water reservoir. Trees @ 2500 trees per Ha shall be planted. At present green belt has been developed only in 27 % area. Scheme to achieve 33 % GBD shall be furnished.
- xv. DMP/Risk assessment shall be based on QRA for existing plant.
- xvi. Chapter 11 of the EIA report is not as per the requirement of EIA Notification. Please furnish revised Chapter 11.
- xvii. In Chapter 3 the data interpretation to assess the space available to pollute and the impact in qualitative term of the proposed project has not been done, please incorporate data interpretation in Chapter 3. Reason for higher level of PM₁₀ in ambient air and reporting of BOD value of below BDL shall be explained.
- xviii. Interpretation of social and biological data has also not been done and same need to be provided.
- xix. EMP Matrix indicating; EMP details: Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology shall be furnished.
- xx. Revised CER table indicating CERs in Project mode shall be furnished. CSR activities are not to be included in CER table.
- xxi. RWH calculations for recharge more than 100 % of annual consumption not furnished.

Recommendations of the Committee

- 22.25.25 In view of the foregoing and deliberations, the Committee recommended to return the proposal in present form. The Committee also recommended that Ministry shall take action against the M/s. SAIL–BSP for carrying out the construction activities beyond the expiry of the validity of the EC by issuing Show Cause Notice followed by letter to State Government of Jharkhand to initiate legal action against M/s. SAIL-BSP under section 15 read with section 19 of the Environment (Protection) Act, 1986.
- 22.26 Greenfield project for production of Ferro Alloys by installation 3 nos. of Submerged Arc Furnace (3 x 9 MVA) for the production of Ferro alloys (Silico Manganese, Ferro Silicon and Ferro Manganese) of total capacity of 59,700 TPA capacity or/and alternatively Pig Iron of total Capacity (1,19,400 TPA) **by M/s. Avassa Ferro Alloys Private Limited** located at Village- Kanbery, Tehsil- Katghora, **District- Korba, Chhattisgarh** [Proposal No. IA/CG/IND/167971/2020; File No. J-11011/178/2020-IA.II(I)] – **Prescribing of Terms of Reference - regarding.**
- 22.26.1 M/s. Avassa Ferro Alloys Private Limited has made application vide online proposal no. IA/CG/IND/167971/2020 dated 19/08/2020 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 & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

- 22.26.2 M/s Avassa Ferro Alloys Private Limited has proposed to establish a Ferro Alloy Plant for production of Ferro Alloys (Silico Manganese, Ferro Silicon, and Ferro Manganese) of total capacity of 59,700 TPA capacity or/and alternatively Pig Iron of total Capacity (1, 19,400 TPA) at Village - Kanbery, Tehsil-Katghora, District- Korba, Chhattisgarh.
- 22.26.3 The land area acquired for the proposed plant is 4.419 ha. No forestland is involved. The entire land is under possession of the company. 1.76 ha (40%) land will be used for green belt development of the total area.
- 22.26.4 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 22.26.5 Total project cost is Rs.109.0 Cr. Proposed employment generation from proposed project will be 233, i.e., total employment including direct & indirect employments. There will be staff from 250 trucks, day during operation phase.
- 22.26.6 The targeted production of the plant is Ferro Alloys (Silico Manganese, Ferro Silicon, and Ferro Manganese) of total capacity of 59,700 TPA capacity or/and alternatively Pig Iron of total Capacity (1, 19,400 TPA). The ore transportation will be done through Road. The proposed capacity for different products for new site area as below: -

SL.No	Product	Facility	Capacity (TPA)
1	Ferro Alloys (Silico Manganese, Ferro Silicon and Ferro Manganese)	Submerged Arc furnace (9 MVA x 3 Nos)	59,700
AND/ OR Alternatively (As Per Market Demand)			
2	Pig Iron	Submerged Arc furnace (9 MVA x 3 Nos)	1,19,400

- 22.26.7 Based on annual installed capacity of the plant; Total power requirement will be 28 MW which will be sourced from nearby unit Swastik Power and Mineral Resources Pvt Ltd through a captive dedicated feeder. In addition to this total 1,100 kVA DG sets are proposed for emergency backup.
- 22.26.8 The main raw materials required for manufacture are given below: -

For Ferro Alloy Plant

Raw Material	Qty (in TPA)	Source
Manganese Ore	1,25,370	MOIL; OMC; and other private mines
High Manganese Slag	23,880	Internal
Quartz	4,776	Local mines in Raipur and Raigarh District
Coke/Coal/Charcoal	35,820	Open Market
Dolomite	1,791	Local mines in Raipur and Raigarh District
Electrode Paste	1791	Local Manufacturers
M.S. Item.	597	Local Rolling mills and fabricators
Lancing Pipe and Canister Sheet	896	Local Pipe Units in Bhilai; Raipur

Oxygen Gas	180	Local Industrial Gas Units in Bhilai; Raipur
Total	1,95,101	

For Pig Iron

Raw Material	Qty(in TPA)	Source
Iron Ore Fines & Mill Scale	1,79,100	NMDC/OMC and Local Units of Sponge Iron
Coke/Coal/Charcoal	71,640	Open Market
Dolomite/Lime/Limestone	11,940	Local mines in Raipur and Raigarh District
Electrode Paste	1,791	Local Manufacturers
M.S. Item.	835.80	Local Rolling mills and fabricators
Lancing Pipe	358.20	Local Pipe Units in Bhilai; Raipur
Total	2,65,665	

- 22.26.9 Project is designed as closed cooling circuit where 100% water will be recycled. The water will be sourced from ground water. The water requirement for production of Ferro alloys will be approx. 200 KL/day and in case of pig iron it will be 132KL/day. Domestic waste will be treated in 20 KL STP and treated water will be reused in Horticulture, water sprinkling etc.
- 22.26.10 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 22.26.11 Name of the EIA consultant: Grass Roots Research and Creation India (P) Ltd. [S.No. 80, List of Accredited Consultant Organizations as on August, 2020].

Observations of the Committee

- 22.26.12 The Committee noted the following:
- i. It is a green field project to manufacture Pig Iron; SiMn; FeSi; and FeMn.
 - ii. 3X9 MVA furnaces shall be installed
 - iii. 4.419 ha land is available. It is adequate.
 - iv. 200 KLD water shall be required
 - v. Power shall be drawn from Group Company power house nearby. There is no grid connectivity.
 - vi. Alternate Site not discussed.
 - vii. Present site is agriculture land and Land Use of the same has not been changed.
 - viii. The site is having villages and schools nearby.
 - ix. The plant site has approach through the plant of another company called Swastic Coal washery.

Recommendations of the Committee

- 22.26.13 The committee after detailed deliberations was of the opinion that the highly polluting and noise prone industry within 200 to 500 m of sensitive receptors like dwellings, schools and hospitals is not at the right location. Hence, the proposal at present location and in present form is not environment friendly. In view of this, the Committee recommended to return the proposal in present form.

- 22.27 Expansion of existing Pellet Plant (1.2 Million TPA to 6.0 Million TPA) keeping Iron Ore Beneficiation plant 1.5 Million TPA, Producer Gas plant (75000 Nm³/hr to 200000 Nm³/hr) with addition of new Wet Grinding unit (4.5 Million TPA), Sponge Iron plant (1.8 Million TPA), Ferro Alloys Plant (0.036 Million TPA) with Chrome briquette & Zigging plant, Steel Melting Shop (1.4 Million TPA) with slag crushing unit, Rolling mill with pickling and Galvanising line (3.5 Million TPA), Wire Rod & Wire Drawing mill (1.0 Million TPA) and CPP 245 MW (120 MW coal and Dolochar Mix Based and 125 MW WHRB based) by **M/s. Rashmi Udyog Private Limited** located at Village Jitusole & Baghmur, P.O-Garhsalboni, P.S- Jhargram, **District Jhargram, West Bengal** - [Online Proposal No. IA/WB/IND/151940/2020, File No. J-11011/180/2012-IA.II.(I)] – **Prescribing of Terms of Reference - regarding.**
- 22.27.1 The proposal cited above was considered during the 21st meeting of Reconstituted Expert Appraisal Committee [EAC] (Industry-I) held on 30th July – 1st August, 2020 wherein the Committee recommended for a site visit by a subcommittee to ascertain the factual status at the site before considering the instant expansion proposal for grant of ToR.
- 22.27.2 In this regard, the Member Secretary apprised the EAC that the site visit shall be preferably completed by 30/09/2020 as directed by the Competent Authority. In response to this, Chairman constituted the following sub-committee for undertaking the site visit:
- i. Representatives of two experts from Industry 1 sector
 - ii. Representative of MoEF&CC.
- 22.27.3 After deliberations, the Committee opined that the sub-committee may plan for the site visit after 20/09/2020 depending upon the Covid-19 situation.

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

1. Executive Summary
2. Introduction
 - i. Details of the EIA Consultant including NABET accreditation
 - ii. Information about the project proponent
 - iii. Importance and benefits of the project
3. Project Description
 - i. Cost of project and time of completion.
 - ii. Products with capacities for the proposed project.
 - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
 - iv. List of raw materials required and their source along with mode of transportation.
 - v. Other chemicals and materials required with quantities and storage capacities
 - vi. Details of Emission, effluents, hazardous waste generation and their management.
 - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
 - viii. The project proponent shall furnish the requisite documents from the competent authority in support of drawl of ground water and surface water and supply of electricity.
 - ix. Process description along with major equipment and machineries, process flow sheet (Quantitative) from raw material to products to be provided
 - x. Hazard identification and details of proposed safety systems.
 - xi. Expansion/modernization proposals:
 - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB/PCC shall be attached with the EIA-EMP report.
 - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
4. Site Details
 - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
 - ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)

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

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

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).
- ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*).
- iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
- iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.
- v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.
- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. **Environmental Status**

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM₁₀, PM_{2.5}, SO₂, NO_x, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant

- wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
 - iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
 - v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
 - vi. Ground water monitoring at minimum at 8 locations shall be included.
 - vii. Noise levels monitoring at 8 locations within the study area.
 - viii. Soil Characteristic as per CPCB guidelines.
 - ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
 - x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
 - xi. Socio-economic status of the study area.

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

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
- v. Details of stack emission and action plan for control of emissions to meet standards.
- vi. Measures for fugitive emission control
- vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization,

recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
- xii. Action plan for post-project environmental monitoring shall be submitted.
- xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. **Occupational health**

- i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
- ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
- iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
- iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

9. **Corporate Environment Policy**

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
- iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. Corporate Environment Responsibility (CER)
 - i. To address the Public Hearing issues, an amount as specified under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018 amounting to Rs.crores, shall be earmarked by the project proponent, towards Corporate Environment Responsibility (CER). Distinct CER projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These CER projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above CER budget
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation

details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

- ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

ANNEXURE-2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
5. PM (PM₁₀ and P_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM₁₀ to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

ADDITIONAL ToRS FOR PELLET PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. PM(PM₁₀ and P_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM₁₀ to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

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

ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY

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

ADDITIONAL ToRs FOR COKE OVEN PLANT

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

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

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

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

Executive Summary

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

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