

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

Summary record of the nineteenth (19th) meeting of Re-Constituted Expert Appraisal Committee (REAC) held during 20-21st May, 2020 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.

The nineteenth 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 20-21st May, 2020 in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the Corona Virus Disease (Covid-19). The list of participants is as follows.

S.No.	Name	Position
1.	Dr. Chhavi Nath Pandey	Chairman
2.	Dr. Bipin Prakash Thapliyal, Director, Central Pulp and Paper Research Institute (CPPRI)	Member
3.	Dr. Siddharth Singh, Scientist 'E' Indian Meteorological Department (IMD)	Member
5.	Dr. Jagdish Kishwan	Member
6.	Dr. G.V. Subramanyam	Member
7.	Shri. Ashok Upadhyaya	Member
8.	Shri. Rajendra Prasad Sharma	Member
9.	Dr. Sanjay Deshmukh	Member
10.	Prof. S.K. Singh	Member
11.	Dr. R. Gopichandran	Member
12.	Shri Jagannadha Rao Avasarala	Member
13.	Shri. J.S.Kamyotra	Member
14.	Shri. A.K. Agrawal	Member-Secretary

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 18th meeting held during 29-30th April, 2020 were confirmed by the EAC as already uploaded on PARIVESH.

20th May, 2020

- 19.1 Proposed development plan (MDP) comprising of augmentation of pulp mill and existing paper machines, installation of new tissue paper machines and installation of 35 MW steam turbines with 135 TPH boiler by **M/s. West Coast Paper Mills Ltd.**, located at Dandeli Village, Haiyal Taluk, Uttara Kannada District, **Karnataka** [Online proposal No. IA/KA/IND/117479/2018; MoEF&CC File No. J-11011/408/2006-IA.II(I)] - **Environment Clearance – regarding.**
- 19.1.1 M/s West Coast Paper Mills Ltd has made an online application vide proposal no. IA/KA/IND/117479/2018 dated 29.04.2020 in prescribed Form-2 along with EIA Report and other documents for seeking Environmental Clearance (EC) for proposed Mill Development Plan (MDP) of existing paper mill. The proposed project activity is listed at Sl. No. 5(i) Pulp & Paper Industry in the schedule under Category “A” in the EIA Notification, 2006 and the proposal is appraised at Central Level.

- 19.1.2 The Proposed Mill Development Plan (MDP) by increasing paper/board production capacity from 3,20,000 TPA to 4,50,000 TPA of M/s West Coast Paper Mills Ltd, located in Dandeli Taluk, Uttara Kannada District in the State of Karnataka was initially received in the Ministry on 7th March 2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry-1) during its 16th meeting held on 6th to 7th March 2017 and prescribed Terms of Reference (ToR) to the project for undertaking detailed EIA study for obtaining EC. Accordingly, MoEF&CC had prescribed ToRs to the project on 30th March 2017 vide File No J-11011/408/2006-IA-II (I). Further, WCPM submitted an application to MOEF&CC for amendment in ToR which was appraised in the EAC during its 35th meeting held during 17th - 18th September 2018 and prescribed additional specific Terms of Reference (ToR) for undertaking detailed EIA study for obtaining EC. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed revised ToRs to the project on 9th October 2018 vide File no. J-11011/408/2006-IA.II(I). Further, PP has also applied to MoEF&CC vide proposal no. IA/KA/IND/153192/2020 dated 13/05/2020 to extend the validity of the ToR till 29/03/2021.
- 19.1.3 Based on the ToR prescribed to the project, the project proponent submitted an application for EC to the Ministry online on 29.04.2020 vide application no. IA/KA/IND/117479/2018.

Details submitted by the project proponent

- 19.1.4 The project of M/s West Coast Paper Mills Ltd, located in Dandeli Taluk, Uttara Kannada District in the State of Karnataka is proposing for Mill Development Plan (MDP) comprising of augmentation of pulp mill to enhance the pulp production capacity from 725 Bone Dry (BD) TPD TPD to 844 BD TPDTDPD, augmentation of existing paper machines to increase the paper production capacity from 3,20,000 TPA to 3,45,000 TPA, installation of new Multi-layer Coated Board Machine with total capacity of 1,05,000 TPA, installation of new De-Inking Plant of capacity 200 BD TPD and installation of 35 MW steam turbine with 135 TPH FBC Boiler to increase the captive power generation capacity from 74.8 MW to 109.8 MW. The existing project was accorded EC vide Letter F.No. J-11011/408/2006-IA.II (I) dated 19th July, 2007.
- 19.1.5 The status of compliance of earlier EC was obtained from Regional Office (Southern Zone), Bangalore vide letter File No. EP/12.1/478/Kar dated 13.03.2020. The observations made by the RO in the report are summarized as below:
- i. Low NOx burners have not been installed.
 - ii. Total Organic Carbon (TOC) in the treated effluent has not been monitored.
 - iii. Prior approval from the Standing Committee of National Board for Wildlife has not been obtained sofar in pursuance to the specific condition no. xvii of the EC dated 19/07/2007.
- 19.1.6 The overview of the proposed capacities as against the existing capacities are as below:

Description	Unit	Existing	Post MDP	Incremental	Proposal
Paper Machines					
Paper/Board PM #1 to # 6	TPA	320,000	345,000	25,000	Modernisation /Upgradation
Board	TPA	--	105,000	105,000	New
Total Paper/board	TPA	320,000	450,000	130,000	
Pulp Plant	BD TPD	725	844	119	Upgradation
DIP Plant	BD TPD	-	200	200	New
Evaporator	TPH of water evaporation	330	560	230	Proposal New Evaporator Plant 230 tph. Evaporator. 100 TPH will be kept as standby
Recovery boiler	TPD of black liquor solids	1600	1800	200	Existing Recovery boilers will be upgraded
Lime kiln	TPD of lime	365	425	60	Existing lime kilns will be upgraded
Re-causticising plant	TPD of AA	350	450	100	Existing re-causticising will be upgraded
Power Boilers					
Power Boiler s	TPH of steam	330 (FBC#1 standby) FBC#2, #3, #4 operating	405	75	FBC#1-60 tph -Retired FBC#2-65 tph- Standby. FBC#3,4-205 tph- Operating FBC #5 – 135 tph – New.
Turbo Generators	MW of power	74.8 (1x5 Standby) +1x5.3 - Standby +1x14.5+1 x15.5 (Standby) +1x34.5)	109.8	35	5 MW Standby 5.3 MW Standby 14.5 MW - Standby 15.5 MW- Part Load 34.5 Mw – Operating 35 MW (New) operating
ClO ₂ plant	TPD	15	15	--	Existing adequate. No change
Water Treatment Plant capacity and water drawl permit	m ³ /day	1,00,000	1,00,000	--	Existing facility is adequate.
Wastewater Treatment capacity	m ³ /day	85,885	85,885	--	Existing facility is adequate.

19.1.7 No additional land is required since the available vacant spaces within the existing mill will be used for project facilities. The mill has total land area of 375.73 acres. The entire land has been already acquired for the project (Industrial Use). It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

19.1.8 The topography of the existing mill area is flat and lies at coordinates of latitude 15°15'11.21"N and longitude 74°37'38.30"E and falls under the Survey of India Topography Map No. 48 I/11, 48 I/12. The ground water table reported to ranges between 11.5-12.5 m during the pre-monsoon season and 10.6-11.8 m during the post-

monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 220 m.

- 19.1.9 Project site is located at about 2 km from the Eco sensitive zone boundary of Dandeli-Anshi Tiger Reserve & Hornbill Conservation Reserve boundary as per draft MoEF&CC Notification for which ESZ notification is yet to be Published. Dandeli Wildlife Sanctuary is located at 9 km (E). The area does not report to form corridor for Schedule-I fauna.

As per the Ministry's O.M. No. 22-43/2018 -IA.III dated 8/8/2019, Proposals involving developmental activity/project located within 10 km of National Park/Wildlife Sanctuary wherein final ESZ notification is not notified (or) ESZ notification is in draft stage, prior clearance from Standing Committee of the National Board for Wildlife (SCNBWL) is mandatory. In such cases, the project proponent shall submit the application simultaneously for grant of Terms of Reference/environmental clearance as well as wildlife clearance.

In the instant proposal under consideration PP has neither obtained the SCNBWL approval for the existing operation nor parallelly applied for wildlife clearance for the proposed expansion.

- 19.1.10 **Process Description:** The major raw material required for the project is wood. Total wood required in the post MDP scenario will be in the order of 11,39,000 TPA as against the current consumption of about 9,58,000 TPA. Wood is chipped in chippers and fed to the digesters. Cooking chemicals, consisting of chemicals recovered in the chemical recovery section along with some amount of make-up chemicals are added to the chips in the digesters. After cooking, the pulp is first screened and washed in a counter-current fashion, using hot process water from the cooking section. The pulp is then bleached using DHT-EOP-DnD bleaching sequence, and stored.

- 19.1.11 The weak black liquor generated in the first brown stock washing stage is sent to the chemical recovery section for recovery of cooking chemicals. The chemical recovery section consists of evaporators (where the spent liquor from pulp mill is concentrated), chemical recovery boiler (where the concentrated black liquor from the evaporation section is fired for generation of steam and smelt), a re-causticising plant (where the alkali, which consists primarily of Na₂CO₃, is reacted with burnt lime generated in a rotary lime mud reburning kiln to produce NaOH required for the cooking process) and a lime reburning kiln for generating lime from the lime mud produced in the re-causticising section together with limestone as a make-up. Pulp is refined in the stock preparation section and treated with sizing chemicals, dyes and loading materials, before being transferred to the paper/board machine section for production of paper/board.

- 19.1.12 The targeted paper/board production capacity is 4,50,000 TPA, bleached chemical wood pulp production capacity is 844 BD TPD, De-Inking Plant (DIP) capacity is 200 TPD, Captive power generation capacity is 109.8 MW. Black liquor (generated in-house), imported coal and furnace oil are the fuels.

Fuel	Unit	Existing	Post MDP	Incremental	Source
Coal	TPA	3,18,000	4,45,000	1,27,000	Additional coal will be Imported from Indonesia/ local
Furnace oil	KL	15300	17,700	2,400	Local Market

- 19.1.13 The total fresh water requirement of the project was estimated as 72,800 m³/day during the preparation of EIA report. However, based on the water conservation measures adopted as per current practices, the existing water consumption of the plant has reduced to 54,000 m³/day as against the quantity of 60,800 m³/day as mentioned in the EIA report. Therefore, the revised total fresh water requirement for the proposed MDP is estimated as 69,700 m³/day as against the existing fresh water consumption of about 57,000 m³/day. Specific fresh water consumption will be reduced from current level of 58 m³/t to 49.6 m³/t of product. The existing mill already has water withdrawal permission of 1,00,000 m³/day from River Kali.
- 19.1.14 The total power requirement of the project is estimated as 63 MW. It is proposed to increase the capacity of existing captive power plant from 74.8 MW to 109.8 MW by adding a new 35 MW TG and 135 TPH boiler.
- 19.1.15 Baseline Environmental Studies were conducted from 5th April - 3rd July 2017. Ambient air quality monitoring has been carried out at eight locations and the data indicated: PM₁₀ (30.1 µg/m³ to 74.9 µg/m³), PM_{2.5} (12.6 µg/m³ to 36.2 µg/m³), SO₂ (3.1 µg/m³ to 15.2 µg/m³) and NO_x (3.6 µg/m³ to 27.8 µg/m³). The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 0.94 µg/m³ with respect to the PM₁₀, 9.6 µg/m³ with respect to the SO₂ and 4.5 µg/m³ with respect to the NO_x.
- 19.1.16 Ground water quality has been monitored in eight locations in the study area and analysed. pH :7.2 to 8.2, Total Hardness: 192 mg/l to 1030.2 mg/l, Chlorides: 41 mg/l to 357 mg/l, Fluoride: 0.14 mg/l to 0.28 mg/l. Heavy metals are within the limits. Surface water samples were analysed from upstream and downstream of River Kali. pH 7.2 and 7.5; DO 7 and 6.9 mg/l, BOD < 2 mg/l, COD <4 mg/l respectively for upstream and downstream of River Kali.
- 19.1.17 Noise levels are in the range of 49.7 dB(A) to 60.8 dB(A) for daytime and 39.3 dB(A) to 51.0 dB(A) for night time.
- 19.1.18 No R&R is involved as no additional land is required for the project.
- 19.1.19 The expected increase in the solid/hazardous waste due to proposed MDP and the respective proposed disposal practices are presented below;

S.No	Source	Composition	Quantity in TPD		Disposal Method
			Existing	Post MDP	
1	Fly ash	Silica	370	590	Cement manufacture/brick manufacture.
2	Lime Mud	Calcium carbonate and silica	375	440	Recycled using lime kiln with make-up lime
3	Saw dust	Organic	60	80	Fired in boiler/ Sold to external party for secondary use
4	Waste ETP sludge pulp from WWTP	Fines and fibre	50	80	Used for card board /egg tray manufacture
5	Plastic Waste	Plastic	-	5	Will be collected in dedicated bins and will be disposed to authorized recyclers
6	De-Inking Plant (DIP)	Organic and Inorganic	-	30	Sludge from the de-inking plant will be

S.No	Source	Composition	Quantity in TPD		Disposal Method
			Existing	Post MDP	
	Sludge	including traces of heavy metals			sent to authorized dealers/fired in boilers
7	Used Oil, KLD	-	0.05	0.06	Sold to KSPCB approved recyclers

19.1.20 A massive greenbelt has been developed in an area of 103 acres in the existing facility. Besides the existing green cover, WCPM is proposing to develop 2 acres of additional greenbelt post MDP.

19.1.21 Consent To Operate for the existing facility under the Water (Prevention and Control of Pollution) Act, 1974 and emissions under the Air (Prevention and Control of Pollution) Act, 1981 was obtained vide combined consent order No: AWH-301773, dated on 29th December 2016 with the validity up to 30/06/ 2021.

19.1.22 The public hearing of the project was held on 29/07/2019 at Dr. B. R. Ambedkar Bhavan, Township Dandeli, Dandeli Taluk., Uttar Kannada District, Karnataka State under the chairmanship of Additional Deputy Commissioner for the proposed Mill Development Plan (MDP) of existing paper/board manufacturing plant at WCPM unit. The issues raised during public hearing are related to pollution issues, health status, CSR activities implemented, etc.

19.1.23 Rs. 375 Lakhs has been embarked for the local community development within the vicinity of the project area for 5 years. The Corporate Environment Responsibility (CER) budget is arrived by considering 0.5% of the total project cost of Rs. 750 Cr.

The issues raised during Public Hearing held by West Coast Paper Mills Ltd, Dandeli and commitment of Project Proponent (PP) along with time bound action plan and financial allocation

S. No	Issue Raised	Proponent Commitment	Action Plan	Time frame and budget
1	<u>Discharge of Treated Wastewater:</u> Some of the attendees of the public hearing have expressed their concern on environmental impacts due to discharge of treated wastewater into river, waste water is discharged without treatment, etc	<ul style="list-style-type: none"> Implementation of water conservation and recycling systems. Reduction in specific water consumption to 50 m³/t. Existing ETP of capacity of 85,885 m³/day will take care of post MDP wastewater quantity of 59,600 m³/day. However, some balancing equipment's will be added based on need. Some quantity of treated wastewater will be utilized for plantation in Mills. Dedicated Dissolved Air Floatation/Disc Filter unit will be installed at New Duplex Board Machine to filter the wastewater and filtrate will be used to the possible extent at various points in the machine. The remaining treated wastewater will be discharged into Halmaddi Nallah as per existing practices after meeting the discharge standards. Mill has permission to discharge 85,885 m³/day and shall be maintained well within the consented limit post MDP. 	<ul style="list-style-type: none"> Effective implementation of EMP Regular Monitoring water quality of Kali River both in upstream and downstream Continuous monitoring of Treated Effluent Quality 	<ul style="list-style-type: none"> Budget: About Rs. 3.5 crores is allocated towards online monitoring systems including ETP up gradation etc. Time frame: After the commencement of project

2	<p><u>Air and Odour Emissions:</u> One of the attendees of the public hearing expressed his concern on air and odour emissions.</p>	<ul style="list-style-type: none"> • High efficiency ESP will be installed for the control of PM from the proposed boiler. • Stack of adequate height (85 m) will be installed for wider dispersion of pollutants in the atmosphere • As per the existing practice, NCGs from the pulp mill will be collected in NCG collection system and burnt in lime kiln. In addition, a stand by Alkali scrubber will be installed to treat NCG gases from the plant during lime kiln shut down, if required. • Dust collectors and water spraying system will be installed for the control of fugitive emissions 	<ul style="list-style-type: none"> • Effective Implementation of EMP • Installation of air pollution control equipment such as Electrostatic Precipitators (ESP) • Continuous monitoring of stack emissions and ambient air 	<ul style="list-style-type: none"> • Budget: About Rs. 10 crores is allocated towards pollution control and monitoring system which includes installation of ESPs, NCG gas collection system etc. • Time frame: After the commencement of project
3	<p><u>Employment opportunities to the locals:</u> Some of the participants raised concern that the local people should be given preference for employment opportunities</p>	<ul style="list-style-type: none"> • WCPM is provided permanent employment 100% to C & D Categories workers for local and neighboring villages as per Sarojini Mahishi report. • Of the total temporary workers (2300 workers) 100% belongs to local and surrounding villages. • Due to the proposed MDP, additional 175 direct and 125 indirect employments will be generated within the factory and in addition about 375 employments will be generated through transportation, maintenance, civil contract and farmers. 	<ul style="list-style-type: none"> • Priority will be given to the local people for employment on merit basis based on the skills and qualifications. 	NA
4	<p><u>Implementation of CSR Programs:</u> Some of the participants expressed the CSR focus areas and activities such as Health care programs, Housing schemes, Training programs, education programs, restoration of water bodies, etc to be taken up under CER/CSR program.</p>	<ul style="list-style-type: none"> • WCPM had spent about Rs. 149 Lakhs. on various CSR activities in the financial year 2017-2018 and Rs.177 Lakhs in the Year 2018-19. • The Dandeli Education Society is the education wing of WCPM through which Junior college for pre-university Science, Arts & commerce course are running & about 825 students are studying. In Degree College BA ,B.Sc & B.com, courses and post-graduation MSc chemistry, MCom courses, BASc(Applied Science) in paper & pulp technology 4years professional course is operated & about 850 Students are studying in degree college. • Various existing CSR programs implemented by WCPM includes <ul style="list-style-type: none"> ○ Health care ○ Education ○ Environmental Sustainability and Ecological Balance ○ Rural Development Projects ○ Protection of Heritage, Arts and Culture ○ Safe Drinking Water ○ Promotion of Rural Sports and Nationally Recognized Sports ○ Benefit to Martyr's dependents 	<ul style="list-style-type: none"> • In addition to the existing CSR budget, about ₹375 lakhs (0.5% of the project cost) have been embarked for the local community development under CER. • The CER budget includes programs under <ul style="list-style-type: none"> • Safe Drinking • Sanitation Facility • Veterinary Clinic Services • Access to Health Facilities • Skill Development Programs 	<p>CER Budget: ₹375 Lakhs (0.5% of the project cost) for a period of 5 years</p>

Activities and budget provision for CER

S.No	Program	Y1	Y2	Y3	Y4	Y5	Total (Rs. Lakhs)
1	Drinking Water	11	11	15	19	19	75
2	Sanitation	6	6	8	9	9	38
3	Skill Development and Animal Husbandry	11	11	15	19	19	75
4	Education	6	6	8	9	9	38
5	Health Care	23	23	30	38	38	150
	Total	56	56	75	94	94	375

19.1.24 The capital cost of the project is **Rs 750 Cr** and the budget allotted for environmental protection measures is proposed as **Rs. 20 Cr**. The annual recurring cost towards the environmental protection measures is proposed as **Rs 40 Lakhs**. The detailed CER plan has been provided in the EMP in Sections 10.6.1 and 10.6.2. The project will create direct employment to about 175 persons. In addition, it would generate indirect employment to about 500 persons.

EMP Budget Allocation

Section	Rs. Cr.
Power boiler ESP and stack	10.00
Ash handling	1.50
Online environmental protection and monitoring	0.50
Effluent treatment plant upgradation	3.00
Water conservation/recycling	4.00
Additional Green belt	1.00
Total	20.00

19.1.25 The existing facility has developed green belt/plantation of 103 acres (27%) in its premises with a total no. of plants of about 1,13,000. Additional 3000 plants will be planted to increase the greenbelt within the existing facility.

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

19.1.27 **Name of the Consultant:** M/s Cholamandalam MS Risk Services Ltd [S.No. 30, List of Accredited Consultant Organizations (Alphabetically) Rev. 87, May 08, 2020].

Observations of the Committee

19.1.28 The structure of the EIA report including chapters have not been prepared in accordance to Appendix-III of EIA Notification, 2006.

19.1.29 Details of machinery for proposed enhancement of production of paper and board is not provided in the EIA report.

19.1.30 It is proposed to expand 119 TPD of production by modernization but the details of the same has not been furnished. Water consumption and production depends on the type of the technology and same has also not been furnished as per design details.

19.1.31 Increase in capacity of lime kiln and recovery boiler is proposed and technical re-

design/modernization details of the same were not given.

- 19.1.32 Project site is Nine (9) km away from the boundary of Dandeli Wildlife Sanctuary and Two (2) km away from the boundary of proposed ESZ of Dandeli Anshi Tiger Reserve for which draft ESZ notification was issued on 2nd November 2016. Project proponent has not obtained the prior approval of SCNBWL for the existing plant and the non-compliance for same was categorically reported by Regional Office, MoEF&CC, Bangalore in its certified compliance report.
- 19.1.33 Baseline studies were carried out in rainy season, i.e April to July.
- 19.1.34 CER table is not clearly addressing the issues raised in the Public Hearing and Social Impact Assessment and the amount earmarked towards CER has not been calculated as per the slabs prescribed in the MoEF&CC O.M. dated 1/5/2018. List of annexures including attendance as mentioned in the proceedings of Public Hearing and the written response received during the consultant along with its reply has not been submitted.
- 19.1.35 Details of ETP to ensure adequacy for increased capacity have not been provided. The report should be comprising of all the design parameters of ETP in terms of flow dynamics, sludge, mass flow in and out, HRT, SRT, recycle of treated effluents and optimization for shock loads etc.
- 19.1.36 SO₂ and NO_x control details to meet statutory norms have not been provided.
- 19.1.37 Water balance for the entire plant has not been given.
- 19.1.38 Compliance of CREP guidelines is not addressed in the EIA Report.
- 19.1.39 Regional Office has reported non-compliance with respect to green belt development.
- 19.1.40 Details of sourcing of wood from renewable forests and contract farming have not been furnished.
- 19.1.41 As per Ministry's O.M. No. J-11015/286/2007-IA.II(I) dated 7/2/2020, any specific non-compliance singled out while the project is being appraised by the EAC, the concerned sector shall issue Show Cause Notice.

Recommendations of the Committee

- 19.1.42 In view of foregoing, after detailed deliberations, the committee recommended to return the proposal in the present form and to issue show cause notice for not obtaining recommendation of NBWL for the existing operations till date.
- 19.2 **Expansion of Integrated Steel Plant from 0.90 MTPA to 0.97 MTPA by M/s. Rungta Mines Limited located at Villages at villages Kamanda & Kula, district Sundergarh, Odisha [Proposal No. IA/OR/IND/151729/2020; MoEF&CC File No. IA-J-11011/434/2009-IA-II(I)]- Environment Clearance under para 7(ii) of EIA Notification, 2006 – regarding.**
- 19.2.1 M/s. Rungta Mines Limited has made an online application vide proposal no. IA/OR/IND/151729/2020 dated 22/04/2020 along with Form - 2, pre-feasibility report and Addendum to the 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

19.2.2 MoEF&CC has accorded Environment Clearance (EC) to M/s. Rungta Mines Limited vide letter no. J-11011/434/2009-IA.II(I) dated 06/11/2017 for setting up of 0.75 MTPA Integrated Steel Plant along with auxiliary facilities at Villages Kamanda and Kulu, District Sundergarh, Odisha. Thereafter, PP obtained another EC from MoEF&CC for expansion of ISP from 0.75 to 0.90 MTPA under para 7(ii) of EIA, 2006 on 08/03/2019 followed by amendment in EC on 19/07/2019 pertaining to the configuration of the pellet plant.

19.2.3 The units sanctioned as per EC dated 06/11/2017 and its subsequent letters dated 08/03/2019 and 19/07/2019 are as follows:

Sl. No.	Facility	Total capacity as per EC dated 06/11/2017, 08/03/2019 & 19/07/2019
1	Beneficiation Plant	1,200,000
2	Pellet Plant	
	Pellet Plant-1	600,000
	Pellet Plant-2	2,640,000
	Sub total	3,240,000
3	Coal Washery	924,000
4	DRI Plant	
	6X100 TPD	273,000
	1X300 TPD	136,500
	3X350 TPD	441,000
	2X500TPD	420,000
	Sub total	1,270,500
5	Sinter Plant -2x24 sqm	532,224
6	Mini Blast Furnace	
	2X262 CUM	458,500
	1X260 CUM	227,500
	Sub total	686,000
7	Coke Oven (2 batteries of 70,000 TPA)	140,000
8	SMS	
	4X15T IF, 2x20 LRF	277,200
	9 X15T IF, 3x35T LRF	623,700
	Sub total	900,900
9	Billet/ Slab/ Bloom Caster	
	Caster I	271,656
	Caster II	271,656
	Caster III	339,570
	Sub total	882,882
10	Flat/ Round/ Wire Rod/ Structural Mill/ others	
	Mill -1	260,790
	Mill-2	260,790
	Mill -3	325,987
	Sub total	847,567
11	Ferro Alloy Plant (1x9 MVA +	

Sl. No.	Facility	Total capacity as per EC dated 06/11/2017, 08/03/2019 & 19/07/2019
	1x18 MVA)	
	Ferro Manganese OR	9 MVA= 18,000 18 MVA=36,000
	Silico Manganese OR	9 MVA= 14,400 18 MVA=28,800
	Ferro Chrome OR	9 MVA= 14,400 18 MVA=28,800
	Ferro Silicon	9 MVA= 6,400 18 MVA=12,800
	Briquette Plant for ferro chrome	88,320
	Briquette Plant for ferro manganese	111,360
12	Captive Power Plant	198 MW
	WHRB	87 MW
	AFBC / CFBC (1x20 MW+ 2x45.5 MW)	111 MW

A CTE has also been obtained from OSPCB for an additional 13 MW from WHRB, thus, the total power generation capacity is 211 MW.

- 19.2.4 Presently, the following facilities are under operation as on 18th May, 2020 after obtaining EC from MoEF&CC followed by the CTE & CTO from Odisha State Pollution Control Board.

Sl. No.	Facilities	Configuration	Production	
1	Sponge Iron plant	6x100 TPD	2,73,000 TPA	
		1x300 TPD	136,500 TPA	
		1x350 TPD	147,000 TPA	
	Total		556,500 TPA	
2	SMS comprising IF, LRF along with CCM	4X15 T	277,200 TPA	
3	Rolling mill	TPA	260,790 TPA	
4	Captive Power Plant			
		WHRB	28 MW	28 MW
		AFBC/ CFBC	20 MW	20 MW

- 19.2.5 The Regional Office of MoEF&CC has visited the plant and issued a compliance status report vide letter no.101-998/EPE/432 dated 27.11.2018 for the existing EC. The observations of Regional Office are summarized as below:

- i. It is required to speed up the construction of 150 KLD sewage treatment plant work.
- ii. It has been observed that PAs have assigned Indian Institute of Technology (IIT), Kharagpur on dated 21.09.2018 to prepare GHG emission inventory of the project. it is required to submit above report to Ministry and its regional office at the earliest.
- iii. It is required to strengthen and maintained the existing green belt with broad leaves native species of the plant especially all along the boundary of the plant.

Action Taken report was submitted by Rungta Mines Ltd vide letter dated 03.05.2019. MoEF&CC Bhubaneswar issued closure report vide letter no. 101-98/07/EPE/858 dated 10.05.2019. PP informed that following are the progress made with respect to the observations of RO report.

S.No.	Observations of RO	Present status
i.	It is required to speed up the construction of 150 KLD sewage treatment plant work.	150 KLD sewage treatment plant has been constructed and commissioned.
ii.	It has come to observed that PAs have assigned Indian Institute of Technology (IIT), Kharagpur on dated 21.09.2018 to prepare GHG emission inventory of the project. it is required to submit above report to Ministry and its regional office at the earliest.	GHG emissions inventory for the plant has been prepared by IIT, Khargpur and report submitted. The recommendations made in the report will be implemented by project proponent.
iii.	It is required to strengthen and maintained the existing green belt with broad leaves native species of the plant especially all along the boundary of the plant.	Strengthening and maintenance works for existing greenbelt is regularly being carried out. Additional plantation of broad leaved native species has been carried out in an area of 12 acres during Sep 2018 to Feb 2019.

After deliberations, the Committee satisfied with the progress made by the PP with respect to the observations of RO.

19.2.6 The present proposal of M/s. Rungta Mines Limited is for seeking Environment Clearance again under the provisions of para 7(ii) of EIA Notification, 2006 for the following:

- i. Change in configuration of Ladle Refining Furnace, Blast Furnace and Sinter Plant.
- ii. Capacity enhancement of DRI, SMS, Billets/Slab/Bloom Caster, TMT/Round/Wire Rod/Flat/ Structural/ others and Pelletisation Plant due to change in configuration followed by the usage of superior coal quality with better Fixed Carbon content and increase in feed of iron ore/pellet.
- iii. New proposal for Oxygen Plant.

19.2.7 The details of the proposed change in configuration and enhancement in production quantities are furnished as below:

Sl. No as per EC.	Facilities	Units	Capacity as per EC dated 06.11.2017	Capacity as per EC dated 08.03.2019	Additional	Proposed production (TPA)	% Change wrt 0.75 MTPA
	TOTAL PRODUCTION	MTPA	0.75	0.90	0.07	0.97	(+) 29.33
2	Pellet Plant						
	Pellet Plant -1	TPA	600,000	600,000	300,000	900,000	(+) 50
	Pellet Plant -2	TPA	2640,000	2640,000	360,000	3,000,000	(+) 13.64
	Sub Total	TPA	3,240,000	3,240,000	660,000	3,900,000	(+) 20.37

4	DRI Plant						
	DRI (6X100 TPD)	TPA	257,400	273,000	35,850	308,850	(+) 19.99
	DRI (1X300 TPD)	TPA	128,700	136,500	25,025	161,525	(+) 25.50
	DRI (1x350 TPD)	TPA	138,600	147,000	19,850	166,850	(+) 20.38
	DRI (2X350 TPD)	TPA	277,200	277,200	0	277,200	Nil
	DRI (2x500 TPD)	TPA	396,000	420,000	0	420,000	Nil
	Sub Total	TPA	1,197,900	1,270,500	80,725	1,351,225	(+) 12.80
5	Sinter plant	TPA	532,224 (2x24 sq.m.)	532,224	0 (configuration change)	532,224 (1x48 sq.m.)	Nil
6	Mini Blast Furnace						
	Mini Blast Furnace-1	TPA	458,500 (2x262 cum)	458,500 (2x262 cum)	-152,250 (configuration change)	306,250 (1x350 cum)	-33.2%
	Mini Blast Furnace-2	TPA	227,500 (1x260 cum)	227,500 (2x262 cum)	152,250 (configuration change)	379,750 (1x434 cum)	+66.9%
	Sub Total	TPA	686,000	686,000	0	686,000	0%
8	SMS						
	SMS (I)	TPA	231,000 (IF 4X15 T, LRF 2x15 T)	277,200 (IF 4X15 T, LRF 2x20 T)	69,300 (configuration change)	346,500 (IF 4X15 T, LRF 3x20 T)	(+) 50
	SMS (II)	TPA	519,750 (IF 9X15T, LRF 5x15 T)	623,700 (IF 9X15T, LRF 3x35 T)	0	623,700 (IF 9X15T, LRF 3x35 T)	
	Sub Total	TPA	750,750	900,900	69,300	970,200	(+) 29.23
9	Billets/ slab/ bloom caster						
	Billet caster (I)	TPA	226,380	271,656	67,914	339,570	(+) 50
	Billets caster (II)	TPA	226,380	271,656	0	271,656	Nil
	Billets caster (III)	TPA	282,975	339,570	0	339,570	Nil
	Sub Total	TPA	735,735	882,882	67,914	950,796	(+) 29.23
10	Rolling mill (TMT/ flat/ Round/ wire rod/ structural mill/ others)						
	Rolling mill (I)	TPA	217,325	260,790	65,198	325,988	(+) 50
	Rolling mill (II)	TPA	217,325	260,790	0	260,790	Nil
	Rolling mill III	TPA	271,656	325,987	0	325,987	Nil
	Sub Total	TPA	706,306	847,567	65,198	912,765	(+) 29.23
13	Oxygen plant	TPD	-		150	150	New unit

19.2.8 The consolidated product slate after change in configuration and enhancement in production quantities are furnished as below:

Sl. No.	Facilities	Units	Sanctioned capacity as per EC dated 06.11.2017	Sanctioned capacity as per EC dated 08.03.2019	Additional	Proposed production (TPA)	% Change wrt 0.75 MTPA
	TOTAL PRODUCTION	MTPA	0.75	0.90	0.07	0.97	(+) 29.33
1	Beneficiation Plant	TPA	1,200,000	1,200,000	0	1,200,000	Nil
2	Pellet Plant						
2.1	Pellet Plant -1	TPA	600,000	600,000	300,000	900,000	(+) 50
2.2	Pellet Plant -2	TPA	2640,000	2640,000	360,000	3,000,000	(+) 13.64
	Sub Total	TPA	3,240,000	3,240,000	660,000	3,900,000	(+) 20.37
3	Coal Washery	TPA	924,000	924,000	0	924,000	Nil
4	DRI Plant						
4.1	DRI (6X100 TPD)	TPA	257,400	273,000	35,850	308,850	(+) 19.99
4.2	DRI (1X300 TPD)	TPA	128,700	136,500	25,025	161,525	(+) 25.50
4.3	DRI (1x350 TPD)	TPA	138,600	147,000	19,850	166,850	(+) 20.38
4.4	DRI (2X350 TPD)	TPA	277,200	277,200	0	277,200	Nil
4.5	DRI (2x500 TPD)	TPA	396,000	420,000	0	420,000	Nil
	Sub Total	TPA	1,197,900	1,270,500	80,725	1,351,225	(+) 12.80
5	Sinter plant	TPA	532,224 (2x24 sq.m.)	532,224	0 (configuration change)	532,224 (1x48 sq.m.)	Nil
6	Mini Blast Furnace						
6.1	Mini Blast Furnace-1	TPA	458,500 (2x262 cum)	458,500 (2x262 cum)	-152,250 (configuration change)	306,250 (1x350 cum)	-33.2%
6.2	Mini Blast Furnace-2	TPA	227,500 (1x260 cum)	227,500 (2x262 cum)	152,250 (configuration change)	379,750 (1x434 cum)	+66.9%
	Sub Total	TPA	686,000	686,000	0	686,000	0%
7	Coke Oven (2 batteries of 70,000 TPA)	TPA	140,000	140,000	0	140,000	Nil
8	SMS						
8.1	SMS (I)	TPA	231,000 (IF 4X15 T, LRF 2x15 T)	277,200 (IF 4X15 T, LRF 2x20 T)	69,300 (configuration change)	346,500 (IF 4X15 T, LRF 3x20 T)	(+) 50
8.2	SMS (II)	TPA	519,750 (IF 9X15T, LRF 5x15 T)	623,700 (IF 9X15T, LRF 3x35 T)	0	623,700 (IF 9X15T, LRF 3x35 T)	
	Sub Total	TPA	750,750	900,900	69,300	970,200	(+) 29.23
9	Billets/ slab/ bloom caster						
9.1	Billet caster (I)	TPA	226,380	271,656	67,914	339,570	(+) 50
9.2	Billets caster (II)	TPA	226,380	271,656	0	271,656	Nil
9.3	Billets caster (III)	TPA	282,975	339,570	0	339,570	Nil
	Sub Total	TPA	735,735	882,882	67,914	950,796	(+) 29.23
10	Rolling mill (TMT/ flat/ Round/ wire rod/ structural mill/ others)						
10.1	Rolling mill (I)	TPA	217,325	260,790	65,198	325,988	(+) 50
10.2	Rolling mill (II)	TPA	217,325	260,790	0	260,790	Nil
10.3	Rolling mill III	TPA	271,656	325,987	0	325,987	Nil
	Sub Total	TPA	706,306	847,567	65,198	912765	(+) 29.23
11	Ferro Alloy Plant	TPA					
11.1	Ferro Manganese OR	TPA	9 MVA= 18,000 18 MVA=36,000	9 MVA= 18,000 18 MVA=36,000	0	9 MVA= 18,000 18 MVA=36,000	Nil

11.2	Silico Manganese OR	TPA	9 MVA= 14,400 18 MVA=28,800	9 MVA= 14,400 18 MVA=28,800	0	9 MVA= 14,400 18 MVA=28,800	Nil
11.3	Ferro Chrome OR	TPA	9 MVA= 14,400 18 MVA=28,800	9 MVA= 14,400 18 MVA=28,800	0	9 MVA= 14,400 18 MVA=28,800	Nil
11.4	Ferro Silicon	TPA	9 MVA= 6,400 18 MVA=12,800	9 MVA= 6,400 18 MVA=12,800	0	9 MVA= 6,400 18 MVA=12,800	Nil
11.5	Briquette Plant for ferro chrome	TPA	88,320	88,320	0	88,320	Nil
11.6	Briquette Plant for ferro manganese	TPA	111,360	111,360	0	111,360	Nil
12	Captive Power Plant	MW	198	198	0	198	Nil
12.1	WHRB	MW	87	87	0	87	Nil
12.2	AFBC/ CFBC	MW	111(1x20 MW+91 MW) (1x115 TPH +4x95 TPH)	111 1x20MW+2x45.5 MW (1x115 TPH +2x195 TPH)	0	111 1x20 MW+ 2x45.5MW (1x115 TPH +2x195 TPH)	Nil
13	Oxygen plant	TPD	-		150	150	New unit

19.2.9 The justification furnished for the proposed enhancement in production capacities due of various units is furnished as below:

A. DRI Unit

- i. Minor changes in feed air lead to increase in capacity with same configuration of DRI kilns.
- ii. In EC dated 08.03.2019, kiln operation days were 350 which are proposed to be increased to 355 days.
- iii. Superior quality of coal with better Fixed Carbon is proposed to be used.
- iv. Company has procured Brokk machine for accretion cutting to minimize the accretion cutting days.
- v. Better control in the operational parameters possible.
- vi. Adequate additional manpower will be deployed.

B. Induction furnace

- i. Replacement of the presently used silica based acidic lining (life- 20 heats) by alumina based neutral lining (life-100 heats) in induction furnaces.
- ii. Furthermore, 100 heat life of neutral lining can be further increased to 350 heat by hot patching.
- iii. Therefore, as compared to present utilisation of 50%(2x15T working, 2x15T crucible undergoing re-lining), in future company can utilise 75% (3X15T working, 1X15 T crucible undergoing re-lining) due to increased life of lining.

C. Rolling mill

- i. Increase in number of hours of operation everyday from 19-20 hours to 22 hrs to cater to increase in production

D. Pelletisation Plant

- ii. Increase in grate factor by increase in speed & bed height

- iii. Material Handling Belt Conveyors carrying capacity can be increased by increasing the belt speed from 1.5 to 1.8 m/sec.
- iv. Raw material storage capacity is sufficient to meet the increased production.
- v. Additional space is available in the building to add two additional pressure filters and one additional pelletizing disc.
- vi. Iron ore fines & additives (lime, coal & bentonite) grinding mills are capable to operate and meet the requirements for increased production quantity by increasing the run hour per day.
- vii. The mixer can handle the increased production requirement.
- viii. Additional burners can be installed in the Induration Furnace (Pellet heat hardening furnace) to get required heat input for heat hardening of pellets.
- ix. Process fans can cater to the higher volume and higher pressure drop caused due to increase in bed height
- x. Grate machine, Kiln, cooler speed can also be increased.
- xi. Increase in number of working days (330 to 350 i.e. 6%)

19.2.10 The existing land of the plant is 154.489 ha, out of which 120.369 ha is private land and 34.12 ha is Government land. No additional land is required for the proposed expansion. The total acquired land by the company is 145.26 ha and rest 9.23 ha land is pending with Tehsildar office. No river passes through the project area.

19.2.11 The topography of the project is flat and reported to lie between 21°55'09'' to 21°55'58''N Latitude and 85°13'16'' to 85°13'53''E Longitude in Toposheet No. 73G/1. The average ground elevation of the project area is 556 m AMSL. The ground water table is reported to range 2.35 m to 10.44 below the land surface during the pre-monsoon season and 1.08 m to 7.89 m below the land surface during the post-monsoon season.

19.2.12 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 Simlipal Wildlife Sanctuary is located at a distance of 130 km from the site. Schedule I species are found in the area and Site Specific Wildlife Conservation Plan approved by PCCF (WL) Government of Odisha vide letter no. 9206/1WL-SSP-257/2016 dated 31.10.2017.

19.2.13 The existing baseline status based on the data collected during the post project monitoring for the existing EC is given as below:

- i. Ambient air quality monitoring: PM₁₀ (56.5 to 78.3 µg/m³), PM_{2.5} (31.2 to 41.4 µg/m³), SO₂ (6.2 to 7.4 µg/m³) and NO₂ (16.2 to 20.4 µg/m³).
- ii. Noise level in the project area is in the range of 49.2 to 59.6 dBA for day time and 41.3 to 48.9 dBA for night time.

19.2.14 The resource requirement and the pollution load assessment for the enhancement in ISP capacity from 0.9 MTPA to 0.97 MTPA is furnished as below:

Sl. No	Item	As per EC dated 08.03.2019	Proposed increase	Total	% change
	Production of finished steel	0.9	0.07	0.97	(+) 7.78

1	Raw Material (in house & out house), TPA	8100584	792047	8892631	(+) 9.78
1.1	Coal, TPA	1368618	-66176	1302442	(-) 4.84
1.2	Iron Ore & fines, TPA	5251056	813720	6064776	(+) 15.5
1.3	Dolomite, TPA	223154	55369	278523	(+) 24.81
1.4	Steel Scrap, TPA	97924	6399	104323	(+) 6.53
2	Finished Product	6098067	805923	6903990	(+) 13.22
2.1	Pellets	3240000	660000	3900000	(+) 20.37
2.2	DRI	1270500	80725	1351225	(+) 6.35
2.3	Steel Products	847567	65198	912765	(+) 7.69
2.4	Ferro Alloys	54000	0	54000	
2.5	Pig Iron	686000	0	686000	
3	Manpower	2135	100	2235	(+) 4.68
4	Power requirement, MW	215.5 MW	13	228.5	(+) 6.03
	Power Source	211 MW CPP, balance from grid	Grid	CPP+Grid	
5	Water & waste water				
5.1	Fresh water consumption (cum/hr)	2428.68	-966.08	1463	(-) 39.78
5.2	Waste water generation (cum/hr)	328	-186	142	(-) 56.68
5.3	Utilization of waste water (%)	100% in Ash quenching, dust suppression , brick plant, horticulture			
6	Transport, trucks per hour (to-fro)	116	8	124	(+) 6.9
7	Air Quality based on Terrain based AAQ modelling carried out using ISCST3 :				
Parameters		Increase in Increment GLC w.r.t 0.277 MTPA operational plant, $\mu\text{g}/\text{m}^3$			
		For 0.97 MTPA	For 0.90 MTPA	Difference	% change
	PM ₁₀	8.007	8.397	(-) 0.39	(-)4.6
	PM _{2.5}	4.601	4.829	(-) 0.228	(-)4.7
	SO ₂	12.21	14.41	(-) 2.2	(-)15.3
	NO ₂	7.858	7.238	(+) 0.62	(+)8.6

19.2.15 There will be reduction in solid waste generation by 2,34,663 TPA. The solid waste generation will reduce in Pellet Plant Dust and Slag from SMS. While the solid waste generation will be increase Char from DRI, ESP Dust from DRI, Kiln Accretion from DRI, Reject from Rolling Mill and Mill Scale from Rolling Mill. The details of solid waste generation and its utilization is given as below:

Solid waste	As per EC for 0.90 MTPA	Additional	Total for 0.97 MTPA	% Change	Management measure
Beneficiation Tailing	500000	0	500000	0	Collected in small tailing pond, dewatered and dredged for 100% reutilisation as sand substitute in infrastructure/ fine concrete

Solid waste	As per EC for 0.90 MTPA	Additional	Total for 0.97 MTPA	% Change	Management measure
					aggregate/ cement manufacture
Pellet plant dust	3,40,362	-2,48,916	91,446	(-)73.13	100% reutilised in mixing building of pellet plant
DRI-Char	2,28,690	8,550	2,37,240	(+)3.74	100% Utilised in CPP
DRI-ESP dust	63,525	3,633	67,158	(+)5.72	100% reutilised in pellet plant or sinter plant
DRI-Kiln Accretion	6,353	404	6,756	(+)6.35	100% Stored in in land fill temporarily till reused in road sub-based
SMS-Slag	36,446	-2,435	34,011	(-)6.68	100% Given for metal recovery, converted to aggregates and used in road making
RM-Reject	14,531	1,138	15,669	(+)7.83	100% Reused in SMS
RM-Mill Scale	38,802	2,964	41,766	(+)7.64	100% Saleable, useable in pellet making & sinter plant, LRF dephosphorisation process
CPP- Ash	3,01,058	0	3,01,058	-	100% reused as per MOEF Notification 2009. Used in cement making, brick making, block making, aggregate making, and road making.
BF- slag	1,86,009	0	1,86,009	-	100% Granulated & sold for cement making
BF- Dust	37,730	0	37,730	-	100% reused in sinter plant
Sinter return fines	29,400	0	29,400	-	100% reused in sinter plant
Coke oven- BF dust	6,342	0	6,342	-	100% reused in sinter plant
Ferro alloy - Slag	64,821	0	64,821	-	100% Re-used in sinter making within plant, grinding & road filling/landfilling, sellable
Ferro Alloy - Fines	10,821	0	10,821	-	100% reused in sinter plant
Total	18,64,890	-2,34,663	16,30,227	(-)12.58	

- 19.2.16 The capital cost of the proposed amendment and enhancement is Rs 120 crores and the capital cost for environmental management is proposed as Rs. 1.2 crore. The annual recurring cost towards the environmental protection measures is proposed as Rs. 50 lakhs per annum. The fund allocated towards CER is Rs. 1.2 crore.
- 19.2.17 The total green area is 50.98 ha, which is 33% of the total area. A 10 m wide green belt, consisting of at least 3 tiers around boundary is developed as green belt and green cover as per CPCB/ MOEF&CC, New Delhi guidelines. Total 1,27,970 trees have been planted till date
- 19.2.18 Public hearing for the existing project was held on 19.07.2017 as per the provisions laid down in the EIA Notification, 2006.
- 19.2.19 The proponent has mentioned that there is no court case or violation under EIAs Notification to the project or related activity.
- 19.2.20 Name of consultant: Min Mec Consultancy Private Limited, New Delhi. The consultant is preparing and presenting reports as per the High Court of Delhi orders in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

19.2.21 During the discussions, the Committee sought specific reply from PP on the following information. In this regard, the reply furnished and presented by the project proponent during the course of meeting is given as below:

S.No.	Information sought by the EAC	PP reply
i.	Additional green belt development beyond 33% of the total project area	Additional plantation over 6 acres within and/or outside plant premises will be carried out.
ii.	Increase in direct hot charging in rolling mill	From the current commitment of 80% direct hot charging to rolling mill, PP will raise it to 90% direct hot charging by taking the necessary steps.
iii.	Fuel for reheating furnace	The fuel proposed for reheating furnace was Furnace Oil, which has sulphur in excess of 3%. Hence, we commit to use fuels (LDO) with lower sulphur content, which will reduce the pollution emission (SO ₂) load from the project.
iv.	Commitment regarding no ground water withdrawal and 100% rain water harvesting	PP committed that no usage of ground water for industrial purpose and also committed for harvest of 100% of the rain water within the plant premises.
v.	Steps for control of NOx emissions from the proposed CPP (2X195 TPH):	<ul style="list-style-type: none"> a. Furnace temp of 880-890 deg C will be maintained throughout the furnace to ensure no or minimal thermal NOx generation takes place. b. Stage combustion will be ensured by providing secondary air at two levels. which will further ensure reduction in NOx generation. c. Proposed boiler is also envisaged with SNCR (selective non catalytic reduction) systems based on aqueous ammonia for further reduction of NOx emission to 100 mg/Nm³.
vi.	Iron ore tailing management	<ul style="list-style-type: none"> a. Use of paste thickener for quicker drying of tailings /pressure filter instead of using decantation ponds b. Reuse of the dried tailings in reutilisation as sand substitute in infrastructure/ fine concrete aggregate/ cement manufacturing. c. Maximum two months storage within premises
vii.	Installation of Top Gas Pressure Recovery turbine (TRT) on blast furnace	PP opted for high pressure axial blower having air blowing pressure of 3 kg/cm ² and dry gas cleaning plant at the blast furnace, the company commits to install a Top Gas Pressure Recovery turbine (TRT) on 434 cum blast furnace for power generation, Average power generation from TRT is in the range of 30-35KWH/ THM, and can easily meet 20% power demand of blast furnace. Total power generation through TRT will be 1.44 MW and it will have the following advantages:

S.No.	Information sought by the EAC	PP reply
		<ul style="list-style-type: none"> a) Offset of the increase in power demand for expansion through a renewable source in-house b) Low pressure gases after release from TRT shall be used for heating of BF stoves and other furnaces due to availability of 20-25% CO in it. c) Savings in coal to the tune of 5582 TPA and ash generation to the tune of 2233 TPA, if this TRT power had to be generated from coal based sources. This translates to preventing 6140 tonnes of CO₂ emissions into the atmosphere. d) For 350 Cum Blast Furnace, the air blowing pressure is 2 kg/cm², which is inadequate to operate a TRT successfully. However we will evaluate the same at the time of detailed engineering. We commit to improve the energy efficiency and reduce atmospheric emissions from the blast furnace by carrying out the following steps: <ul style="list-style-type: none"> e) Staves cooling arrangement for controlled cooling of blast furnace shell and internal refractory, it is closed circuit cooling and entails lesser heat loss from BF shell, improves BF refractory life. f) Bell less top for better and controlled charge distribution inside furnace g) Top combustion high temp stoves for elevated blast temperature h) Slag granulation system with exhaust chimney for evacuation of steam and fumes i) Cast house de-dusting system j) Dry gas cleaning plant for better cleaning of blast furnace gas in comparison to wet cleaning and elimination of water requirement. k) Septum valves for maintaining top pressure to increase residence time of gases inside furnace for promotion of gaseous reactions. l) Bag Filters and dust suppression system at Day bins and other material handling areas of Blast furnace.
viii.	Waste recycling plant	The company commits to enhance existing waste recycling plant (slag separation plant) to recover metal from the SMS plant. The metal shall be reused in IF.
ix.	Reduction in	During the environmental clearance of 0.75 MTPA

S.No.	Information sought by the EAC	PP reply
	emission levels	steel plant, the emissions from the plants were projected and planned in the range of 50 mg/Nm ³ from proposed stacks. However, with more stringent air pollution control and availability of efficient air pollution control equipment, the units to be installed will be able to comply 30 mg/Nm ³ emission from proposed stacks. This will lead to increased bag filter and ESP dust generation. This will be 100% recycled in the sinter plant and will have the advantages of resource conservation as well as associated cost savings. Further, PP committed to control fugitive dust by adding an industrial grade vacuum cleaner.
x.	Additional CER	An additional CER of Rs. 1.2 Cr will be spent in the next 4 years.

Observations of the Committee

- 19.2.1 The Committee noted that as per the records made available by the project proponent, the capacity of Integrated Steel Plant is increasing from 0.90 MTPA to 0.97 MTPA by change in configuration of the units followed by the usage of superior coal quality with better Fixed Carbon content and increase in feed of iron ore/pellet. There will be no change in land requirement and reduction in anticipated emission levels due to the adoption of higher configuration units. Therefore, the Committee consider the instant proposal under para 7(ii) (a) of the EIA Notification, 2006 and dispense with the requirement of conducting fresh public consultation. An additional CER of Rs. 1.2 Cr is earmarked which will be spent in the next 4 years.

Recommendations of the Committee

- 19.2.2 In view of the foregoing and after detailed deliberations, the committee recommended the project for grant of Environment Clearance under para 7(ii) of EIA Notification, 2006 subject to the following specific conditions in addition to the applicable general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to integrated steel plants.
- i. PP shall adopt 90% direct hot charging in rolling mills in order to reduce energy consumption and overall emission levels of PM, SO₂ and NO_x.
 - ii. Additional green belt plantation over 5 ha land beyond 33% of the total project area shall be done in next three years within and/or outside plant premises.
 - iii. Light Diesel Oil (LDO) shall be used in reheating furnaces, to reduce the SO₂ emission level.
 - iv. No ground water withdrawal is permitted for industrial purposes. Only surface water shall be used.
 - v. 100% of the water consumed annually shall be recharged through Rain Water Harvesting (RWH) within the plant and/or outside in nearby areas. Recharge system shall have monitoring facility.
 - vi. PP should take additional steps for reduction in NO_x emissions from the proposed CPP (2x195 TPH) boilers by maintaining optimal temperature in the furnace and adoption of SNCR (selective non catalytic reduction) systems based

on aqueous ammonia to achieve the NO_x emissions from the boiler well below the permissible limits.

- vii. Tailings management in the beneficiation plant, shall be carried out as under:
 - a. Use of paste thickener for quicker drying of tailings /pressure filter instead of using decantation ponds
 - b. Reuse of the dried tailings in reutilization as sand substitute in infrastructure/ fine concrete aggregate/ cement manufacture.
 - c. Maximum two months storage within premises shall be permitted.
 - viii. PP shall install a Top-Gas Pressure Recovery Turbine (TRT) on 434 m³ blast furnace for recovery of waste heat for power generation by optimizing the blast furnace operation parameters.
 - ix. Staves cooling arrangement for controlled cooling of blast furnace shell and internal refractory shall be closed circuit cooling type to minimise heat loss from BF shell, and to improve BF refractory life.
 - x. Cast house de-dusting system; Dry gas cleaning plant for better cleaning of blast furnace gas shall be provided.
 - xi. Bag Filters and dust suppression system at Day bins and other material handling areas of Blast furnace shall be provided.
 - xii. PP shall enhance the existing waste recycling plant (slag separation plant) to recover metal and flux from the SMS slag for recycling within the plant.
 - xiii. All units existing as well as those to be installed now shall comply with the PM emission level of 30 mg/Nm³. The dust recovered (100%) from pollution control systems shall recycled in the sinter plant/pellet plant.
 - xiv. Fugitive dust shall be controlled by adding an industrial grade vacuum cleaner.
 - xv. The additional CER of INR 1.2 Cr will be spent in the next 4 years.
- 19.3 Capacity enhancement of Steel Manufacturing Unit by replacing existing Induction Furnace and enhance production capacity 45,000 to 1,40,000 MTPA by **M/s Vardhman Ispat Udyog** located at Village- Bathri, **Dist. Una, State Himachal Pradesh** [Proposal No. IA/HP/IND/104614/2019, MoEF&CC File No. IA-J-11011/187/2019-IAII(I)] – **Environmental Clearance – regarding.**
- 19.3.1 M/s Vardhman Ispat Udyog has made an online application vide proposal no. IA/HP/IND/104614/2019 dated 29.04.2020 in prescribed Form-2 along with EIA Report and other documents for seeking Environmental Clearance for the project cited above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) in the schedule under Category “A” in the EIA Notification, 2006 due to the applicability of General condition and the proposal is appraised at Central Level.
- 19.3.2 The application of M/s Vardhman Ispat Udyog located at vill. Bathri, tehsil Haroli, dist. Una, Himachal Pradesh was initially received in the Ministry on 7th May 2019 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC (I)] during 7th meeting on 29th to 31st May, 2019 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining EC. Accordingly, the Ministry of Environment, Forest and

Climate Change had prescribed ToRs to the project on 20.04.2020 vide F.No. J-11011/187/2019-IA-II(I).

- 19.3.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 29/04/2020 vide Online Application No IA/HP/IND/104614/2019.

Details submitted by the project proponent

- 19.3.4 M/s Vardhman Ispat Udyog (VIU) is undergoing backward integration with the purchase of two plants namely; M/s H.N. Steel Castings Pvt. Ltd and S.R. Steels along with the purchase of adjoining Land of Mr. Rakesh Kumar (10199 sq.m) in Village Bathri, Distt. Una (HP). Accordingly, M/s Vardhman Ispat Udyog has purchased the said assets as an ongoing unit and established it as a New Steel Manufacturing unit. The existing steel casting unit has the production capacity of 18000 MTPA by casting ingots with molten steel from the Induction furnaces in moulds then reheating the ingots in reheating furnace and rolling in Rolling mill. Another quantity of 27000 MTA of steel was rolled by purchasing ingots from the market and then heating it in reheating Furnace and rolling in Rolling mill.
- 19.3.5 Capacity enhancement of steel manufacturing unit by replacing both the existing induction furnaces and enhance production capacity from 45,000 to 1,40,000 MTPA. Total capacity of two Induction furnaces proposed is 20 MT/heat.
- 19.3.6 The total land required for the project is 2.7078 ha which is already in the possession of project proponent. No forest land is involved. 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.
- 19.3.7 The topography of the area is hilly terrain and reported to lie between 31°19'6.17"N to 31°19'10.02"N Latitude and 76°17'25.43"E to 76°17'36.96"E Longitude in Survey of India topo sheet No 53A3, 53A4, 53A7, 53A8 at an elevation of 454 m AMSL. The ground water table reported to range between 2.0 to 39.0 meter below the land surface during the post-monsoon season and 2.0 to 45.0 meter below the land surface during the pre-monsoon season.
- 19.3.8 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger 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. No Schedule-I species is found in the 10 km radius of the project site.
- 19.3.9 The targeted production capacity of the Billets/Ingots is 413 TPD and MS rolled product is 400 TPD. MS Scrap, Ferro Alloys & MS Billets will be used as basic raw material to manufacture TMT Bar, Girders & Angels. Raw materials will be purchased from open market and transported to site through trucks.
- 19.3.10 The total freshwater requirement of the project is estimated as 31 m³/day, which will be sourced from the Borewell. Water requirement will be met through HP Ground Water Authority, Govt. of Himachal Pradesh). Application submitted on dated 18.09.2019 and is under process.
- 19.3.11 The power requirement of the project is estimated to be 9925 KW; the permission has been obtained from the Himachal Pradesh State Electricity Board Limited (HPSEBL).
- 19.3.12 Baseline Environmental Studies were conducted during Pre-Monsoon season i.e. from 1st March 2019 to 31st May, 2019. Ambient air quality monitoring has been carried out

at nine locations and the data submitted indicated: PM₁₀ (63.3µg/m³ to 99µg/m³), PM_{2.5} (33.3 to 62.8 µg/m³), SO₂ (7.4 to 13.5µg/m³) and NO_x (14.7 to 30.1µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is just 0.03846 µg/m³ with respect to the PM₁₀.

- 19.3.13 Ground water quality has been monitored in nine locations in the study area and analyzed. pH: 6.96 to 7.66, Total Hardness: 242 to 440 mg/L, Chlorides: 8.0 to 33.0 mg/L, Fluoride: 0.53 to 0.91 mg/L. Heavy metals are within the limits. Surface water samples were analyzed from three locations. pH: 8.1 to 8.2; DO: 3.8 to 5.2 mg/L and BOD: 3.8 to 5.7 mg/l, COD: 12.00 to 20.0 mg/L.
- 19.3.14 Noise levels are in the range of 58.3 to 65.03 dB(A) for daytime and 50.61 to 58.4 dB(A) for nighttime.
- 19.3.15 No R&R is involved. It has been envisaged that no families to be rehabilitated.
- 19.3.16 It has been reported that a total of 21 MTPD of Slag, 10 MTPD of Mill Scale and 1.0 MTPD of APCD dust will be generated due to the project, out of which mill scale waste will be sold to the market, slag will be sent to paver industry for interlock block making after metal extraction and APCD waste will be send to TSD site for proper disposal. Zinc metal recovery from APCD dust is under consideration for implementation. It has been envisaged that an area of 0.894 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.
- 19.3.17 It has been reported that the Consent to Operate from the Himachal Pradesh State Pollution Control Board obtained vide Certificate No. No. HPSPCB /PCB-ID10611 (H N Steel) & HPSPCB /PCB-ID10264 (S R Steel) validity of CTO is up to 31.03.2019 and 31.03.2023.
- 19.3.18 The Public hearing of the project was held on 11.12.2019 at Rajiv Gandhi Common Facility Center HPSIDC at VPO Bathu, Tehsil- Haroli, Dist. Una, H.P. under the chairmanship of Shri Arindam Chaudhary, Deputy Commissioner Una for production of 413 TPD of Billets and 400 TPD of MS rolled products (TMT Bar, Girders & Angels etc). The issues raised during public hearing are employment, pollution control and Providing Health Facility. The issues raised during public hearing and response of the project proponent with action plan are tabulated below:

Sr. No	Name of the person	Detail of query/ statement/ information/clarification sought by the person present at the venue of hearing	Reply of the query/ statement/ information/clarification given by the project proponent	Time bound action plan.
1.	Sh. Ravinder Sharma, Village Bathu, Tehsil Haroli, District Una (HP)	He expressed his concern about pollution due to existing industries and its impact on the health of people and said proposed industry can increase the level of pollution in the area. He asked how proposed industry will control pollution generated by their activities.	Environment Consultant of proposed Project Dr. Sandeep Garg answered this question that steel industry is mainly air polluting; the air pollutants are discharged into air through stack. As per guidelines of Govt. of India, stack height should be 30 m. Stack of 120 ft height with Pulse Jet Beg House Filter has been installed to maintain emission level to 150 mg/m ³ . Pulse Jet Bag Filter is used to remove dust particle from smoke to maintain emission level within prescribed limits and online air	Project proponent has already provided air pollution control device in the form of side suction hood followed by Pulse Jet Beg House Filter on one induction furnace and same will be provided on second furnace also based on latest technology and there will be no impact on the environment.

			monitoring system will be provided which will be visible to concerned department in case level of pollution is above prescribed standards.	
2.	Sh. Ramesh Chand Sharma, Aazad Nagar Arniyala Road Una, Tehsil & District Una (HP)	He asked Project Proponent that how fund under CSR will be used and who will audit. What is the mechanism for auditing this expenditure? He suggested that fund could be used for water harvesting in the nearby area for irrigation and for constructing building in local schools.	Environment Consultant of proposed project agreed to the audit of budget allocated under CSR activities. He said that 25 lacs will be utilized in the development of area and its utilization will be decided after discussion with local administration and people. He also gave assurance that 100% fund will be utilized for the development of area and expenditure details will be displayed on company's web site. He also suggested that fund can be utilized for constructing toilets in Girl's school and constructing cremation shed.	<ul style="list-style-type: none"> Project Proponent assured that CER Committee will be constituted. Pradhan of village panchayat Bathu will be member of this committee and expenditure details will be displayed on company's web site. Project proponent assured that Rs. 25 lakhs will be utilized in the development of area; Out of which, funds will be utilized for constructing toilets in Girl's school and constructing cremation shed.
3.	Sh. K.K Rana, Pradhan Village Bathu, Tehsil Haroli, District Una (H.P)	He welcomed setting up proposed project. He expressed his concern regarding pollution caused by various industries in the area; he said area is not suitable to live due to pollution; local people are suffering adverse impact due to pollution. He showed dissatisfaction toward action taken by the Pollution Control Board in controlling the pollution generated by the industries. He raised the question regarding unauthorized settlement along the side of industrial area and said this area is turning into slum area where open defecation is a normal practice. He said local people expect from administration not to convert this area into slum and to take appropriate measures for rehabilitation of the contractor's laborers. He asked to take necessary step to make this area from defecation free. He further said CSR budget from the existing industries is not still being utilized for development activities and it should be ensured that CSR budget from proposed industry should	DC, Una and President informed Sh. K.K. Rana to ask question related to project only. Environmental Consultant of proposed project requested people to raise question related to proposed project only as requested by DC, consult his office regarding other administrative matter. Environmental Consultant of proposed project answered the query raised by K.K. Rana that 25 lacs will be utilized in the development of area and he assured on the behalf of company's management that Pradhan of village panchayat Bathu will be nominated as member of CSR Committee of the company. As per his suggestions fund will be utilized, in this way he can keep viewing the expenditure done under CSR activities. Environmental Consultant of proposed project said that 100 people will get employment and local will be preferred as per their qualification. Environment Consultant of proposed project explained that three month's Base line monitoring has been done for proposed project and found that only 1% pollution will be increased. Sufficient air pollution control equipments like pulse jet beg house filters will be used. Thus pollution level shall not increase. He further said that 14 employees will reside within the company's premises and company management will ensure that contractor's laborers will take appropriate measures to mitigate pollution in their settlement area.	<p>-</p> <p>Project Proponent assured that CER Committee will be constituted. Pradhan of village panchayat Bathu will also be member of this committee. CSR activities depicting detailed given in report. Company has assured to provide additional 100 nos. of employment in the project for expansion and preference will be given to local villagers. The Project proponent assured that they will provide the air pollution control devices based on latest technology and there will be no impact on the environment and expansion project will be established after completing all the statutory guidelines and norms.</p>

		<p>be utilized for the development of local area only.</p> <p>The existing industries employ local people as laborer only not as staff for office work. Migratory workers are preferred for laborer. He asked project proponent to give employment to local people based on qualification.</p> <p>He further said that the proposed project should establish after completing of all statutory guidelines and norms.</p> <p>He said that administration should increase supply of cement to local panchayat by government and to ban illegal mining.</p>	<p>President of industrial area, Una said that a hostel has been already constructed in this area so workers can stay there instead of slum.</p>	
4.	Sh. Sunil Kumar, Village Santoshgarh, Tehsil and DisttUna (HP)	<p>He asked how local workers will be benefited by proposed project and how many people will get employment?</p>	<p>Environment Consultant of proposed project said that 100 people will get employment and as already said local will be preferred as per their qualification.</p>	<p>Company committed to provide additional 100 nos. of employment in the project after expansion and preference will be given to local villagers based on their qualification.</p>

19.3.19 An amount of Rs. 25.0 lakhs (approx 1% of Project cost) has been earmarked for Corporate Environment Responsibility based on public hearing issues. The details of CER proposed are as follows:

S. No.	Description	Amount to be spent		Total Rs. in Lakhs
		1 st Year Rs.in Lakhs	2 nd Year Rs.in Lakhs	
1.	Employment (Vocational Training for Skill development for self-employment like Sewing, Pickle making, Craft making for Women Empowerment of village Bathri)	7.0	3.0	10.0
2.	Educational Facility I. (Construction of 4 No's of Toilets for Boys & Girls separately) II. Donation of books to the School Library.	4.0	2.0	6.0
3.	Community Development I. Providing 4 No's of Solar Light to Gram Panchayat Bhawan. II. Construction of Rainwater Harvesting Structure at Gram Panchayat Bhawan.	4.0	2.0	6.0
4.	Construction of Shed for Cremation Ground	2.0	1.0	3.0
	Total (1st Year +2nd Year)	17.0	8.0	25.0

19.3.20 The capital cost of the project is Rs 3038.0 Lakh and the capital cost for environmental protection measures is proposed as Rs 137 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 35 Lakhs. The detailed CER plan has been provided in the EIA report in its page No. 224 in chapter 8. The employment generation from the proposed project/expansion is 184. The

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

S.No	Title	Capital Cost Rs. Lacs	Recurring Cost Rs. Lacs (Annum)
1	Air Pollution Control Devices (Bag Filters, online continuous emission monitoring system etc.)	100	20
2.	Water Pollution Control Measures	20	04
3.	Noise Pollution Control Measures	05	01
4.	Environment Monitoring and Management	-	06
5.	Occupational Health	2	01
6.	Green Belt Development	3.5	01
7.	Rainwater Harvesting	7.5	02
	Total	137.0	35.0

19.3.21 Greenbelt will be developed in 0.894 ha which is about 33 % of the total area. A 10m wide greenbelt, consisting of at least 2 tiers around unit boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare (Trees n Shrubs). Total no. of 500 saplings will be planted and nurtured in 0.894 hectares in 5 years. Out of total 2500 plant, 1451 plants are already existing and remaining 900 plants (Approx.) shall be planted in the newly acquired land.

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

19.3.23 **Name of the EIA Consultant:** Shivalik Solid Waste Management Limited [S.No. 148, List of Accredited Consultant Organizations (Alphabetically) Rev. 87, May 08, 2020].

Observations by the committee

19.3.24 The Committee noted the following:

- i. Project area is 2.71 ha and additional land of 1.0 ha would be purchased for plantation.
- ii. Existing producer gas plant shall be dismantled and 100 % hot charging shall be practiced.
- iii. Swan River is only 2.0 km away from plant. Project proponent is yet to plan for drawl of surface water to avoid ground water abstraction.
- iv. CER table is drawn satisfactorily.

Recommendations of the committee

19.3.25 In view of foregoing, after detailed deliberations, the committee recommended the project for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the following specific conditions in addition to the applicable general conditions as per the Ministry's Office Memorandum No. 22- 34/2018-IA.III dated 9/8/2018 pertaining to Induction/ Electric Arc Furnace & Rolling Mills.

- i. To control fugitive emissions, all roads inside the factory premises shall be concreted and shall be maintained by industrial vacuum cleaner.

- ii. Sprinklers shall be provided in the raw material stack yard to control dust.
- iii. Particulate emission levels from all the process stacks shall be below 30mg/Nm³.
- iv. In addition to 10 m wide green belt around the factory, plantation shall be undertaken in 1.0 ha land outside the plant area.
- v. Existing producer gas plant shall be dismantled and 100 % hot charging shall be practiced.
- vi. Ground water abstraction shall be permitted for three years only. Project proponent shall make arrangements to draw surface water.
- vii. Rain Water Harvesting (RWH) shall be carried out inside and in the study area such that recharge shall be more than 100 % of annual water consumption in the plant.
- viii. All CER activities, with budget allocation in compliance with this Ministry's OM vide F.No. 22-65/2017-IAIII dated 01.05.2018 shall be completed in three years.
- ix. Solar lights shall be provided by installing solar panels in the parks, building roofs etc.
- x. Dedicated Environment Management Cell shall be established.

19.4 Proposed 3 MMTPA crude steel plant and Captive power generation of 88.6 MW plant by **M/s. AP High Grade Steels Limited** located at Sunnapurallapalli and Peddandluru villages, Jammalamadugu mandal, YSR Kadapa district, **Andhra Pradesh** [Proposal No. IA/AP/IND/146236/2020; MoEF&CC File No. IA-J-11011/70/2020-IAII(I)] – **Prescribing of Terms of Reference** – regarding.

19.4.1 M/s. AP High Grade Steels Ltd has made online application vide proposal no. IA/AP/IND/146236/2020 dated 07.05.2020 in prescribed Form-1 along with other documents to propose Terms of Reference for undertaking EIA study for proposed project mentioned in the subject. 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.

19.4.2 M/s. **AP High Grade Steels Ltd** proposes to install a new manufacturing unit for integrated Steel plant and captive power. It is proposed to set up the plant for integrated steel plant of 3.0 million MTPA capacity with captive power generation of 88.6 MW based on internally generated waste gases / waste heat.

19.4.3 The proposed unit will be located at Sy.No.418, 419 etc., of Sunnapurallapalli village, Sy.No.373, 391/1 etc., of Peddandluru villages, Taluka: Jammalamadugu, District: YSR Kadapa, State: Andhra Pradesh.

19.4.4 The land area for the proposed plant is 1453.49 ha (3591.65 acres). Out of the total land 1274.23 ha (3148.68 acres) is Govt. land which is already given in advance possession by Government of Andhra Pradesh vide G.O. RT. No. 1447, dt. 13.12.2019..Remaining land of 179.26 ha is a private land. The land proposed is predominantly a barren land/single crop rain fed. No forestland involved. The entire land is in the process of acquisition for the project, of the total area 479.65 ha (33%) land will be used for green belt development.

- 19.4.5 There is no national park /wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc with in 10 km from the site area. The area also does not report to form corridor for Schedule-I fauna.
- 19.4.6 Total project cost is approximately Rs.20098.56 Crore. Proposed employment generation from proposed project will be 4200 direct employment and 2100 indirect employment.
- 19.4.7 The targeted production capacity of the 3.0 million TPA and captive power generation of 88.6 MW. Metallurgical coal required for the plant will be imported through Krishnapatnam Port and transportation to the plant will be made by rail route. The ore for the plant would be procured from (linkages AP MDC). The ore transportation will be done through Rail/Road. The proposed capacity for different products for new site area as below:

Manufacturing Capacity

Sl. No	Items	Capacity, (TPA)
1	BF Coke	136100
2	Coke Breeze	27200
3	Iron Shots	300200
4	Wire Rods	1000000
5	Merchant Product	1200000
6	Plates	668000
7	Granulated Slag	978600
8	Oxygen Plant	891000
9	By products	
	Cove oven gas	84360 Nm ³ /hr
	Crude Tar	92000
	Elemental sulphur	2500
	Naphthalene	150
	In house power generation	88.6 MW
	Steam turbine generator (STG) at power blowing station	(3 x 18 MW) – 2 Working + 1 Standby
	Back pressure turbine generator (BPTG) at CDCP	(1 x 10.6 MW)
	Top recovery turbine generator (TRT) at blast furnace	(1 x 27 MW)
	Waste heat recovery boiler generator (WHRB) at sinter plant	(1 x 15 MW)

Proposed Plant Facilities

Sl. No.	Plant facilities	Configuration
1	Coke oven and by product plant	2 x 67 ovens, 7 m tall
2	Sinter plant	496 m ²
3	Blast furnace	4,700 m ³ (UV)
4	Steelmaking and continuous casting shop	
a)	Basic oxygen furnaces (BOFs)	2 x 175 t
b)	Ladle furnaces (LF)	2 x 175 t
c)	RH-Degasser	1 x 175 t
d)	Billet casters	2 x 6-strand
e)	Slab caster	1 x 1 - strand
5	Rolling mills	
a)	Plate mill	668,000 tons/yr

b)	Merchant mill	1,200,000 tons/yr
c)	Wire rod mill	1,000,000 tons/yr
6	Oxygen plant	2 x 1350 tons/day
7	Calcination plant	
a)	Calcined lime plant	2 x 500 tons/day
b)	Calcined dolo plant	1 x 500 tons/day

19.4.8 The total electricity load for the plant will be 1515 MU (Million Units). Out of this 883 MU (Million Units) will be procured from the Grid and the balance 632 MU (Million Units) will be Captive generation. Company has also proposed to install 44.25 MVA DG Set.

19.4.9 Proposed raw material and fuel requirement for project are presented in table below. The requirement would be fulfilled by local market /mines as well as Imported. Fuel consumption will be mainly for reduction of ore.

List of Raw Materials, Source and Mode of Transport

Sl. No.	Raw material	Units	Gross quantity	Source
1	Iron ore lump (BF	tons/yr	1139900	Source will be in the vicinity of 240 km, transport by goods wagon train
2	Iron ore lump for	tons/yr	37100	
3	Iron ore lump	tons/yr	1177000	
4	Iron ore fines	tons/yr	3922400	
5	Limestone (BF	tons/yr	411900	
6	Dolomite (BF	tons/yr	540100	
7	Limestone (SMS	tons/yr	602400	
8	Dolomite (SMS grade)	tons/yr	139800	
9	Blended coking	tons/yr	2308000	Australia and then through Krishnapatnam port at a distance of 190 km, transport by goods wagon train.
10	Non coking coal for CDI	tons/yr	515000	
11	Quartzite	tons/yr	202600	Mines within 100 km from the site, transport by trucks.
12	Ferro alloys	tons/yr	61850	Local manufacturers within 100 km from the site, transport by trucks.
13	DRI	tons/yr	151000	
14	Propane	Tons	2 x 100	For steel plant including sinter, SMS, to meet the requirement of 10 – 15 days casters, and rolling mills, drawn from local Petro product storage at a distance of 100 km, transport by bullet trucks.

- 19.4.10 Water Consumption for the proposed project will be 4200 m³/hr and it will be sourced from Gandikota Reservoir. Wastewater generation will be 200m³/hr. Zero liquid discharge (ZLD) for the entire plant has been envisaged. In ZLD System it will be ensured that no waste water will be discharged from the plant. Domestic wastewater will be treated in STP Plants and used for green belt developments.
- 19.4.11 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 19.4.12 Name of the EIA Consultant: TEAM Labs and Consultants (S.No. 159, List of Accredited Consultant Organizations (Alphabetically) Rev. 87, May 08, 2020).

Observations of the committee

- 19.4.13 Proposed project site is located at a distance of 1.6 km from Penna River and abutting three irrigation tanks which are in between Penna river and the proposed site in the northern side.
- 19.4.14 Kanya Theertham, a holy place, which is surrounded three sides by the boundary of the site. A temple, over head water tank facility, a check dam for rainwater harvesting and hamlet existing in this place. The same was not mentioned in the pre-feasibility report for which Social Impact Assessment shall be conducted.
- 19.4.15 A natural drain from Kanya Theertham joins the north west part of the site crossing the proposed site.
- 19.4.16 There are a number of check dams in and around the project site which may be part of water shed management in the region.
- 19.4.17 The proposed 3.0 MTPA Integrated Iron and Steel plant with 293 MW CPP, is a green field project, being set up by Govt of AP in an area of 1274.22 ha at a total cost of Rs 20,098.56 Cr.
- 19.4.18 4200 Cum /hr water shall be drawn from Gaudikota Reservoir on Penna River which is situated at a distance of 24 Km from the plant.
- 19.4.19 Process adopted has features like; dry cooling of BF gas, stove heat recovery, elemental sulfur recovery from coke oven gas, 7 m tall coke oven batteries; sinter cooler waste heat recovery, dog house for convertors, BOF gas recovery.
- 19.4.20 PFR does not indicate specific water consumption, quantities of solid waste generated and energy conservation measures.
- 19.4.21 No details have been submitted regarding available of railway siding. Railway line is only 4.4 km away from the plant.
- 19.4.22 Project proponent has proposed ZLD including Coke ovens.
- 19.4.23 LCP shall have regenerative type VSKs.
- 19.4.24 Plant boundary is only 200 meter from the forest boundary.
- 19.4.25 Project proponent mentioned that base line data collection was started from March 2020 under special permission from Government of Andhra Pradesh.

Recommendations of the committee

- 19.4.26 In view of the foregoing, and after detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA/EMP study in addition to the generic ToRs enclosed at Annexure-1 read with additional ToRs at Annexure-2:
- i. Process adopted shall have features like; dry cooling of BF gas, stove heat recovery, cast house dedusting, cast house granulation, Coke dry quenching; Elemental Sulfur recovery from coke oven gas, 7 m tall oven batteries; Sinter cooler waste heat recovery, Dog House for Convertors, BOF gas recovery, Vertical Shaft Kiln (VSK) for Lime Calcination Plant (LCP); Metal and flux recovery from BOF stag, etc as per BAT followed universally.
 - ii. Specific water consumption, quantities of solid waste generated and energy consumption shall be drawn in accordance with the proposed technology and the details of the same shall be furnished in the EIA Report. Further, water consumption shall be optimized as per CREP guidelines. Accordingly, conservation measures for water, energy and other materials in the process shall be furnished in the EIA report.
 - iii. Plant shall be designed to achieve Zero Liquid Discharge. Process water balance flow chart and corresponding balance sheet shall be furnished.
 - iv. Action plan for 100 % waste utilization shall be furnished to avoid dumping of waste at the site.
 - v. Railway siding shall be provided for inbound and out bound traffic management.
 - vi. Project shall be designed to achieve emission standards as prescribed by MoEF&CC /CPCB.
 - vii. Natural drainage pattern and water shed management in the area shall not be disturbed in the area and action plan for the same with revised watershed management based on the hydrological survey shall be furnished.
 - viii. A detailed hydro-geological survey shall be conducted and the rainwater harvesting unit will be designed to recharge water to the ground to the tune of more than 100 % of annual consumption.
 - ix. Air quality impact assessment shall be conducted by modeling with all inputs, viz., site features, authenticated met data, terrain features of study area, proposed process stacks with geo referencing etc. Worst case scenarios shall be assessed and EMP for the same shall be furnished.
 - x. RA/DMP shall be furnished for all hazardous storages, processes and handlings and furnish the measures for emergence response.
 - xi. Green belt shall be created for at least 33 % of project area in accordance with the guidelines of CPCB.
 - xii. A 300 meter wide dense plantation shall be done within the plant boundary in the direction of and close to the Reserved Forests to provide additional buffer for the Reserved Forests.
 - xiii. A detailed need based social impact assessment and health survey in the local area shall be conducted and action plan for the same shall be furnished in the CER activities including issues raised in the Public Hearing.

- xiv. Kanya Theertham temple and adjoining settlement shall be excluded from the land acquired and landscaping plan should be made for the beatification of the same to improve the aesthetics of the religious settlement. Further, no polluting unit shall be proposed on the northeastern side adjoining the Kanya Theertham while designing plant layout.
- xv. Drain flow from the Kanya Theertham shall be protected with safety zone by developing plantation 50 m either side, across the plant layout, up to northwestern boundary of the project site.

19.5 Expansion of Integrated Steel Plant comprising of Pellet Plant from 900,000 TPA to 1250,000 TPA, DRI plant from 375,000 TPA to 953,000 TPA, New 720,000 TPA Sinter Plant, New 450,000 TPA Blast Furnace, SMS from 305512 TPA to 1171,000 TPA, Rolling Mill from 480,000 TPA to 1020,000 TPA, New 220 TPD Oxygen Plant, Captive Power Plant from 72.5 MW to 123.5 MW by **M/s MSP Steel & Power Ltd** located at Jamgaon and Manuapalli villages, **District Raigarh, Chhattisgarh** [Proposal No. IA/CG/IND/146473/2020, MoEF&CC File No. IA-J-11011/227/2007-IAII(I)] – **Prescribing of Terms of Reference – regarding.**

Consideration of the proposal was deferred as the project proponent vide email dated 18/05/2020 expressed his inability to participate in the VC meeting due to the National lock down and requested to consider the proposal in the next EAC meeting. The Committee acceded to the request of PP and asked the Ministry to place the proposal in the next EAC meeting.

19.6 Proposed 1200 MT/day (396000 MT/annum) Cement Plant by **M/s. Kashmir Cements** to be located at village Bhatayan, Khrew, Tehsil Pampore, **District Pulwama, Jammu and Kashmir** - [Online Proposal No. IA/JK/IND/76457/2018, File No. IA-J-11011/269/2018-IA-II(I)] – **Environment Clearance - regarding.**

19.6.1 M/s. Kashmir Cements Ltd has made application vide online proposal no. IA/JK/IND/76457/2018 dated 04.05.2020 in prescribed Form-2), copy of EIA report and other documents for seeking Environmental Clearance (EC) for the project mentioned above. The proposed project activity is listed at S. No. 3(b) Cement Plants under Category “B” of the schedule of the EIA Notification, 2006. Due to applicability of general condition, i.e, proximity of the Dachigam Wildlife Sanctuary, the proposal is appraised at Central Level.

19.6.2 The project of M/s Kashmir Cements located in village Bhatayan, Tehsil Pampore, , District Pulwama, State Jammu and Kashmir was initially received in the Ministry on 28th August, 2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 35th meeting held on 17th to 18th September, 2018 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 9th October, 2018 vide Lr. No. IA-J11011/269/2018-IA.II(I).

19.6.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 15th November, 2019 vide Online Proposal No. IA/JK/IND/76457/2018.

Details submitted by the project proponent

- 19.6.4 The total land required for the project is 3.89 ha which falls within the notified Industrial Limestone Area of Pulwama District. No forestland is involved. The entire land has been acquired for the project. No river passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.
- 19.6.5 The topography of the area is hilly terrain and reported to lies between 34.05211 to 34.05322 N Latitude and 75.01749 to 75.01954 E Longitude in Survey of India topo sheet No. 43J/13, at an elevation of 1894m AMSL. The ground water table reported to ranges between 1.5 to 2.5 m below the land surface during the post-monsoon season and 2 to 3 m below the land surface during the pre-monsoon season. The stage of groundwater development is reported to be 8.38 % and thereby these are designated as safe areas.
- 19.6.6 The Dachigam National Park is located at a distance of 3.37 km from the site.
- 19.6.7 The cement plant process will have process steps namely - Crushing of Limestone, Prehomogenisation, Grinding of Raw Materials, Homogenisaton, Pyroprocessing, Clinker Formation, Cement Grinding, Cement Storage, Packing & Dispatch.
- 19.6.8 The targeted production capacity of the project is 0.396 million TPA of cement. The limestone for the plant would be procured from local mines located nearby the project site. The mineral transportation will be done through road.
- 19.6.9 The water requirement of the project is estimated as 350 m³/day and the requirement will be obtained from the tube well. The permission for drawl of ground water is under process and will be obtained from before the commissioning of the project.
- 19.6.10 The power requirement of the project is estimated as 9 MW, which will be obtained from the state electricity supply.
- 19.6.11 Baseline Environmental Studies were conducted during post monsoon season i.e. from 1st October, 2018 to 31st December, 2018. Ambient air quality monitoring has been carried out at eight locations during the study period and the data submitted indicated:PM₁₀ (32 µg/m³ to 71 µg/m³), PM_{2.5} (18 to 39 µg/m³), SO₂ (5.4 to 10.2 µg/m³) and NO_x (9.8 to 23.4 µg/ m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 5.6 µg/m³ with respect tothePM₁₀, 3.7 µg/m³withrespectto the SO₂ and 2.4 µg/m³ with respect to the NO_x.
- 19.6.12 Ground water quality has been monitored in eight locations in the study area and analyzed. pH: 7.26 to7.46, Total Hardness: 118 to 145 mg/l, Chlorides: 44.6 to 57.2 mg/l, Fluoride: 0.21 to 0.29 mg/l. Heavy metals are below detectable limits. No surface water body is present within the study area.
- 19.6.13 Noise levels are in the range of 42.2 to 63.9 dB(A) for day time and 37.3 to47.8 dB(A) for nighttime.
- 19.6.14 It has been reported that no population is there in the core zone of the project. No/R&R is involved.
- 19.6.15 It has been reported that no solid wastes wills be generated from the project. All the wastes generated would be reused for the production of cement. It has been envisaged that an area of 1.3 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.

- 19.6.16 The Public hearing of the project was held on 18th May, 2019 at Town Hall, Pampore under the chairmanship of Additional District Magistrate (designation) for production of 0.396 million TPA of green field cement plant. The issues raised during public hearing are employment to local youth and pollution problems due to the existing cement plants. An amount of 125 Lakhs (0.85 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.
- 19.6.17 The capital cost of the project is Rs.198.60Cr and the capital cost for environmental protection measures is proposed as Rs.8.40 Cr. The annual recurring cost towards the environmental protection measures is proposed as Rs. 2.15 Cr. The detailed CSR plan has been provided in the chapter 8 of the EIA report. The employment generation from the proposed project is 200.
- 19.6.18 Greenbelt will be developed in 1.3 ha which is about 33 % of the total acquired area. Adequately wide green belt, consisting of at least three tiers around plant boundary will be developed as green belt and green cover as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 3250 saplings will be planted and nurtured in 1.3 hectares within 1 year of the project installation.
- 19.6.19 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

Observations of the Committee

- 19.6.20 The proposal was considered in the 15th EAC meeting in Jan 2020. The Committee noted that EIA report was not in line with Appendix III of the EIA Notification, 2006. Besides, there are several inadequacies in the report such as noncoverage of ecological biodiversity and socio-economic study aspects, hydrogeological aspects, approved wildlife conservation plan, disaster management plan and social impact assessment etc., Therefore, after detailed deliberations, the Committee returned the proposal in present form and asked the project proponent to submit fresh EIA report as per Appendix III of the EIA Notification, 2006.
- 19.6.21 It is proposed to abstract 350 Cum /day of groundwater for the project.
- 19.6.22 CER budget allocation and activities are not in accordance with the Ministry's OM dated 01.05.2018.
- 19.6.23 TOR Point 9 is not addressed. Land use map and DEM were not furnished. Raw material not analyzed for trace metals;
- 19.6.24 Chapter on RA/DMP is not furnished in proper.
- 19.6.25 No waste heat recovery system was furnished.
- 19.6.26 EIA report is not as per Notification even now.
- 19.6.27 No mention of pollution control measures to achieve standards.
- 19.6.28 Rain water harvesting is not proposed for annual rainfall basis.

Recommendations of the committee

- 19.6.29 In view of the foregoing and after detailed deliberations, the Committee returned the proposal in present form and asked the project proponent to submit revised EIA report as per Appendix III of the EIA Notification, 2006 and complying ToR points.

19.7 Expansion of cement plant with clinker production from 0.165 MTPA to 3.0 MTPA & Cement (OPC/PPC/PSC/Composite Cement) & GGBS capacity from 0.252 MTPA to 2.0 MTPA by M/s. **Shiva Cement Limited** located at Village – Telighana, P.O. Bringatoli, Kutra, **Dist. Sundargarh, Odisha** - [Online Proposal No. IA/OR/IND/153046/2020, File No. J-11011/84/2008-IA-II(I)] – **Prescribing of Terms of Reference (ToRs) - regarding.**

19.7.1 M/s. Shiva Cement Limited has made application vide online proposal no. IA/OR/IND/153046/2020 dated 11/05/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToR for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(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

19.7.2 M/s. Shiva Cement Limited proposes to increase Clinker Production from 0.165 MTPA to 3.0 MTPA, Cement (OPC/PPC/PSC/Composite Cement) & Ground Granulated Blast Furnace Slag (GGBS): 0.252 to 2.0 MTPA of existing Cement Plant located at Village – Telighana, P.O. Bringatoli, Kutra, Tehsil -Rajgangpur Dist. Sundargarh Odisha.

19.7.3 M/s Shiva Cement Ltd. received the Environment Clearance from MoEF&CC vide letter no. J-11011/84/2008-IA-II(I) dated 23/05/2011 for expansion of clinker capacity from 0.115 MTPA to 0.825 MTPA and Cement from 0.132 MTPA to 1.05 MTPA. Thereafter, the EC validity was extended till 22/05/2021 by MoEF&CC vide letter dated 15/06/2018.

19.7.4 The project was to be implemented in two phases, i.e. increase in clinker capacity from 0.115 MTPA to 0.165 MTPA (350 TPD to 500 TPD) and cement from 0.132 MTPA to 0.252 MTPA in the first phase which has been implemented by carrying out relevant modification in the existing plant and machinery. Consent to Operate from SPCB has also been obtained vide letter No. 11901, IND-I-CON-119 dated 07-11-2019. However, remaining part of the Environment clearance is still under implementation with the installation of new Kiln, Vertical Roller Mills for raw meal, coal/pet coke and cement grinding with latest technology pollution control equipments in the same premises. The project is likely to be commissioned by beyond the EC validity period i.e, March, 2022.

19.7.5 Since all the facilities envisaged in the existing EC are unable to be implemented within the validity period, M/s. Shiva Cement Limited proposes to obtain a fresh EC for the units under implementation along with further expansion. The details of the units under operation, under implementation and proposed expansion are summarized as below:

Details	Sanctioned Capacity as per EC dated 23/05/2011	Units implemented and under operation	Under implementation only	Proposed Expansion	Total capacity after Expansion
	(MTPA)	(MTPA)	(MTPA)	(MTPA)	(MTPA)
Clinker	0.825	0.165	0.66	2.175	3.0
Cement (OPC/ PPC/	1.05	0.252	1.47	0.95	2.0

Details	Sanctioned Capacity as per EC dated 23/05/2011	Units implemented and under operation	Under implementation only	Proposed Expansion	Total capacity after Expansion
	(MTPA)	(MTPA)	(MTPA)	(MTPA)	(MTPA)
PSC/ Composite Cement) & GGBS					

- 19.7.6 The proposed expansion unit will be located at Village – Telighana, P.O. Bringatoli, Kutra, Tehsil -Rajgangpur Dist. Sundargarh Odisha.
- 19.7.7 The present SCL cement plant is located in an area of 28.67 ha. The proposed expansion is being done within the existing 28.67 ha land area along with an additional land area of approx. 12.93 ha which is contiguous to the existing plant boundary. The total land area thus will be 41.60 ha. SCL has developed greenbelt in an area of 9.46 ha in and around the cement plant complex and will increase it to 13.47 Ha. (33%).
- 19.7.8 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.
- 19.7.9 Total project cost is INR 2150 Crores. The total manpower at the existing plant is 200 Nos. An additional manpower of 700 persons will be employed for the operational phase.
- 19.7.10 With increase of clinker production capacity, SCL cement plant is supported by their captive Limestone mines to meet the additional limestone requirement of Cement Plant after proposed expansion. The details of the existing limestone mine details are given as below:
- i. Expansion of existing Khatkurbahal Limestone mine from 0.12 MTPA to 1.5 MTPA (Total area- 72.439 ha., life of mine – 44 years).
 - ii. Mining of 4 MTPA Limestone and Dolomite from the Khatkurbahal North Limestone mine which the company has recently been allotted by the Government of Odisha through e-auction. (Total area - 156.43 ha, mine life – 19 years)
 - iii. Both the mines are adjacent to each other and are located at about 12 km distance from the plant.
 - iv. Application for ToR for expansion of the existing mine has already been submitted to SEIAA, Odisha vide application no. SIA/OR/MIN/37895/2019 whereas the ToR application for Khatkurbahal Mine (new auction block) is under process.
- 19.7.11 Present peak power requirement of the cement plant is 5.0 MW. Presently the power requirement is met from the grid. Total power requirement for the proposed expansion will be 39 MW and the same will be sourced from the state grid with a dedicated 132 kV overhead grid line.

- 19.7.12 The raw material required for production of clinker is Limestone, Laterite/ Clay, Slag and Coal. The requirement of raw material per annum on an average for the production of clinker and cement is presented below:

S. No.	Raw material	Existing requirement (TPA)	Total requirement after proposed expansion (TPA)	Source	Distance /Transportation
1.	Limestone	172,500	4,200,000	Captive Mine	12 km
2.	Laterite/ Clay	4,600	3,160,000	Jharsuguda	90 km
3	Coal*	28,750	460,000	Paradeep Port	460 km
4	Pet Coke*	0	260,000	IOCL, Odisha	460 km
5	Alternate Fuel	0	33,000	Different sources	
6	BF Slag	56,760	820,000	Rourkela	60 km
7	Gypsum	6,600	85,000	Paradeep Phosphates Ltd.	490 km
8	Fly Ash	5,280	200,000	Rourkela	60 km

**Coal and Pet Coke can be used in any combination depending on process & quality requirements*

- 19.7.13 The present water requirement is 100 m³/day. Additional water requirement for the expansion proposal is 1700 m³/day. SCL has obtained permission for withdrawal of 698 m³/day water from the CGWA. Permission for additional / balance 1102 m³/day groundwater withdrawal will be obtained from the competent authority before execution of the project.
- 19.7.14 Wastewater generated is only from domestic activities at cement plant and residential colony. Presently, the waste water is disposed in septic tanks followed with soak pits. However, a full fledged sewage treatment plant (STP) designed for a maximum load of 80 m³/day is proposed to be installed. Treated domestic wastewater will be reused for greenbelt development within SCL cement plant complex.
- 19.7.15 There is no court case or violation under EIA Notification to the project or related activity.
- 19.7.16 Name of the EIA consultant: M/s. B. S. Envi - Tech (P) Ltd. (S.No. 22: List of Accredited Consultant Organizations (Alphabetically) Rev. 87, May 08, 2020).

Observations of the Committee

- 19.7.17 The Committee noted the following;
- i. Proposal involves multifold (18 times) expansion of clinkerization and Cement Mill at Rajgangpur in Odisha.

- ii. Plant at present is occupying 28.67 ha land and additional 12.93 ha land is yet to be acquired. Status of acquisition is not made available.
- iii. Limestone for the plant is to come from captive mine which is located twelve (12) km away from the site. Huge road traffic for Limestone transport is expected for first three years of plant operation. There is no provision of railway siding. A belt conveyor is proposed in future.
- iv. Annual traffic by road for this plant for inbound and out bound material is likely to be of the order of 9 MTPA.
- v. Water is proposed to be drawn from Ground (1700 KLD). Daku Nadi is 3.6 km away. Possibility of surface water availability is not explored.
- vi. There is no mention about the extent of waste heat recovery from kiln.
- vii. Existing plant is to be dismantled after the installation of new kiln. No details are available on environmental issues of decommissioning of existing plant.
- viii. There are two limestone mines with PP. Expansion application for mine 1 has not been submitted and Status of EC for Second Mine is not available.
- ix. Numerous uncertainties regarding land acquisition, availability of adequate Lime stone, Conveyor route and ROW for the same, Water availability and Waste Heat Recovery from Kiln has been observed.

Recommendations of the Committee

19.7.18 In view of the foregoing and after detailed deliberations, the Committee deferred the consideration of the instant proposal and sought following additional information for further consideration of the proposal:

- i. Plant at present is occupying 28.67 ha land and additional 12.93 ha land envisaged for the proposed expansion is yet to be acquired. Status of acquisition of additional land shall be submitted.
- ii. Road transportation of Limestone is envisaged for the cement plant as the captive mine is located 12 km away from the plant site. In this regard, existing traffic load and the traffic load due to the proposal expansion along with its environment impact shall be estimated and submitted.
- iii. Feasibility of providing railway siding shall be worked out and submitted.
- iv. Conveyor route and land requirement and details of acquisition of land shall be furnished.
- v. Possibility of surface water availability from Daku Nadi shall be explored and presented in place of ground water withdrawal.
- vi. Extent of waste heat recovery from Kiln shall be presented.
- vii. Details on environmental issues of decommissioning of existing plant shall be furnished.
- viii. There are two LS mines with PP. Expansion application for mine No. 1 has not been submitted and Status of EC for Second Mine is not available. Detailed shall be made available.

19.8 Integrated Steel Plant (3.5 MTPA) including Captive Power Plant (295 MW) by **M/s. Aaress Iron and Steel Private Limited** at village Halavarthi, Tehsil Koppal, District Koppal, **Karnataka** – [Online Proposal No. IA/KA/IND/27952/2015, File No. J-11011/161/2015-IA-II.(I)] - **Reconsideration for Environment Clearance - regarding.**

19.8.1 The proposal was considered in the meeting held during 26th June 2019 and related portion of minutes are given as below:

19.8.2 M/s. Aaress Iron and Steel Limited (AISL) made an online application vide proposal no. IA/KA/IND/27952/2015 dated 21st January 2019 in prescribed format (Form -2) along with copies of EIA/EMP report and other documents for 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.

19.8.3 The proposed project of M/s AISL is located in Villages Halavarthi, Basapur, Koppal, Kidadal, Ginigera , Tehsil Koppal, District Koppal, State Karnataka is for setting up of a new Integrated Steel Plant for production of 3.5 MTPA along with 295 MW CPP.

19.8.4 The proposed project of M/s AISL located in Village Halavarthi, Tehsil & Koppal, State Karnataka was initially received in the Ministry on 03rd June 2015 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 43rd meeting held on 2nd and 3rd July 2015 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on 22nd July 2015 vide Lr. No. F.No. J-11011/161/2015-IA II(I). Extension to the TOR was granted in 32nd meeting of Expert Appraisal Committee (Industry) [EAC(I)] held on 11th – 13th June 2018. The application for EC was considered by the Ministry and placed before EAC (Industry- 1) meeting held during 20-22nd February 2015. The Committee observed short comings in the EIA report with respect to QCI/NABET requirements, point wise compliance to prescribed ToRs which include conduct of baseline study for one month and status of court case details in Hon’ble Supreme Court of India.

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

Sl. No.	Plant Units	Phase-I	Phase-II	Final Plant Configuration
1	Coal Washery	1x3.0 MTPA	-	1x3.0 MTPA
2	Ore Beneficiation Plant	1.2 MTPA	-	1.2 MTPA
3	Pellet Plant with coal gasifier unit	1x1.2 MTPA	-	1x1.2 MTPA
4	Sinter Plant	1x144 m ² ; 1.29 MTPA	1x324 m ² ; 3.8 MTPA	(1x144) + (1x324) m ² ; 5.09 MTPA gross sinter
5	Coke Oven	1x0.68 MTPA; 2x55 Ovens ; 5.5 m tall	1x1.5MTPA ; 2x65 Ovens; 7.0 m tall	2.1 MTPA Coke Oven battery; 2x55 ovens 5.5 m tall; 2x65 ovens 7.0 m tall

6	Blast Furnace	1x1681m ³ BF; 1.2 MTPA	1x3814 m ³ BF; 2.6 MTPA	1x1681m ³ +1x3814 m ³ BF; 3.8 MTPA hot metal
	BF slag	343,000	788,000	1,131,000 tpa
7	SMS			
a)	EOF(EnergyOptimizing Furnace)/BOF (Basic Oxygen Furnace)	2x65 t EOF	2x180 t BOF furnaces	(2x65)t EOF + 2x180t BOF
b)	LF (Ladle Furnace)	2x65 t	1x180 t	2x65 t +1x180 t
c)	VD / RH Degasser	2x65 t VD	1x180 t RH Degasser	2x65 t VD + 1x180 t RH Degasser
f)	Billet Caster/ Bloom Caster	2x3 Billet Caster + 1x2 Bloom caster	-	2x3 Billet Caster +1x2 Bloom caster
h)	Slab Caster	-	2x1 strands slab caster	(2x1) Strand
8.	Billet & Bar Mill	0.25 MTPA	-	0.25 MTPA
9.	Bar & Rod Mill	0.60 MTPA	-	0.60 MTPA
10.	Hot Strip Mill	-	2.5 MTPA slab input	2.5 MTPA slab Input
11.	Cold Rolling Mill with continuous Pickling Line	-	1.00 MTPA hot coil input	1.00 MTPA hot coil input
12.	Hot Dip Galvanizing / Galvalume Unit	-	0.4 MTPA CR coil input	0.4 MTPA CR coil input
13.	Colour Coating Unit	-	0.2 MTPA Galvanizing Coil Input	0.2 MTPA Galvanizing Coil Input
14.	Oxygen Plant	1x550 TPD	1x1100 TPD	1650 TPD
15.	Lime Plant (Out Sourced)	2x300 TPD	1x600 TPD	1200 TPD
16.	Dolo Plant (Out Sourced)	1x300 TPD	-	300 TPD
17.	Captive Power Plant(CPP)	1x70 MW from CFBC based Boiler+ 6 MW TRT from BF-1	2x100 MW conventional based on washed coal + 12 MW TRT + 7MW WHRB based	295 MW CPP from CFBC/WHRB/TRT/coal reject/middling/washed coal
18.	Material Handling Plant for both phase	Matching	Matching	Matching

19.8.6 The total land required for the project is 776 ha. The entire land has not acquired for the project. 373.19 ha. of land has been acquired through Karnataka Industrial Areas Development Board (KIADB) and Balance 402.81 ha. Land is already approved by State High Level Committee & is under KIADB consideration.

- 19.8.7 No River passes through the project area. It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed. No forestland involved.
- 19.8.8 The topography of the area is undulating to flat and reported to lies between 15°19'34.32"N to 15°20'52.49"N N Latitude and 76°12'9.78" E to 76°13'58.16"E Longitude in Survey of India topo sheet No. 57A/3 at an elevation of 515 m MSL. The ground water table reported to ranges between 4.5 to 16.5 m below the land surface during the post-monsoon season and 1.11 to 16.24 m below the land surface during the pre-monsoon season.
- 19.8.9 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger 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.
- 19.8.10 The targeted production capacity of the Integrated Steel Plant is 3.5 MTPA. The ore for the plant would be procured from Captive Mines (70 - 73 Km) and Open market (35 – 40 Km). The ore transportation will be done through Rail or Road (tarpaulin covered trucks).
- 19.8.11 The estimated water requirement for the project is 20.93 MGD. The permission for drawl of 15 MGD from Tungabhadra Dam was obtained from State Government Karnataka vide Lr. No. 775/B1/2008 date 23.04.2008. Application for remaining 5.93 MGD has been already filed to state government.
- 19.8.12 The power requirement of the project is estimated as 366000 KVA, and will be met from Captive Power Plant.
- 19.8.13 Baseline environmental studies were conducted for the three months during 01.03.2016 to 29.05.2016. As per the recommendation of EAC in its meeting held during 20-22nd February, 2019, additional one-month baseline environmental studies was also conducted during the period of February –March 2019. Ambient air quality monitoring has been carried out at nine locations the data submitted indicated: PM₁₀ (36 µg/m³ to 63 µg/m³), PM_{2.5} (15 to 35 µg/m³), SO₂ (7 to 20 µg/m³) and NO_x (12 to 31 µg/m³). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is µg/m³ with respect to the PM₁₀, 20.3 µg/m³ with respect to the SO₂, 10.7 19.43 µg/m³ with respect to the NO_x.
- 19.8.14 Ground water quality has been monitored in eight locations in the study area and analysed. pH:7.26 to 8.03, Total Hardness: 295 to 450 mg/l, Chlorides: 23 to 570 mg/l, Fluoride: 0.8 to 1.67 mg/l. Heavy metals are within the limits. Surface water samples were analysed from six locations. pH: 7.26 to 7.5; DO: 5.2 to 5.7 mg/l and BOD: 1.2 mg/l to 2.2 mg/l
- 19.8.15 Noise levels are in the range of 36.4 to 57.4 dB(A) for daytime and 34.0 to 47.5dB(A) for night time.
- 19.8.16 No R&R is involved.
- 19.8.17 Solid waste generated from different units and disposal is as follows:-

Solid Waste	Total generation at full capacity (tons)		Utilization and mode	Disposal as wastes
	Phase-1	Phase-2		
Coal/coke dust	11,854	12,653	100% utilized in coal blend charge in the	Nil

Solid Waste	Total generation at full capacity (tons)		Utilization and mode	Disposal as wastes
	Phase-1	Phase-2		
			coke oven complex	
Undersize coke	26,000	59,200	100% utilized in sintering plants as a bed material for heat energy	Nil
Tar sludge	240	256	To be used along with coal charge in the coke ovens	Nil
Acid sludge from by-product units	100	100	-	To be neutralized and disposed as landfill.
Lime sludge from PCM	450		To be used as neutralizing agent	Nil
Iron bearing dusts from dust catchers/ESPs/B ag filters	232,980	556,669	To be used along with the charge mix in the sintering plants. The design has provisions to use these.	Nil
Blast Furnace granulated slag	362,208	822,298	To be sold to cement plants for making blast furnace slag cement	Nil
Steel making slag	150,000	324,000	Only iron bearing portion of the steel slag would be recovered and iron to be used in steel making. A small % of the steel slag can be used in Blast furnace as source of lime.	These would be used as landfills either inside the plant or in the neighborhood
Iron oxide from acid regeneration plant of Cold rolling mills		40,000	To be sold to users like Ferro magnet industry, iron powder industry etc.	Nil
Power plant fly ash	127,360	490,758	To be sold to fly ash brick makers and cement plants making fly ash cements	Nil
Power plant Bottom ash	31,840	122,689	Cannot be used in the processes adopted.	To be used as land fill
Arising of skull/scraps	94,197 (114,197)*	191,315	To be used in steel making for re-	Nil

Solid Waste	Total generation at full capacity (tons)		Utilization and mode	Disposal as wastes
	Phase-1	Phase-2		
			melting.	
Rejects after Two stage WHIMS treatment in the fine ore beneficiation plant.		4,44,188 (Dry)	To be temporarily stocked at the designated site in the plant and later transported to a nearby ore mine pit for re-filling and green development.	Phase-1: Phase-2: 4,44,188 t
Refractory wastes	10,880	26,849	Un-contaminated (80%) bricks will be sold (for construction) or crushed to be used as mortar.	About 20% of the waste bricks which are contaminated with slag/skull etc. would have to be discarded and dumped in landfills.
Muck/sludge/wastes	5,050	7,750	Cannot be re-used	
Total arising	1,053,159	3,098,723	174,066 (16.53%)	870,968 (28.2%)

- 19.8.18 The Public hearing of the project was held on 28th May 2018 at Halavarthi Koppal Karnataka under the chairperson of the Deputy Commissioner of Koppal District Smt. Kanagavalli for proposed 3.5 MTPA Integrated Steel Plant along with 295 MW CPP. The issues raised during public hearing are 1) Employment 2) Water Supply 3) Land Acquisition. An amount of Rs. 45 Cr (0.25 % of Project cost) has been earmarked for Corporate Environment Responsibility based on public hearing issues.
- 19.8.19 The capital cost of the project is Rs. 17,979 Cr and the capital cost for environmental protection measures is proposed as Rs. 800 Cr. The annual recurring cost towards the environmental protection measures is proposed as Rs 107.5.Cr. The detailed CER plan has been provided in the EMP in its page No. 267 to 271. The employment generation from the proposed project is 3811.
- 19.8.20 Greenbelt will be developed in 256 ha which is about 33 % of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 1600 trees per hectare. Total no. of 409600 saplings will be planted and nurtured.
- 19.8.21 A court case has been filed for 109.03 Acres of land (Survey No. 295/2, 298, 299, 300/A, 300/B, 130/AP1, 130/AP2, 132/B, 133, 140, 140/P1, 147,150/B, 155/3, 155/B, 156/2, 170/D, 172/A, 172/B, 172/P3, 172/P4, 171/AA1, 172/H, 172/F, 172/P5 out of 922.19 Acres. The matter is under consideration. However AISL will follow the verdict of court as reported.
- 19.8.22 Consultant: Pollution and Ecology Control Services (PECS) Listed at no. 121 in QCI List.

Observations of the Committee (meeting held during 26th June 2019)

- 19.8.23 The Committee noted that total land requirement for the project is 1917.6 acres out of which 922.1 acres is under possession of the proponent while 995.50 acres is under acquisition by KIADB. Further, it is noted that a litigation is pending before the Hon'ble Supreme Court for 109.03 acres of land which is part of 922.1 acres land under possession of the project proponent wherein the Hon'ble Court has directed to maintain status-quo.
- 19.8.24 The project proponent has no permission for withdrawal 4170 KLD of water, the total daily water requirement for the project, from Tungabhadra reservoir.

Recommendations of the Committee (meeting held during 26th June 2019)

- 19.8.25 After detailed deliberations and considering the matter being sub-judice, the Committee recommended not to consider the project at this stage.
- 19.8.26 In accordance with the decision of EAC, the proposal was kept in abeyance.

Representation of project proponent for reconsideration of the proposal

- 19.8.27 Project proponent has submitted the representation to the Ministry on 24.09.2019 and mentioned the following.
- i. M/s Aaress Iron and Steel Ltd is in total possession of 922.1 acres which was acquired by Karnataka Industrial Area Development Board (KIADB) and handed over to the project proponent vide letters KIADB/AE/2392/2007-08 dated 10.03.2008 and KIADB/AE/3060/2009-10 dated 15.01.2010 for 1st phase of 1.0 MTPA capacity steel plant.
 - ii. The State High Level Committee (SHLC), Government of Karnataka has considered and cleared the project vide GO No: C1274 SPI 2016, Bengaluru dated 20.10.2016 for enhancing capacity to 3.5 MTPA steel plant and given in principle approval for acquiring the land of notified survey numbers to an extent of 995.5 acres through KIADB for 2nd phase in addition to the land in possession, i.e 922.1 acres.
 - iii. In accordance with OM of the Ministry vide F.No.22-76/2014–IAIII dated 07.10.2014, full acquisition of the land is not the prerequisite for consideration of the case for EC, there should be some credible document to show the status of Land acquisition with respect to project site when the case is brought before the concerned EAC. Only 109.03 acres land was adjudicated by the farmers after the acquisition process between Government of Karnataka and the farmers.
 - iv. Initially 10 MGD of water for the steel project was sanctioned by the Government of Karnataka vide order no. CI 511 SPI 2005 dated 22.03.2006 and Tungabhadra board also concurred for the same vide their memorandum no. 775/B1/2008 dated 23.04.2008. Further 8th SHLC, Government of Karnataka has given permission vide proceedings dated 23.02.2007 for drawl of additional 5 MGD water from Tungabhadra River. Balance required water drawl from Krishna River is under process and in active consideration of Water Resources Department of Government of Karnataka.
- 19.8.28 After examination of the same, the Ministry asked project proponent to submit details of court cases including copies of orders and petitions, complete land details with survey numbers, layout plan of the project along with depiction of land under possession /in process of acquisition/ adjudicated, alternative layout vide letter dated

15.01.2020.

19.8.29 Revised layout plan which avoids adjudicated land of 109.3 acres, along with details of the court cases and the layout with survey numbers were submitted by project proponent vide letter dated 13.02.2020. The same was examined and referred to Legal Monitoring Cell (LMC) in the Ministry for comments. LMC opined that the revised layout plan is legally in order since, there is no dispute involved in the revised plan. Therefore, the same may be taken into account for further consideration of the project. In view of aforementioned facts and with the approval of competent authority, the proposal was placed before the EAC.

Observations of the Committee

- i. In accordance with OM of the Ministry vide F.No.22-76/2014–IAIII dated 07.10.2014, if the land for the project is proposed to be acquired through Government intervention, a preliminary notification issued by the concerned State Government regarding acquisition of land as per the provisions of land acquisition, R&R Act, 2013 shall be required at the time of appraisal by the EAC. In the instant proposal following is the land acquisition status:

S.No.	Land (Acres)	Present status	Remarks
1.	922.1 acres	Acquired by KIADB and handed over to PP.	Out of 922.1 acres, 109.23 acres is under legal dispute.
2.	995.5 acres	Land is yet to be acquired. Further, preliminary notification by the Govt. of Karnataka is also pending.	Preliminary notification is required for appraisal by EAC.

19.8.30 Out of the total land required (1917.6 acres) for setting up of 3.5 MTPA steel plant, 922.1 acres is under possession for which KIADB notified as industrial land. After the notification, out of this 922.1 acres of land, 109.03 acres land is adjudicated. The dispute is between KIADB, Government of Karnataka and land owners / farmers and the project proponent is the affected party. A special leave petition was filed by the project proponent where in Hon'ble Supreme Court directed to maintain status –quo by all concerned with regard to the land of the Writ Petitioners (landowners) vide order dated 27.07.2012. Whereas the second phase of land acquisition process by KIADB for 995.5 acres is in progress.

19.8.31 Out of total water (15 MGD) for the project, project proponent was granted permission for 10 MGD and the rest 5 MGD is under consideration of the State Government.

Recommendations of the committee

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

- i. Revised layout plan of project by realigning the facilities with exclusion of all the subjudiced / disputed lands.

- ii. Preliminary notification issued by the State Government of Karnataka regarding acquisition of 995.5 acres of land as per the provisions of land acquisition, R&R Act, 2013
- iii. Progress made regarding obtaining water withdrawal permission of remaining 5 MGD

ANNEXURE -1

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 NAQPM 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, within 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
