

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

SUMMARY RECORD OF THE SEVENTH (7th) MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE HELD DURING 29-31st MAY, 2019 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER THE PROVISIONS OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA) NOTIFICATION, 2006.

The sixth meeting of the Re-Constituted Expert Appraisal Committee (EAC) for Industry-1 Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-1 Sector Projects was held during 29-31st May, 2019 in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

30th May, 2019

7.15 Expansion of Total Production Capacity and augmentation of integrating melting and rolling facility (from 54,000 TPA to 92,500 TPA) by **M/s. Kundlas Loh Udyog Ltd** located at Village Balyana, Post Barotiwala, Tehsil Baddi, District Solan, **Himachal Pradesh**- [Proposal No. IA/HP/IND/65822/2017, MoEF&CC File No. J-11011/350/2017-IAII(I)] – **Environment Clearance – regarding.**

M/s. Kundlas Loh Udyog has made an online application vide proposal no. IA/HP/IND/87362/2017 dated 6th February, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance 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 “B” EIA Notification, 2006. However, due to the applicability of general condition i.e., interstate boundary of Haryana and Himachal Pradesh at distance of 3.16 Km in west direction, the project is being appraised at the Central level as Category ‘A’.

Details submitted by the Project Proponent

- 7.15.2 The application of M/s. Kundlas Loh Udyog located at Vill. Baliana, Tehsil Baddi, Distt. Solan, Himachal Pradesh was initially received in the Ministry on 30th June 2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC (I)] during 20th meeting on 10th to 12th July, 2017 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 19th September 2017 vide F.No. J-11011/350/2017-IA-II(I).
- 7.15.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 6th February, 2019 vide Online Application No. IA/HP/IND/87362/2017.
- 7.15.4 The project of M/s Kundlas Loh Udyog located at Vill. Baliana, Tehsil Baddi, Distt. Solan, Himachal Pradesh State is for expansion and augmentation of melting and

rolling facility from 54000 TPA to 92500 TPA and replacement of existing Induction Furnace having 6 MT/heat capacity with 12 MT/heat capacity and addition of one more Induction furnace having 12 MT/heat capacity. Total capacity of two Induction furnaces proposed is 24 MT/heat.

- 7.15.5 The total land required for the project is 0.779 ha., out of which 0 ha is an agricultural land, 0 ha is grazing land and 0.779 ha. is others/Private land (0 ha. Government Land). No forest land involved. The entire land has been acquired for the project. 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.
- 7.15.6 The topography of the area is mainly plain and reported to lies between 30054'56.380"N to 30055'0.789"N Latitude and 76049'58.503"E to 76050'04.130"E Longitude in Survey of India topo sheet No. H43K13 at an elevation of 448 m AMSL. The ground water table reported to ranges between 3.02 to 27.57 meter below the land surface during the post-monsoon season and 5.01 to 28.76 meter below the land surface during the pre-monsoon season.
- 7.15.7 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. No Schedule-I species is found in the 10 km radius of the project site.
- 7.15.8 The targeted production capacity of the Billets/Ingots is 288 TPD and MS rolled product is 280 TPD. MS Scrap, Ferro Alloys & MS Billets will be used as basic raw material to manufacture TMT Bar, Garter & Angels. Raw materials will be purchased from open market and transported to site through trucks.
- 7.15.9 The total fresh water requirement of the project is estimated as 65 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 31.05.2017.
- 7.15.10 The power requirement of the project is estimated to be 11000 KVA; the permission has been obtained from the Himachal Pradesh State Electricity Board (HPSEB).
- 7.15.11 Baseline Environmental Studies were carried out during Post-Monsoon season. Ambient air quality monitoring at 8 locations during 1st October, 2017 to 31st December, 2017 indicated: PM₁₀ (60.59 µg/m³ to 87.57 µg/m³), PM_{2.5} (30.02 to 58.93 µg/m³), SO₂ (6.25 to 16.15 µg/m³) and NO_x (17.55 to 33.34 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is just 1.23 µg/m³ with respect to the PM₁₀.
- 7.15.12 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 7.41 to 7.84, Total Hardness: 190.87 to 239.81 mg/L, Chlorides: 25.48 to 33.98 mg/L, Fluoride: 0.27 to 0.78 mg/L. Heavy metals are within the limits. Surface water samples were analyzed from 8 locations. pH: 7.7 to 7.85; DO: 4.5 to 6.5 mg/L and BOD: 3.28 to 28.07 mg/l, COD: 20.74 to 116.14 mg/L.

- 7.15.13 Noise levels are in the range of 58.3 to 65.03 dB(A) for day time and 50.61 to 58.4 dB(A) for night time.
- 7.15.14 No R&R is involved. It has been envisaged that no family is to be rehabilitated.
- 7.15.15 It has been reported that a total of 21 MTPD of Slag, 11 MTPD of Mill Scale and 0.8 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 send to paver industry for interlock block making after metal extraction and APCD waste will be send to TSDF site for proper disposal. Zinc metal recovery from APCD dust is under consideration for implementation. It has been envisaged that an area of 0.257 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.
- 7.15.16 It has been reported that the Consent to Operate from the Himachal Pradesh State Pollution Control Board obtained vide Certificate No. HSPCB/PCB-ID15312/8069-71 dated 23/09/2018 and consent is valid up to 31/03/2021.
- 7.15.17 The Public hearing of the project was held on 04.07.2018 at Project site under the chairmanship of ADM, Solan District for production of 288 TPD of Billets and 280 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:

S. No	Name of the person	Issues raised	Action Plan		
			Commitment	Time Frame	Budget
1	Sh. Balbir Thakur Block Chairman Doon Distt. Solan	Smoke emission from these kinds of iron and steel units. emphasized upon further improvisation in the air pollution control devices	Smoke generated from induction furnace shall be passed through Air pollution control devices to prevent any adverse impact on the environment; he informed that pulse jet bag filter is proposed as APCD, its efficiency 99.9%. APCD dust having some concentration of Zinc and same will be sold to authorized recycler for zinc recovery. Monitoring and analysis of smoke emission will be done regularly.	Implemented parallel with implementation of the proposed project.	Rs. 40 Lakhs is earmarked for APCD and Rs. 4 Lakhs/ annum as recurring cost

S. No	Name of the person	Issues raised	Action Plan		
			Commitment	Time Frame	Budget
2	Dr. R N Thakur Deputy Director Agriculture, Distt. Solan	He said that Soil texture analysis, Bulk density etc. has been got analyzed from which laboratory? He also asked the consultant regarding the source of topographical features mentioned in the EIA Report	The analysis has been done by Shivalik Solid Waste Management laboratory at Nalagarh which is NABL Accredited and MoEF&CC recognized Laboratory. Representative of Kundlas Loh udyog informed that the requisite data was procured from the geological survey of India, Chandigarh and satellite image obtained from Hyderabad.	-----	-----
3	Dr. Sobnath, Department of Fisheries, Distt. Solan	He asked consultant regarding the provision for the treatment for Liquid and solid waste to be generated from expansion activities and its impact on the local rivers and other water bodies.	No liquid waste generated from the process as whole water shall be recirculated in closed loop. Proper treatment of domestic waste water will be done which will be treated in STP (8 KLD) and used within the premises for plantation. As far as solid waste is concerned there will be two types of solid waste. <i>i.e.</i> Slag (Non-Hazardous) and APCD dust (Hazardous). The crushed slag after extraction of metallic contents and in combination with other constituent materials shall be used for pebbles manufacturing and APCD dust shall be disposed to TSDF facility.	Implemented parallel with implementation of the proposed project. ---	Rs. 4 Lakhs is earmarked for STP and Rs. 1 Lakhs/ annum as recurring cost Rs. 1.00 Lakhs is earmarked in EMP Budget

S. No	Name of the person	Issues raised	Action Plan		
			Commitment	Time Frame	Budget
4	h. Ramesh Verma, Joint Director, Deptt. Of Industries, Baddi	Clarification regarding the enhanced power load and proposed production capacities. Er. A. K Sarda advised the project proponent to apply and obtain all requisite permission after obtaining Environment Clearance	Power load enhanced from 4210.53 KVA to 11000 KVA and permission obtained from HPSEB. The existing production capacity is 54000 MTPA (rolled product) but unit being operated with a single induction furnace with capacity 20000 MTPA (billets) which will be enhanced to 92000 MTPA (billets and rolled products)	-----	-----
5	Sh. Vivek Chandel, ADM cum Chairman	The chairman raised the issue regarding plantation done under Pollution Abating Plantation Abhiyan "PAPA" Within and outside the premises, He advised the project proponent to plant more trees which finally result into a model green buffer around the unit. HE also asked about the mechanism for use of slag in brick manufacturing	Project proponent informed that 150 nos. plants were planted under Pollution Abating Plantation Abhiyan "PAPA" and assured that more plant will be carried out. 33 % of the total plant area will be developed as a Greenbelt. Greenbelt development programme also organized in nearby village's school and gram panchayat land. The brick manufacturing shall be executed after adopting the technology approved and permitted by State Pollution Control Board. Approx. 3610.47 m ³ /year will be harvested inside the plant premises and RWH pit (12mx10mx20m) will developed for storage of rain water.	6 months 8-10 months Implemented parallel with implementation of the proposed project.	Rs. 2.50 Lakhs is earmarked in EMP Budget Rs. 4.00 Lakhs is earmarked in CER Budget Rs. 3.00 Lakhs is earmarked in EMP Budget

S. No	Name of the person	Issues raised	Action Plan		
			Commitment	Time Frame	Budget
		and to ensure procedure to be adopted its use by brick kiln industries. He also raised the issue regarding Rain Water Harvesting to be implemented by the project proponent			
6	Pradhan Gram Panchyat	He welcomed everyone in the Public Hearing and said that they don't have any objection w.r.t expansion proposal however he emphasized that the plant shall be operated in the same manner as being run in the past beside resulting into no adverse impact on environment. He requested project proponent to contribute in C.S.R activities as usual.	He reiterated that they shall be bound to adhere pollution control norms beside their contribution to C.S.R activities in similar ways as implemented in the past.	After complete implementation of proposed project	2% from profit make by industry.

7.15.18 An amount of Rs. 13.5 lakhs (more than 1% of Project cost) has been earmarked for Corporate Enterprises Responsibility based on public hearing issues. The details of CER proposed are as follows:

S. No.	Description	Amount to be spent	
		First Year	Second Year
		Rs.in Lakhs	Rs.in Lakhs
1	Employment (Vocational Training for Skill development for self-employment like Sewing, Pickle making, Craft and in-plant training for welding, fabrication and maintenance of appliances for youth of nearby villages)	0.60	0.40
2	Greenbelt Development (Plantation in and around the project site, nearby villages and schools)	2.50	1.50
3	Health Camp (Health, Eye etc. check up camp will be organized for villagers)	0.90	0.60
4	Educational Facility (Distribution of School dress, books, Furniture, water cooler, renovation of toilets in schools etc.)	2.50	1.50
5	Community Development (Rain water harvesting structure & maintenance of street light)	2.00	1.00
Sub Total		8.50	5.00
Total		Rs. 13.5	

7.15.19 The capital cost of the project is Rs 1019.75 Lakh and the capital cost for environmental protection measures is proposed as Rs 56 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 7.50 Lakhs. The employment generation from the proposed project / expansion is 321. 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	40.0	4.0
2.	Water Pollution Control/ sewage Treatment Plant	2.0	1.0
3.	Noise Pollution Control (Including cost of Landscaping, Green Belt)	5.0	1.0
4.	Solid Waste Management	1.0	00
5.	Environment Monitoring and Management (Including Establishment of Laboratory)	2.0	0.5
6.	RWH	3.0	0.50
7.	Miscellaneous (Appointment of Consultants, occupational health & safety measure)	3.0	1.0
	Total	56.00	8.00

- 7.15.20 Greenbelt will be developed in 0.257 Ha which is about 33 % of the total acquired area. A 10m wide greenbelt, consisting of at least 2 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 1500 trees per hectare. Total no. of 500 saplings will be planted and nurtured in 0.257 hectares in 5 years.
- 7.15.21 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.15.22 Name of the consultant: M/s. Shivalik Solid Waste Management Limited, Zirakpur [S.No. 138, List of QCI Accredited Consultant Organizations (Alphabetically) Rev. 74, Maarch 07, 2019].
- 7.15.23 The project was considered in the 5th meeting of Re-constituted EAC (Industry – 1) held on 27th– 29th March, 2019 at item no. 5.1. There were certain observations were made by the EAC on the proposed Project.
- i. The EIA/EMP report submitted by the project proponent is inadequate and not as per the QCI/NABET norms. Further, permission from the Competent Authority for ground water extraction and power supply has not been obtained.
 - ii. All quantities related to raw material, utilities, products and solid waste should be in same unit, i.e., tons/annum.
 - iii. Detailed plan for rainwater harvesting should be furnished.
 - iv. Explore the feasibility of water withdrawal from nearby river and submit action plan accordingly.
 - v. HIRA is not project specific.
 - vi. The existing re-heating furnace shall be decommissioned and there will be no change in caster two numbers and one number rolling mills
 - vii. EIA report should be recast as per the Appendix-III of EIA Notification 2006
 - viii. After detailed deliberations, the committee, for want of aforesaid clarifications / documents, returned the proposal in the present form.
- 7.15.24 Project Proponent submitted Reply to the above observations to MoEF&CC on 06.05.2019.

Sr. No	Observation	Reply
1.	The EIA/EMP report submitted by the project proponent is inadequate and not as per the QCI/NABET norms. Further, permission from the Competent Authority for ground water extraction and power supply has not been obtained	Complied as per NABET norms. An application for water withdrawal permission for existing borewell is submitted as per CGWA Public Notice dated 14.11.2018, and also for expansion has been submitted to Himachal Pradesh Ground water Authority, I&PH (Irrigation & Public Health) department on 31.05.2017 and the application is under process. A latest communication about site inspection report from I&PH Department has been

		received vide letter No. 1946 dated 06.04.2019 and application still under process for grant the water permission (all communication letter with IP&H department and application status is attached as Annexure 9 in the EIA Report. Extension of Existing Power Load of 4442 KVA to 7400 KVA has been granted in favour of M/s KundlasLoh Udyog by HPSEB vide letter No. 3108 dated 26.05.2018 (attached as Annexure 4) and an application has been submitted to HPSEB for remaining power load which is under processing.
2.	All quantities related to raw material, utilities, products and solid waste should be in same unit, i.e., tons/annum.	All quantities are given in same unit and incorporated in chapter 2 at table no. 2.1, Page No. 2-17.
3.	Detailed plan for rainwater harvesting should be furnished.	The expected total rainwater available will be around 3610.47 m ³ /year and same will be stored in a Pit of size 12mX10mX20m. Detailed Plan for rainwater harvesting has been prepared and incorporated in chapter 4 at Item No.4.10, Page No. 4-103.
4.	Explore the feasibility of water withdrawal from nearby river and submit action plan Accordingly.	The water withdrawal from nearby river is not possible as the nearest river Sirsa is flowing at distance of 4 km in the east direction and is a seasonal river. Therefore, water is not available for round the year.
5.	HIRA is not project specific.	Site Specific HIRA is prepared and included in the EIA Report in chapter 7 at Table No. 7-2, Page No. 7-24.
6.	The existing re-heating furnace shall be decommissioned and there will be no change in caster two numbers and one number rolling mill.	Noted & Complied. In this regard, an undertaking given by project proponent and attached as Annexure 11 with EIA Report.
7.	EIA report should be recast as per the Appendix-III of EIA Notification 2006	Complied

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

7.15.26 **Consultant:** Shivalik Solid Waste Management Limited, Certificate No. NABET/EIA/1619/RA 0040.Sr. No. 140, Rev. 75, April 10, 2019

Observations of the Committee:

7.15.27 Permission for abstraction of ground water is yet to be obtained by the Project Proponent. There is no mention of Monitoring of quantum of rainwater to be harvested.

Recommendations of the Committee:

7.15.28 After detailed deliberations, the Committee sought following additional information for further consideration of the proposal.

- i. The project proponent shall submit permission for withdrawal of ground water from CGWA/CGWB/concerned Authority.
- ii. Action plan to undertake rainwater harvesting and recharge, and the quantum of water so channelized shall be more than the water consumption in the project area.

- iii. Monitoring of rainwater harvesting/recharging performance shall be done by the PP using standard methodology.
- iv. Action plan to maintain the Stack emissions below 30 mg/Nm³.
- v. Project proponent shall confirm that no reheating furnace will be installed, and 100% hot charging process shall be adopted.

7.16 Proposed Expansion of Sponge Iron/Sponge Pellets (2 Nos. Of Kiln), Billets/Ingots (2 Nos. Of Furnace), TMT Bars & Channel/Angle (Rolling & Section Mill), CPP (2 MW) and Waste Heat Recovery Boiler (4 Mw) Manufacturing Unit in Existing Premises of **M/s. Nilkanth Concast Private Limited** Located at Survey No. 221, Village: Vadala. Taluka: Mundra, Dist. Kutch, **Gujarat** [Proposal No. IA/GJ/IND/87842/2008, MoEFCC File No. J-11011/85/2008-IAII(I)] – **Environment Clearance – regarding.**

Project Proponent withdrew the proposal and requested the Ministry to consider the proposal after submission of the revised EIA report with additional one-month baseline data by them. The committee, in view of the aforesaid, recommended to return the proposal to the PP in the present form

7.17 Proposed Modernization and Expansion Plan (MEP) of Existing Paper/Board Manufacturing Plant by **M/s JK Paper Limited** located at JKPL Unit: CPM, Fort Songadh, P.O Central Pulp Mills, District Tapi, **Gujarat** – [Proposal No. IA/GJ/IND/4883/2008, MoEFCC File No. J-11011/416/2008-IAII(I)] – **Environment Clearance - regarding.**

M/s JK Paper Limited made application vide online proposal no. IA/GJ/IND/4883/2008 dated 15th February, 2019 along with the application in prescribed format (Form-I) for expansion and modernization of Existing Paper/Board Manufacturing Plant by replacing existing Recovery Boilers with one new Energy Efficient Recovery Boiler (EERB) and enhancing the inhouse Pulp Production without increasing the total Paper/Board Production Capacity under the provisions of 7 (ii) of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 5(i) Pulp and Paper Manufacturing Industry under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

7.17.2 The Proposed Mill Modernization and Expansion Plan (MEP) by increasing paper/board production capacity from 1,60,800 TPA to 3,60,800 TPA of M/s JK Paper Limited, located in Village Gunsada, Bhimpura, Singalkhanch, Fort Songadh Taluk, Tapi District in the State of Gujarat was initially received in the Ministry on 24th 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 Terms of Reference (ToR)s to the project for undertaking EIA 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 Letter No. IA-J-11011/416/2008-IA.II (I).

- 7.17.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 8th May 2019 vide application no. IA/GJ/IND/4883/2008.
- 7.17.4 The project of M/s JK Paper Limited, located in Gunsada Bhimpura, Singalkhanch Village, Fort Songadh Taluk, Tapi District in the State of Gujarat is proposing for Modernization and Expansion Plan (MEP) of the existing paper/board manufacturing plant by increasing paper/board capacity from 1,60,800 tpa to 3,60,800 tpa by installing a multi-layer coated new board machine of capacity 2,00,000 tpa. The existing pulp mill of capacity 60,000 BD tpa will be replaced with ECF based Bleached Chemical Wood Pulp (CWP) mill of capacity 1,60,000 BD tpa which will be shifted from JKPL, Rayagada unit and re-installed. A new Bleached Chemi Thermo Mechanical Pulp (BCTMP) of capacity 1,00,000 AD tpa, De-Inking Plant (DIP) of capacity 150 BD tpd and Secondary Fiber Treatment (SFT) Plant of capacity 400 BD tpd are proposed to cater to the fiber demand of the varieties of Boards for the proposed new Board machine. The existing project was accorded environmental clearance vide Letter F.No. J-110 11/416/2008-IA-II dated 17th October 2008.
- 7.17.5 The Status of compliance of earlier EC was obtained from Regional Office, Bhopal vide Letter File No. 5-266/2008(ENV)/316, dated 07.08.2018. There are no non-compliances reported by Regional officer.
- 7.17.6 The overview of the proposed capacities as against the existing capacities are as below;

S.No	Description	Unit	Existing	Post MEP	Incremental	Proposal
1	Paper/Board Machines section					
1.1	PM#1&2 (PWP)	TPA	60,000	60,000	-	Existing will continue
1.2	PM#3 (Board)	TPA	100,800	100,800	-	Existing will continue
1.3	PM#4 (New Board)	TPA	-	200,000	200,000	New Unit
1.4	Total Paper/board Production	TPA	160,800	360,800	200,000	-
		TPD	480	1,080	600	-
1.5	Deinking Plant	BD TPD	-	150	150	New or Existing SFT will be converted to DIP
1.6	Secondary Fiber Treatment (SFT) Plant	BD TPD	200	600	400	Existing will be used with New 400 tpd SFT plant
2	Pulp Mill					
2.1	Bleached Chemical Wood Pulp mill	BD TPA	60,000	160,000	100,000	Relocating and Reinstallation from JKPL unit, Rayagada, Orissa, with Up gradation. The

MoM of 7th meeting of the Re-constituted EAC (Industry-I) held during 29-31st May, 2019

S.No	Description	Unit	Existing	Post MEP	Incremental	Proposal
		BD TPD	175	460	285	existing pulp mill of capacity 60,000 BD tpa will be retired.
2.2	BCTMP mill	AD TPA		100,000	100,000	New Unit
		AD TPD		300	300	
2.3	ClO ₂ plant	TPD	2	15	15	Existing Nonintegrated ClO ₂ plant will be retired and New integrated ClO ₂ plant will be installed.
2.4	Oxygen Generation Plant	Nm ³ /hr	200	500	500	Installation of new O ₂ generation plant of capacity 500 Nm ³ /hr. The existing O ₂ generation plant will be retired.
2.5	Pulp Wet lapping machine	TPD		150	150	New wet lap machine
3	Recovery plant					
3.1	Evaporator	TPH of water evaporation	70	300	230	Existing Evaporator will be used for BCTMP waste liquor evaporation along with Reinstalled/new evaporator with upgradation
3.2	Recovery boiler	TPD of black liquor solids	335	950	950	Existing recovery boiler will be retired and a new Recovery boiler will be installed
3.3	Lime kiln	TPD of lime	90	230	140	Existing will be used along with re-installed lime kiln from JKPM or JKPM lime kiln will be re-installed with upgradation.
3.4	Recausticising plant	White liquor cum/day	1,000	3,000	2000	Existing plant will be upgraded with additional equipment.
4	Power Plant					
4.1	Power Boilers	TPH of steam	170	360	190	CFB#1-20 (To be Retired) CFB#2 - 30 (To be

S.No	Description	Unit	Existing	Post MEP	Incremental	Proposal
						Retired) CFB#3-50 (Operating), CFB#4 - 70 (Operating) New CFB#5 - 150 tph (Operating) New CFB#6 - 90 tph (Standby)
4.2	Turbo Generators	MW	30.25	72.00	41.75	TG#1 - 3.125 (To be Retired), TG#2 - 3.125 (To be Retired) TG#3 - 12 (Operating), TG#4 - 12 (Operating) New TG#5 - 30 MW and New TG#6 18 MW will be installed
5	Others					
5.1	PG Plant	Nm ³ /hr	3000	10000	7000	New 7000 Nm ³ /h will be installed
5.2	Precipitated Calcium Carbonate (PCC) Plant (CaCO ₃)	TPM	1200	1200	-	Existing capacity is adequate. No change
5.3	Silicate Nano Fibers (CaSiO ₃)	TPM	1500	1500	-	Existing capacity is adequate. No change
5.4	GCC plant	TPD	--	100	100	New 100 tpd GCC plant will be installed
6	Water and Wastewater					
6.1	Water Intake and Treatment Plant	m ³ /day	35,000	45,000	10000	Intake pump station and WTP will be upgraded.
6.2	Wastewater Treatment	m ³ /day	30,000	45,000	15000	The existing ETP will be upgraded up to tertiary level to meet the additional hydraulic volumes during the post project scenario

7.17.7 No additional land is required since the available free space in the mill will be used for project facilities. The mill has total land area of 363 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.

- 7.17.8 The topography of the existing mill area is flat and lies at coordinates of latitude 21°12'N and longitude 73°34'E and falls under the Survey of India Topography Map No. 46G/7, 46G/8, 46G/11 and 46G/12. The ground water table reported to ranges between 3.9 to 9.5 m during the pre-monsoon season and 3.3 to 7.1 m during the post-monsoon season.
- 7.17.9 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna and no Schedule-I fauna were observed in the study area.
- 7.17.10 Process Description: Total wood/bamboo required in the post MEP scenario will be in the order of 5,15,000 tpa as against the current consumption of about 1,63,000 tpa. Wood is debarked and chipped in chippers. The wood chips are then taken into digester(s), where it is cooked. The pulp from rapid displacement heating (RDH) type digester is screened and then washed in washers. The RDH process has extended delignification with significant reduction in energy consumption and lower chemical costs. The process also reduces the steam consumption significantly. Due to the increase in lignin removal efficiency in RDH process than a conventional system, the chemical consumption in the bleaching section will also reduce which in turn reduces the pollution load on ETP. After washing the pulp is taken for oxygen delignification which is performed with oxygen (O₂) and caustic (NaOH) serving as the active chemicals. Pulp, after oxygen delignification, is led to a post oxygen washer and then bleached to a brightness level of minimum 88% ISO, by employing "A/D-EOP-DP (chlorine dioxide, caustic, oxygen and hydrogen peroxide)" sequence comprising of Acid treatment for pH adjustment, Chlorine dioxide, Caustic, Oxygen and peroxide bleaching. The pulp bleaching is elemental chlorine free process and thereby encounters reduced specific water consumption and also lower pollution load on the system. The process steps involved in BCTMP pulping are: Chip washing system, Impregnation system, HC refining, washing, LC refining, screening, reject refining and Thickening & storage.
- 7.17.11 The targeted paper/board production capacity is 3,60,800 tpa, bleached chemical wood pulp production capacity is 1,60,000 BD tpa, BCTMP (Bleached ChemiThermo Mechanical Pulp) production capacity is 1,00,000 AD tpa. Black liquor (generated in-house), indigenous, imported coal, lignite, furnace oil and pet coke are the fuels. Necessary permission will be obtained for the usage of pet coke during MEP.

S.No	Fuel	Unit	Existing	Post MEP	Incremental	Source
1	Indian local (Linkage and Open Market)	TPA	70,000	200,000	130,000	Existing coal linkage of 73,804tpa with Western Coalfield is available. Additional coal linkage shall be obtained

S.No	Fuel	Unit	Existing	Post MEP	Incremental	Source
						locally/open market.
2	Imported coal	TPA	100,000	200,000	100,000	Coal is imported from Indonesia through open market.
3	Lignite	TPA	70,000	100,000	30,000	Additional lignite linkage shall be obtained locally from Rajpardhi mines as per the existing procurement.
4	Furnace oil for lime kiln and recovery boiler	Kl	170	3,200	3,030	Local Market
5	Pet coke for lime kiln	TPA	-	9,600	9,600	Local Market

- 7.17.12 The total fresh water requirement of the project is estimated as 37,000 m³/day as against the existing fresh water consumption of about 20,500 m³/day. Specific fresh water consumption will be reduced from current level of 40 m³/t to 32 m³/t of product. Existing water allocation from Narmada W.R.W.S and Kalpasar Department is about 5 MGD (22,730 m³/day). Necessary in-principle permission for total of 10 MGD has been obtained from Narmada W.R.W.S and Kalpasar Department for the drawl of additional fresh water.
- 7.17.13 The power requirement of the project is estimated as 60 MW. Therefore, it is proposed to increase the capacity of existing captive power plant from 30.25 MW to 72.0 MW by adding a new 30 MW TG, 18 MW TG and 150 tph CFBC boiler.
- 7.17.14 Baseline Environmental Studies were conducted from 24th September 2018 to 23rd December, 2018. Ambient air quality monitoring has been carried out at eight (8) locations and the data indicated: PM₁₀ (57.8 µg/m³ to 86.5 µg/m³), PM_{2.5} (27.9 to 51.1 µg/m³), SO₂ (14.1 to 26 µg/m³) and NO_x (24.4 to 28.9 µg/m³). The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 1.59 µg/m³ with respect to the PM₁₀, 9.48 µg/m³ with respect to the SO₂ and 6.03 µg/m³ with respect to the NO_x.
- 7.17.15 Ground water quality has been monitored in eight (8) locations in the study area and analysed. pH 7.2 to 8.2, Total Hardness 253.31 mg/l to 335 mg/l, Chlorides 52.29 mg/l to 116.48 mg/l, Fluoride 0.35 mg/l to 0.58 mg/l. Heavy metals are within the limits. Surface water samples were analysed from upstream and downstream of River Tapi. pH 8.04 and 8.05; Do 6.0 and 6.1 mg/l, BOD < 5 mg/l, COD of 20 mg/l and 26 mg/l respectively for upstream and downstream of River Tapi.

7.17.16 Noise levels are in the range of 50.15 dB (A) to 55.70 dB (A) for daytime and 41.34 dB (A) to 47.50 dB (A) for night time.

7.17.17 No R&R is involved as no additional land is required for the project.

7.17.18 The expected increase in the solid and hazardous waste due to proposed MEP and the respective proposed disposal practices are presented below.

Sl No	Particulars	Existing Quantity (BD TPD)	Additional Quantity (BD TPD)	Post MEP Quantity (BD TPD)	Disposal
1	Bamboo/Wood Dust	20	40	60	Considering the carbon content, the wood dust will be used as alternative fuel in Boiler as per existing practice
2	Fly Ash	120	300	420	Will be used for Cement/Brick manufacturing as per existing practice.
3	Lime Sludge/Grit	60	-	40	Due to the installation of new lime kiln along with existing one and operating lime kiln with full capacity, only lime grit will be generated which will be used as backfilling material at abandoned stone quarry as per existing practice.
4	ETP Sludge	16	40	56	Will be sold to board manufacturers as per existing practice.
6	Spent Oil	725 kg/Month	1000 kg/Month	1725 kg/Month	Will be disposed to authorized recyclers as per existing practice.

7.17.19 The existing facility has fully developed green belt/plantation of 120 acres (33.33 %) in its premises. Besides the existing green cover, JKPL is proposing to develop 10 acres of additional greenbelt post MEP.

7.17.20 Consolidated Consent and Authorization (CC&A) is obtained from GPCB vide their Consent No. AWH-101342 dated 25.03.2019, valid up to 10.04.2024.

7.17.21 The public hearing of the project was held on 30.04.2019 at the project site JKPL, Unit CPM under the chairmanship of District Collector for the proposed Modernization and Expansion Plan (MEP) of existing paper/board manufacturing plant at JKPL unit. The

issues raised during public hearing are related to discharge of treated wastewater, air and odour emissions, groundwater contamination, employment opportunities for local people and implementation of CSR activities.

7.17.22 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 0.25% of the total project cost of Rs. 1500 Crores. The issues raised during Public Hearing and commitment of Project Proponent (PP) along with time bound action plan and financial allocation is given as below.

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
1	Discharge of Treated Wastewater: 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"> • CPM operates Effluent Treatment Plant on continuous basis i.e. 24 hours and 365 days basis without any interruption. • CPM has adopted two stage wastewater treatment processes at the existing facility. For the MEP, the existing treatment facility will be upgraded and augmented to meet the prescribed discharge norms during the post project scenario. • Unit CPM is currently supplying treated wastewater for irrigation needs in the neighboring areas with the prior consent of the farmers. • Periodic soil monitoring studies have been carried out regularly by the accredited environmental laboratory and no abnormal values are 	<ul style="list-style-type: none"> • About 400 acres of land have been identified and prior consent is obtained from the farmers for irrigation of the additional wastewater generated during the post MEP. • Treated wastewater, ground water quality and soil monitoring studies will be continued during post project scenario. 	<ul style="list-style-type: none"> • Budget: About Rs. 55 crores is allocated towards pollution control and monitoring system which includes ETP up gradation etc. • Time frame: After the commencement of project

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
		reported.		
2	Air and Odour Emissions: Some of the attendees of the public hearing have expressed their concern on air and odour emissions.	<ul style="list-style-type: none"> Regular maintenance of boilers is being carried out to control the boiler emissions and about ₹50 lakhs have been spent on retrofitting of ESPs in year 2018. Stack emissions are regularly monitored by the plant, GPCB and third party NABL certified laboratories. The emission levels are maintained well within the GPCB norms. Coal dust control measures are in place such as dust collection system in the coal crushers, closed hood covers at the conveyor belts for the transfer of coal and adequate sprinkling systems. Unit is continuously adopting various improved technologies in the existing facility to control odour emissions. CPPRI has conducted odour emission test for which results were found to be below the detectable limit. 	<ul style="list-style-type: none"> Modern ESPs will be installed to the proposed boilers to meet the PM emission norms. The proposed project is designed based on a modern technology including adoption of Elemental Chlorine Free (ECF) bleaching etc to mitigate foul smell. The wood digestion and cooking process will be upgraded to RDH cooking which is a modern technology. 	<ul style="list-style-type: none"> Budget: About Rs. 55 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	Ground water contamination: Some of the attendees of the public hearing have	<ul style="list-style-type: none"> Ground water quality monitoring is being carried out by third party NABL accredited laboratory 	<ul style="list-style-type: none"> Treated wastewater, ground water quality and soil 	NA

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
	expressed their concern on ground water contamination due to the discharge of treated waste water for irrigation	and the results indicate that there is no ground water contamination.	monitoring studies will be continued during post project scenario.	
4	Employment opportunities to the locals: Some of the participants raised concern that the local people were deprived from employment opportunities and priority shall be given to the local youths.	<ul style="list-style-type: none"> • Currently CPM is providing permanent employment to 1100 and temporary employment to 1200. Out of which 80% are from Gujarat and 60% employees are from within 10 km radius of project area. • About 300 direct employment and 1000 indirect employment will be generated due to the proposed MEP. 	<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. • CPM will take appropriate actions on the proposals received from Sarpanchs with regards to providing local employment. 	NA
5	Implementation of CSR Programs: Some of the participants expressed that CSR programs by JKPL are not being implemented in their villages i.e., the CSR activities like health camps were not implemented in some of the study area villages.	<ul style="list-style-type: none"> • Unit CPM is implementing various CSR programs in the vicinity of the existing plant. About ₹132.35 lakhs have been spent on local community development under CSR during FY 2009 to 2018 and CSR programs amounting to about ₹75 lakhs have been spent during FY 2019-20. • The various CSR programs of JKPL includes Adult Literacy program, 	<ul style="list-style-type: none"> • In addition to the existing CSR activities, about ₹375 lakhs have been embarked for the local community development under CER. • According to need based assessment the allocated CER budget will be spent. 	CER Budget: ₹375 lakhs for a period of 5 years

S. No	Issue Raised	Proponent Response	Action Plan	Time frame and budget
		Promoting Self Help Groups for Livelihood Generation, Promotion of Health Care Services, Sanitation and Making Available Safe Drinking Water, Infrastructural Development, Ensuring Environmental Sustainability, Gender Equality, Women Empowerment, Promotion of Sports & Games, Art & Culture and Others, Social & Cultural Activities, etc.	<ul style="list-style-type: none"> The CER budget includes programs under Drinking Water, Health and Road Safety, Irrigation Facilities, Education Facilities and Environment 	

Activities and budget provision for CER

S.No	Program	Y1	Y2	Y3	Y4	Y5	Total (Rs. Lakhs)
1	Drinking Water	22.5	22.5	22.5	22.5	22.5	112.5
2	Health and Road Safety	15	15	15	15	15	75
3	Irrigation Facilities	15	15	15	15	15	75
4	Education Facilities	7.5	7.5	7.5	7.5	7.5	37.5
5	Environment	15	15	15	15	15	75
	Total	75	75	75	75	75	375

7.17.23 The capital cost of the project is Rs 1500 crores and the budget allotted for environmental protection measures is proposed as Rs. 55 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 1.1 crores. The detailed CER plan has been provided in the EMP in Sections 10.4.1 and 10.4.2. The project will create direct employment to about 300 persons. In addition, it would generate indirect employment to about 1000 persons. During the implementation and construction stage of the project, it will generate employment to about 1000 in direct persons for about a year.

EMP Budget Allocation

SL. No	Pollution Control Systems	Capital Cost in Lakhs
1	Air Pollution Control:	1890
2	Water Conservation and Wastewater treatment facility:	3200
3	Solid waste management	20
4	Environmental monitoring systems	200
5	Fire safety systems (E)	200
	Total in Lakhs	5510

- 7.17.24 The existing facility has fully developed green belt/plantation of 120 acres (33.33 %) in its premises. Dominant species planted in the facility are Eucalyptus, Casuarina, Subabul, Leucaena leucocephala, Pongamia, Tectonagrandis and Terminalia, Sizidiumcumini and Bamboos. Besides the existing green cover, JKPL is proposing to develop 10 acres of additional greenbelt post MEP.
- 7.17.25 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.17.26 Name of the Consultant: M/s Cholamandalam MS Risk Services Ltd. SI No in the QCI list: 27

Observations of the Committee:

- 7.17.27 The proposal involves modernisation of the plant and expansion of production. The proposed paper/board production capacity is 3,60,800 tpa, bleached chemical wood pulp production capacity is 1,60,000 BD tpa, BCTMP (Bleached Chemi Thermo Mechanical Pulp) production capacity is 1,00,000 AD tpa. Black liquor (generated in-house), indigenous, imported coal, lignite, furnace oil and pet coke are the fuels. It is proposed to use of pet coke in the proposed expansion project.
- 7.17.28 It is proposed to use treated effluent for irrigation. CER activities are proposed to implement within 5 years. It is proposed to optimise specific consumption of resources.

Recommendations of the Committee:

- 7.17.29 After detailed deliberations, the Committee recommended EC for the proposal with the following specific conditions.

A. Specific conditions

- i. The project proponent shall use 85% of the treated effluent for irrigation of 1500 acres of land.
- ii. The specific water consumption shall not exceed 32 m³ per tonne of paper production.
- iii. The energy consumption shall not exceed 1330 kwh per tonne of paper production.
- iv. Specific coal consumption shall not exceed 1.4 ton/ton of paper production.
- v. Sodium Absorption Ratio (SAR) on the land irrigated by the treated effluent shall not exceed 10. PP shall ensure monitoring of the soil sample twice a year, *i.e.*, during pre-monsoon and post-monsoon periods. In case of increase in trend of SAR, the PP shall initiate appropriate corrective action.

- vi. PP shall ensure that all the wood procured by it for its operations comes from sustainable source.
- vii. The PP shall ensure that the TDS level of the treated effluent does not exceed level of 1900 mg/lit.
- viii. The CER activities shall be implemented within a period of three (3) years.

B. General conditions

I. Statutory compliance:

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (incase of the presence of Schedule-I species in the study area)
- iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- vi. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and the systems be calibrated according to equipment supplier's specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

- iii. The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions. (case to case basis small plants: Manual; Large plants: Continuous)
- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vi. The project proponent shall install high volume, low concentration NCG collection & destruction system to mitigate all malodorous gases emitted.
- vii. Emissions shall be controlled from chemical recovery section through primary and secondary venturi scrubbers.
- viii. Pollution control system in the pulp and paper plant shall be provided as per the CREP Guidelines of CPCB.
- ix. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- x. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xi. In case of treatment process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- xii. The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production
- xiii. Elemental Chlorine Free (ECF) technology shall be used and lime kiln shall be installed to manage lime sludge

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according

to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. (case to case basis small plants: Manual; Large plants: Continuous)

- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. The project proponent shall provide the ETP to meet the standards prescribed in vide G.S.R. No. 546 (E) dated 30th August 2008 as amended from time to time and S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- vii. Tyre washing facilities shall be provided at the entrance of the plant gate(s).
- viii. Ensure that there is no black liquor spillage in the area of pulp mill, no use of elemental chlorine for bleaching in mill, installation of hypo preparation plant.
- ix. Ensure that no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE in the Chemical recovery process directly to ETP
- x. The project proponent shall practice rainwater harvesting to maximum possible extent.
- xi. Water meters shall be provided at the inlet to all unit processes in the steel plants.
- xii. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

VI. Waste management

- i. Deinking sludge and fine sludge from ETP shall be disposed through TSDF.
- ii. Black Liquor shall be separately processed for recovery of energy and chemical in a Chemical Recovery Process.
- iii. Sufficient number of colour coded waste collection bins shall be constructed at shop floors in each shop to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.
- iv. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office. (in case of CPP).
- v. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016
- vi. Kitchen waste shall be composted or converted to biogas for further use. *(to be decided on case to case basis depending on type and size of plant)*

VII. Green Belt

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

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

- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- v. The proponent shall follow International Standards of safety for ClO₂ generation and storage system, and ozone plant, and certification on regular basis may be submitted. Provision for adequate safety for personnel in case of any accidental leakage should be in place

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
 - i. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- iv. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- v. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Pulp and Paper plants shall be implemented.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

7.18 Up gradation of existing Wet Iron Ore Grinding System to Beneficiation Circuit in the Operational 1.2 MTPA Iron Ore Pellet Plant by **M/s MSPL Limited** located at Survey no. 2, 8, 9, 12 to 15, 132, 136 & part of 5, 6, 7, 16, 17, Village: Halavarthi, Tahsil: Koppal, District: Koppal, **Karnataka** [Proposal No. IA/KA/IND/26038/2014, MoEF&CC File No. J-11011/383/2014-IAII(I)] – **Environment Clearance - regarding.**

M/s. MSPL Limited has made an online application vide proposal no. IA/KA/IND/26038/2014 dated 1st February 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance 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 proposal is appraised at Central level.

7.18.2 The proposal of upgradation of existing Wet Iron Ore Grinding System to Beneficiation Circuit in the Operational 1.2 MTPA Iron Ore Pellet Plant of M/s MSPL located in Village Halavarthi, Tehsil Koppal, District Koppal, State Karnataka was initially received in the Ministry on 19th December 2017 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 28th meeting held on 5th to 7th February 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 26th February 2018 vide Lr. No F.N. J-11011/383/2014-IA.II (I).

7.18.3 Based on the ToRs prescribed to the project, the project proponent submitted an application after conducting public hearing for environmental clearance to the

Ministry online on 21st January 2019 vide Online Application IA/KA/IND/26038/2014.

- 7.18.4 The project of M/s. MSPL located in Halavarthi Village, Koppal Tehsil, Koppal District, Karnataka State is proposed for the upgradation of existing Wet Iron Ore Grinding System to Beneficiation Circuit in the Operational 1.2 MTPA Iron Ore Pellet Plant. The existing 1.2 MTPA Pellet Plant was accorded environmental clearance vide F No. J-1011/383/2014-IA II (I) dated 23rd September 2016.
- 7.18.5 The Status of compliance of earlier EC was obtained from Regional Office, Bangalore vide Lr. No. EP/12.1/2016-17/7/Kar, dated 4th October 2016. There are no non-compliances reported by Regional officer. This present proposal is for upgradation of existing Wet Process of IOGS (Iron Ore Grinding System) unit to Beneficiation circuit. This modification will be useful for beneficiation of low-grade iron ore from captive mines and open market to utilize in existing operational Iron Ore Pellet Plant.

Name of Unit	No. of Unit	Capacity of Unit	Product Capacity
Upgradation of existing wet iron ore grinding system in the Beneficiation Circuit in operational 1.2 MTPA Pellet Plant	1	20,00,000 TPA	Beneficiated Ore: 14,00,000 TPA

- 7.18.6 The total land in possession for the project is 45.72 Ha, which was allocated by KIADB and out of which the existing plant is operating in area of 16.5Ha. The upgradation activity will be taken in an area of 200 m² attached with operational plant. 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.
- 7.18.7 The topography of the area is undulating to flat and reported to lies between 15° 19'49.9 N to 15° 19'49.4" N Latitude and 76°12'29.9"E to 76°12'12.0" E Longitude in Survey of India topo sheet No. 57 A/3, at an elevation of 515 m AMSL. The ground water table reported to ranges between 4.5 to 16.50 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.
- 7.18.8 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.
- 7.18.9 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process are given in the chapter 2 of the EIA report.
- 7.18.10 The targeted production capacity of the Beneficiation unit is 14,00,000 TPA of beneficiated iron ore. The ore for the plant would be procured from MSPL Captive Mines (70 - 73 Km) and Open market (35 – 40 Km). The ore transportation will be done by tarpaulin covered trucks.

- 7.18.11 The total water requirement including existing and upgradation project is estimated at 1594.06 m³ /day. The permission for drawl from Tungabhadra Dam is obtained from State Government Karnataka vide Lr. No. 775/B1/2008 date 23.04.2008.
- 7.18.12 The power requirement for the proposed Modification and Pellet Plant is 15 MW and will be met by the Karnataka State Electricity Board sanctioned quota. Power will be received at 220 kV from Utility (GESCOM) and stepped down to 33 KV and again to 6.6kV for further distribution.
- 7.18.13 Additional one-month baseline Environmental Studies has been conducted for the month of February –March 2019. Ambient air quality monitoring has been carried out at 9 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).
- 7.18.14 The results of the modeling study indicate that the maximum increase of GLC for the proposed project due to internal transportation is 0.00986 µg/m³ with respect to the PM₁₀, 0.05002 µg/m³ with respect to the SO₂ 0.22194 µg/m³ with respect to the NO_x.
- 7.18.15 Ground water quality has been monitored in 8 locations in the study area and analysed. pH:7.26 to 8.03, Total Hardness: 29 to 220mg/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 6 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
- 7.18.16 Noise levels are in the range of 38.0 to 55.5 dBA for daytime and 36.4 to 57.3dBA for nighttime. No R&R is involved.
- 7.18.17 With beneficiation of fine low-grade ores, a rejected portion i.e. tailing will arise which is approximately 30% of the overall iron ore through put. The tailings will be temporarily stored within the plant boundary for drying and then shifted to an adjoining site (land owned by MSPL) for storage for a few years till it is used at the filling work of the upcoming steel plant in adjacent land or used by employing some of the upcoming technologies for recovery of silica and alumina. MSPL have identified about 12.2 Acres of land for storing tailing. In addition to this it is also proposed to utilize this tailing for land filling on adjacent land where ISP is proposed. It has been envisaged that an area of 37 acres, 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.
- 7.18.18 It has been reported that the Consent to Operate for operational 1.2 MTPA Pellet Plant from the Karnataka State Pollution Control Board obtained vide Lr. No AWH-301242 dated 20/10/2016 and consent is valid up to 30/06/2021.
- 7.18.19 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 Up gradation of existing Wet Iron Ore Grinding System to Beneficiation Circuit in the Operational 1.2 MTPA Iron Ore Pellet Plant. The issues raised during public hearing are 1) Employment 2) Water Supply 3) legal matter in land acquisition for AISL. An amount of 75 Lakhs (1 % of Project cost) has been earmarked for Corporate Environment Responsibility based on public hearing issues.

- 7.18.20 The capital cost of the upgradation project is Rs 75 Crores and the capital cost for environmental management plan is proposed as Rs 4.07 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 0.51 crores. The detailed CSR plan has been provided in the final EIA report in its page No. 148 to 156. During operation phase additional 65 no. technical and nontechnical people will be employed.
- 7.18.21 Greenbelt will be developed in 14.97 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. Adequate green belt is provided all around the pellet plant and inside the plant premises. About 10000 Nos. of locally available types of trees which are resistant to pollutants are planted. MSPL has already developed Green Belt over 6.07 Ha.
- 7.18.22 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. The land for present proposal and operational 1.2 MTPA Pellet Plant is NOT PART OF THE LAND UNDER CONSIDERATION IN HONORABLE SUPREME COURT.
- 7.18.23 Consultant: Pollution and Ecology Control Services (PECS) Listed at no. 121 in QCI List
- 7.18.24 Project Proponent made application vide proposal No. IA/KA/IND/71698/2017 dated 29th May 2018. The proposal was considered in the 33rd EAC (Industry-1) meeting. After detailed deliberations and specifically in view of the fact that EIA was based on baseline data which was more than three years old, the Committee was of the view that a fresh EIA Report should be prepared with fresh data as laid down by MoEF&CC Notifications. Since public hearing is a part of EIA process, the fresh draft EIA report should be put up for public hearing and the points raised during public hearing and suggested actions thereon, should be incorporated in the final EIA Report and submitted to the Ministry. The fresh EIA report should address the deficiencies pointed above and should be in compliance of the ToR.
- 7.18.25 Project Proponent represented the Ministry that the baseline data generated in the period Mar-2016 to May-2016 for M/s Aress Steel Ltd may be allowed to use as the proposed site for steel plant is sharing common boundary to existing beneficiation unit and EIA report prepared using the same data was placed in the Public Hearing conducted on 28th May, 2018. The request of the Project Proponent was considered in the EAC meeting held during 9th -11th January 2019. After detailed deliberations, the committee recommended for permission to use the baseline data collected for M/s Aaress Iron & Steel Limited for preparation of fresh EIA/EMP for the proposed upgradation of existing Wet Iron Ore Grinding System to Beneficiation Circuit in the Operational 1.2 MTPA Iron Ore Pellet Plant subject to submission of the EIA/EMP within the validity period of baseline data (i.e. before March 2019) and permission from the agency collected baseline data for M/s AISL. Since the public hearings were conducted to the both the projects individually and the baseline was placed before the

public during the public hearing conducted for the M/s AISL, committee agreed for consideration of the public hearing conducted on 28th May, 2018.

- 7.18.26 In accordance with recommendation of EAC, the Project Proponent made application alongwith revised EIA report and made application for Environmental Clearance on 21st January 2019. The proposal was again considered in the 5th EAC (Industry-1) meeting held during 20-22nd February 2019. The committee observed that the issues raised during 33rd meeting held on July, 2018 has not been again addressed satisfactorily. After detailed deliberations and request of the project proponent, the Committee recommended to reconsider the proposal after incorporating one-month fresh environment data (physical) and satisfactory response to the aforementioned issues. Accordingly, the Ministry sought additional information on 27th February 2019.
- 7.18.27 The Project Proponet has submitted the reply to the additional information sought on 16th April 2019.

Observations of the Committee:

- 7.18.28 The committee observed that the reply to the additional information is adequate and one moth fresh baseline data was also incorporated for assessing the impacts of the proposed activities.

Recommendations of the Committee:

- 7.18.29 After detailed deliberations, the Committee recommended Environmental Clearance for the proposal with the following specific conditions.

A. Specific conditions

- i. To meet the need of all its plant operations, the PP shall draw water from Tungabhadra Dam only, and no ground water shall be abstracted except for domestic use.
 - ii. The dewatered tailings from iron ore beneficiation, and the tailings' cake shall be disposed of using standard practice. PP shall not construct any tailing pond.
 - iii. PP shall develop additional plantation with 30,000 saplings outside but within 2 km distance from the boundary of the plant by using tree species required by the villagers.
 - iv. Drinking water facilities shall be provided in all villages located within 2km distance from the boundary.
 - v. Stack emissions shall be maintained within 30mg/Nm³.
 - vi. The CER activities shall be implemented within a period of 3 years.
 - vii. Monitoring of rainwater harvesting/recharging performance shall be done using standard methodology.
- 7.19 Expansion of Integrated Cement Plant Clinker (9.5 to 13 MTPA), Cement (12 MTPA to 16 MTPA), & WHRB (30 to 45 MW) by **M/s. Wonder Cement Limited** located near Villages Sangaria, Borakheri, Peerkhera and Rasulpura, Tehsil Nimbahera, District

Chittorgarh, **Rajasthan** [Online Proposal No. IA/RJ/IND/26626/2015, MoEF&CC File No. J-11011/298/2012-IAII(I)] – **Environment Clearance – regarding.**

M/s. Wonder Cement Ltd made application vide online proposal no. IA/RJ/IND/26626/2015 dated 18th May, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

- 7.19.2 The expansion of integrated cement project of M/s Wonder Cement Limited is located near villages- Sangaria, Borakheri, Peerkhera and Rasulpura, Tehsil-Nimbahera, District Chittorgarh, State- Rajasthan was initially received in the Ministry on 26th May 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 letter No. J-11011/298/2012-IAII(I).
- 7.19.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 24th April 2019 vide Online Application No. IA/RJ/IND/26626/2015.
- 7.19.4 The existing project was accorded environmental clearance for Integrated Cement Project for Line-I, Line II and Line III vide Letter No.: J-11011/506/2007-1A II(I) dated 12th June, 2008, J-11011/298/2012- 1A II (I) dated 21st Feb, 2014 and J-11011/298/2012-IA II (I) dated 17 March 2016 respectively.
- 7.19.5 The Status of compliance of earlier EC was obtained from Regional Office, MOEF & CC Lucknow, vide File.No. IV/ENV/R/Mines-517/872/2014 dated 29th January 2019. There is no non-compliances reported by Regional Officer.
- 7.19.6 The proposed capacity for different products for production enhancement as below:

Sr. No.	Units	Line-I	Line-II	Line-III under commissioning stage	Proposed New Line-IV	Total Capacity after Expansion
		EC Granted	EC Granted	EC Granted	EC sought/ to be Installed	
1	Clinker (MTPA)					
i	EC Granted	3.0	3.0	3.5	3.5	13.0
ii	Plant installed	3.0	3.0	3.5	3.5	13.0
2	Cement (MTPA)					
i	EC Granted	4.0	4.0	4.0	4.0	16.0
ii	Plant installed	4.0	4.0	4.0	4.0	16.0
3	Captive Power Plant (MW)					
i	EC Granted	40.0	40.0	60.0	Nil	140
ii	Plant installed	40.0	-	30	-	70

4	WHRB(MW)					
i	EC Granted	9	9	12	15	45
ii	Plant installed	9	9	12	15	45
5	D.G. Set (MW)					
i	EC Granted	2	5	Nil	Nil	7
ii	Plant installed	2	Nil	-	-	2

- 7.19.7 The total land of the existing project site is 191.064 ha, out of which 68.984 ha is plant area, 17.6298 ha is Township area, 71.197 ha is Green Belt, 21.7468 ha is area for CPP, WHRB and approach road and others (open land) is 11.5064 ha. No /forestland is involved. The entire land has been acquired for the project. Expansion will be carried out in existing plant premises. No additional land is required for expansion of proposed project. The Seasonal nala passes through the project area. It has been reported that water body exist around the project and no diversion in the existing natural drainage pattern at any stage has been proposed.
- 7.19.8 The topography of the area is flat that gradually slopes down towards the northand reported to lies between 24o39'12.47" N to 24o40'14.8" N Latitude and 74o37'43.26" E to 74o38'48.56" E Longitude in Survey of India topo sheet No. 45L/9 & 45L/10, at an elevation of 438 to 445 MRL. The ground water table reported to ranges between 13.4-8.7 m bgl during the post-monsoon season and 36.4-44.1 m bgl during the pre-monsoon season. Based on the hydro-geological study, it has been reported the stage of groundwater development is reported to be 136 %. the area is designated as notified area.
- 7.19.9 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area report for corridor for Schedule-I fauna i.e Peacock, Leopard and Indian Wolf. The authenticated list of flora and fauna provided through the Chief Wildlife Warden reporting presence of Schedule-I fauna in the study area.
- 7.19.10 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process.
- 7.19.11 The targeted production capacity of the clinker from 9.5 MTPA to 13 MTPA, cement from 12 MTPA to 16 MTPA and waste heat recovery boiler power plant form 30 MW to 45 MW. The Limestone for the plant will be sourced from Captive mine and other raw materials would be procured by authorized suppliers. The limestone transportation from captive mines located adjoining the cement plant will be done through dumper and belt conveyor.
- 7.19.12 The water requirement of the expansion project is estimated as 980 m³/day out of which 845 m³/day will be fresh water and 135 m³/day will be recycled treated water from ETP/STP. Total water requirement of the project after expansion including existing plant is estimated as 5014 m³/day, out of which freshwater requirement is 4049 m³/day and recycled treated water from ETP/STP is 965 m³/day. Source of water will be ground water, mine pit water and Gambhiri dam. The permission for drawl of 2470 m³/day groundwater is obtained from CGWB vide Lr. No. 21-4(212)/WR/CGWA/2007-1570 dated 9th October 2015. The permission for drawl of 2434 m³/day (31.54 Mcft/year) water is obtained from Water Resources

Department, Rajasthan. Rainwater of 1329 m³/day is available from captive Limestone mine pit. Volume of rainwater in mine pit will further increase on year wise progressive excavation of mine pit.

- 7.19.13 The power requirement of the project is estimated as 157.60.MW, which will be sourced from captive thermal power plant (40+30=70 MW), WHRB ((9+9+12+15) = 45 MW)), Captive Solar Power Plant (2 MW), Captive Wind Power Plant (1.5x10=15 MW) and balance 25.6 MW from State Grid of AVVNL (Ajmer Vidyut Vitran Nigam Ltd.) & DG Set for Emergency.
- 7.19.14 Baseline Environmental Studies were conducted during Pre monsoon season i.e. from 1st March 2018 to 31st May 2018, Ambient air quality monitoring has been carried out at 12 locations during 1st March 2018 to 31st May 2018 and the data submitted indicated: PM₁₀ (32.2 µg/m³ to 74.7 µg/m³), PM_{2.5} (10.7 to 39.2 µg/m³), SO₂ (8.0 to 21.3 µg/m³) and NO_x (11.2. to 32.7 µg/m³). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.77 µg/m³ with respect to the PM₁₀, 0.00 µg/m³ with respect to the PM_{2.5}, 0.07 µg/m³ with respect to the SO₂, 0.90 µg/m³ with respect to the NO_x.
- 7.19.15 Ground water quality has been monitored in 12 locations in the study area and analysed. pH: 6.75 to 8.0., Total Hardness: 335 to 1080 mg/l, Chlorides: 42.54 to 889.6. mg/l, Fluoride: 0.4 to 1.1 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 3 locations. pH: 7.47.to 7.51; DO: 5.5 to 5.8 mg/l and BOD: <3.0mg/l. COD from <5.0 mg/l.
- 7.19.16 Noise levels are in the range of 45.6.to 70.7. dBA for daytime and 42.2.to 56.7 dBA for night time.
- 7.19.17 No R&R is involved.
- 7.19.18 It has been reported that a total of 3300 KL per annum of STP sludge will be generated due to the project, which will be used as manure in greenbelt. Greenbelt/plantation has been carried out in area of 71.197 ha(37 % of project area).
- 7.19.19 Consent to operate has been granted by Rajasthan Pollution Control Board for existing plant Line I and plant Line II vide letter no. 2016-2017/CPM/4768 dated 31-1-2017 with validity up to 31-1-2022 and letter no. 2018-2019/CPM/5341 dated 23-10-2018 with validity up to 31-8-2023 respectively. CTE of plant Line III was granted vide letter no. 2018-2019/CPM/5157 dated 12-4-2018 with validity up to 31-12-2022. Construction work of Cement Plant Line III has been completed and will be commissioned by 1st week of June 2019.
- 7.19.20 The Public hearing of the project was held on 14th February 2019 at 11.00 AM under the Chairmanship of Additional District Collector, Chittorgarh at public place near Surpur Balaji Temple, Village Rasulpura, Tehsil Nimbahera, District Chittorgarh, Rajasthan for expansion of production from clinker from 9.5 MTPA to 13 MTPA, cement from 12 MTPA to 16 MTPA and waste heat recovery boiler plant form 30 MW to 45 MW within Existing integrated cement plant premises. The issues raised during public hearing are employment for locals and CSR

activities, An amount of Rs 3.75 Crore has been earmarked for Enterprise Social Commitment based on public hearing issues.

- 7.19.21 The capital cost of the project is Rs1500 Crores and the capital cost for environmental protection measures is proposed as Rs150 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 10 Crores. The employment generation from the proposed project / expansion is 256 persons.
- 7.19.22 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:

- 7.19.23 The proposal is for expansion of existing cement plant from 12 MTPA to 16 MTPA. The water requirement for the existing project is being met from mines pit water and ground water. A wildlife conservation plan is in place for 10 years.

Recommendations of the Committee:

- 7.19.24 After detailed deliberations, the Committee recommended EC for the proposal with the following specific conditions.
- i. The PP shall meet the total water requirement of its plant from surface water resources, *i.e.*, water collected in mine pits and from Gambir Dam. The PP shall implement this condition within a period of 3 years. No ground water shall be abstracted by the PP after 3 years except for drinking water requirement.
 - ii. A supplementary Wildlife Conservation Plan shall be prepared and implemented for an additional period of 10 years, in consultation with the wildlife authorities.
 - iii. The CER activities shall be implemented by the PP within a period of 3 years utilizing the earmarked funds of Rs.7.75 crores.
- 7.20 Expansion of Sponge Iron plant to Mini Steel Plant for production of 67,500 TPA Rolled Product by installation of 2x12 Ton Induction Furnace with Billet Caster, Iron Ore Crushing & Beneficiation by **M/s. Maa Chhinmastika Cement & Ispat Pvt. Ltd.** located at Village Hehal, P.O. - Barkakhana, Dist.- Ramgarh, **Jharkhand** [Proposal No. IA/JH/IND/84413/2004, MoEFCC File No. J-11011/215/2016-IAII(I)] – **Reconsideration for grant of Environmental Clearance based on ADS reply – regarding.**

M/s. MAA Chhinmastika Cement and Ispat Private Limited has made an online application vide proposal no. IA/JH/IND/84413/2004 dated 10th January, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance 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 proposal is appraised at Central level.

Details submitted by the Project Proponent

- 7.20.2 The proposed expansion project of M/s. Maa Chhinnmastika Cement and Ispat Private Limited is located at Village: Hehal, P.O.: Barkakana, District: Ramgarh, Jharkhand initially applied in the Ministry on 09.06.2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry-1) during its 8th meeting held on 27th & 28th June 2016. Accordingly, the Ministry of Environment, Forest & Climate Change (MoEF&CC) had prescribed ToR to the project on 11.08.2016 vide Lr.No. J-11011/215/2016-IA.II(I).
- 7.20.3 The project of M/s. Maa Chhinnmastika Cement and Ispat Private Limited located in Village: Hehal, P.O.: Barkakana, District: Ramgarh, Jharkhand is for setting up of a new units; Steel Making Shop for production of 72000 TPA Billets, Rolling Mill for production of 67,500 TPA rolled products, Iron Ore Crushing & Beneficiation Plant of capacity 1,67,300 TPA throughput, Briquette Plant of capacity 27,000 TPA, Slag Crushing Plant for SMS Slag of capacity 12,000 TPA along with 15 MW Captive Power Plant. The existing project of DRI unit with for production of 90,000 TPA sponge iron through 3x100 TPD DRI Kiln was installed after getting NOC vide letter No. N-502 dated 16.09.2005 and subsequently CTO from JSPCB. The compliance of CTO was submitted to Jharkhand State Pollution Control Board (JSPCB), Ranchi. The proposed capacity for different products for site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity(TPA)
Existing Units			
Sponge Iron Unit	3 DRI Kilns	100 T	90,000
Proposed Units			
Steel Making Shop, Induction Furnaces and Billet Caster	2	12 T	72,000
Rolling Mill – TMT Rebar Mill	15 Stand Mill with Direct Hot Charging	225 T	67,500
Power Plant Waste Heat Boilers AFBC Boiler	3 1	3 x 2 MW 1 x 9 MW	15MW
Iron Ore Crushing & Beneficiation Plant	Single stream (throughput)	80 – 100 TPH	167,300
Briquette Plant	1	90 TPD	27,000
Slag Crushing Plant for SMS Slag	Single stream	5 TPH	12,000

- 7.20.4 No additional land shall be required for the project. The project shall be installed within existing plant area of 12.42 Ha. No forest land is involved. 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.
- 7.20.5 The topography of the area is Gently undulating and reported to lies between 23° 36' 57.25" to 23° 37'16.62" N Latitude and 85° 25' 30.31" to 85° 25' 52.79" E Longitude in Survey of India topo sheet 73 E/6 & 73 E/10 at an elevation of 260 m AMSL. The ground water table reported to ranges between 1.6 to 5.9 mbgl during the post-monsoon season and 2.25 to 11.19 mbgl during the pre-monsoon season.
- 7.20.6 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. List of flora & fauna issued by Ramgarh Forest Division mentions that there are no endangered flora and fauna or Schedule-I species in the region.
- 7.20.7 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process are given as below:

Basic Raw Material Used

Raw Material Used	Quantity in TPA	Source	Mode of Transport Dist. from plant
For the Existing Sponge Iron Plant			
Iron Ore	167,300	West Singhbhum, Jharkhand & Barbil, Odisha	Mode: Road, Rail Approx. – 300 km
Coal	144,000	Different Collieries of CCL	Mode: Road, Rail Approx. – 150 km
Dolomite	2300	Daltonganj, Jharkhand. Katni, M.P.	Mode: Road Daltonganj – 250 km Katni – 700 km
For the Proposed Project			
Non-coking Coal for Power Plant	45,000	Different Collieries of CCL	Mode: Road, Rail Approx. – 150 km

Process involved

Iron Ore Beneficiation, Briquette Plant, Sponge iron production through Coal based DRI Kiln (Existing), Billet Production through Induction Furnace & Billet Caster, Rolling of Billet in Rolling Mill for TMT Bar production and generation of 15 MW Power through 3 nos. of WHRB and 1 no. of AFBC Boiler.

Waste Generated in process(Unit - TPA)

Item	Generation	Utilization
------	------------	-------------

		Recycled / Reused	Sold
<i>Power Plant</i>			
Fly-Ash	18,000	-	18,000
Bottom Ash	7,000	--	7,000
Coal Fines	7,000	7,000	
<i>Steel Making Shop</i>			
Bag Filter Dust	2,200	2,200	--
Slag	13,200	1,320	11,880
Scale from Billet Caster	350	350	--
<i>Rolling Mill</i>			
Mill Scale	1,150	1,150	--
<i>Iron Ore beneficiation plant</i>			
Iron Ore fines	21,500	21,500	
Tailing waste (cake from Press Filter)	1,800	-	--
Total	72,200	33,520	36,880

- 7.20.8 The targeted saleable capacities of the TMT Bar, Billet and Sponge Iron will be 67,500 TPA, 1,500 TPA and 16,500 TPA respectively. The Iron ore for the plant would be procured from West Singhbhum, Barbil and other places of Jharkhand. The raw material transportation will be done through rail and road.
- 7.20.9 The water requirement of the project is estimated at 2080 m³ /day will be met from Damodar River. The permission for drawl of surface water is filed to Damodar Valley Reservoir Regulation Committee, Govt. of Jharkhand on 12.04.2017 and the same is yet to be obtained.
- 7.20.10 The power requirement of the project is estimated 15 MW out of which 13.5 MW will be obtained from the Captive power plant and remaining balance power of 1.5 MW will be sourced from the Power Grid.
- 7.20.11 Baseline Environmental Studies were conducted during Post Monsoon Season i.e. from 01.10.2016 to 31.12.2016. Ambient air quality monitoring has been carried out at 8 locations during study period indicates: PM₁₀ (45.20 to 96.40 µg/m³), PM_{2.5} (27.60 to 57.70 µg/m³), SO₂ (7.7 to 16.10 µg/m³) and NO_x (22.10 to 27.90 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 6.87 µg/m³ with respect to the PM₁₀, 22.96 µg/m³ with respect to SO₂ and 2.99 µg/m³ with respect to the NO_x.
- 7.20.12 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 7.27 to 8.04, Total Hardness: 187.05 to 328.78 mg/l, Chlorides: 64.16 to 139.26 mg/L, Fluoride: 0.88 to 1.32 mg/L. Heavy metals are within the limits. Surface water samples were analyzed from 2 locations. pH: 7.78 to 7.80, DO: 5.5 to 5.9 mg/l and BOD: 11.60 to 13.09 mg/l. COD from 48.73 to 50.10 mg/l.
- 7.20.13 Noise levels are in the range of 52.18 to 55.36 dB(A) for day time and 40.16 to 44.84dB(A) for night time.

- 7.20.14 It has been reported that there are no people in the core zone of the project has been displaced. No R&R is involved.
- 7.20.15 It has been reported that a total of approx. 72,200 TPA waste will be generated due to the project, out of which 33,520 TPA will be reused and 36,880 TPA remaining will be sold. It has been envisaged that an area of 4.36 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.
- 7.20.16 It has been reported that the latest Consent to Operate from the Jharkhand State Pollution Control Board was obtained vide Lr. No JSPCB/HO/RNC/CTO-2204067 /2018/958 dated 06.06.2018 and consent is valid up to 31.12.2022.
- 7.20.17 The Public hearing of the project was held on 30.01.2018 at Rajkiyakrit Utkramit Madya Vidyalaya Village-Hehal, Sub Division: Patratu, P.O.- Barkakana, District-Ramgarh Jharkhand under the chairmanship of Mrs. Jyotsana Singh (Director-DRDA Ramgarh, an ADM Rank officer) for the expansion proposal. The issues raised during public hearing and response of the project proponent with action plan are pollution, potable drinking water, employment etc. An amount of Rs 142 Lakhs (0.75% of Project cost) has been earmarked for CER based on public hearing issues.

S. No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Budget
	Mr Rustom Ansari, Mr. Mohd. Hakkim, Mr. Mannovar Aalam, Mr. Rajender badiya Village – Chaingada Mr. Prakash Giri, Mr. Ravinder Mundda, Mr Madeshvar	<ul style="list-style-type: none"> Pollution is affecting Crop, Cattles and near by habitation. The environmental control equipment are not in working condition for all time No CSR facility provided by Project proponent for social welfare development of the villagers. 	<ul style="list-style-type: none"> Company has already installed the 6 bag filter and 2 ESPs and for the propose project 1 ESP and 4 bag filter will be installed to control the pollution. The sensible heat of DRI gas will be used in WHRB boilers and waste dolochar will be used in AFBC Boiler which will help in reducing the pollution. Interlocking system with the pollution control facility shall be installed. Pollution control equipment shall be regularly maintained Plant shall be shut down when pollution control equipment is under maintenance 	18 month	Budget Allocation for Air Pollution Control Equipment: Capital Cost : Rs. 700 lakhs Recurring Cost: Rs. 78 Lakhs/year Rs. 50

MoM of 7th meeting of the Re-constituted EAC (Industry-I) held during 29-31st May, 2019

S. No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Budget
	Badiya, Mrs. Meena Devi, Mrs. Poonam Devi Mohd. Akhtar Ansari Mr. Balkeshwar singh Mr Yugal Kishor Mr. Rajeshwar Singh Mrs. Jatiley Devi, Mr Anwar Hussain Village – Hehal Mr Gangadar Badiya Village – Masmohna (Pere Panchyat) Mr. Nageshwar Mundda Village –	<ul style="list-style-type: none"> • Medical facilities will be provided to the local villagers under CER activities. • Community Health Check-up programs such as periodically medical check-up camps, blood donation camps and health awareness programs on child and mother care, health and hygiene practices shall be conducted. • Efforts will also made by the company's management to keep the local area clean to reduce the spread of diseases. • Company will provide the infrastructure development facilities, Medical facilities, Education facilities, under the CER activity. 	0.6-1 year	Lakhs	

S. No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Budget
	Dhurgi (Panchayat)				
	Mr. Giri shankar Mehtao Village - Chanigada	<ul style="list-style-type: none"> He asked for providing safe drinking due to pollution the Water is not potable 	<ul style="list-style-type: none"> Installation of Hand Pumps in Hehal, Chaingara, Masmohna, Durgi and Barakhana Villages Cost of Installation of Hand Pump- No. of 4 hand Pumps in each Village 50,000x4x5villages=Rs.10 lacs Rain Water Harvesting System in villages-Cost of the scheme- 50,000x2x5=about Rs 5 lacs Construction of Ponds in village - Estimated Cost- Rs 20 lacs 	1 year	Rs. 35.00 lakhs
	Mrs Bavita Devi, Mr. Vikram Malhaar, Mr. Bejnath Thakur, Village - Hehal	<ul style="list-style-type: none"> Employment for the local people 	<ul style="list-style-type: none"> Expansion project will be generating around 396 direct employments and many indirect employments for the villagers. Preferences will be given to villagers on the basic of their Qualification Vocational Training Center for Educated youth of Hehal & Chaingara villages Short term courses for skill up gradation for villagers Training centers for Ladies (stitching, Embroidery, tailoring 	1 year	Rs. 20.00 Lakhs

S. No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Budget
			etc.,)		

- 7.20.18 The capital cost of the project is Rs 161.42 crores (including 1.42 Crs. for CER) and the capital cost for environmental management is proposed as Rs 962 Lakhs. The annual recurring cost towards the environmental management is proposed as Rs 101.40 Lakhs/year. An amount of Rs 142 Lakhs (0.75% of Project cost) has been earmarked for CER based on public hearing issues and need based assessment. The employment generation from the proposed project/expansion is 396.
- 7.20.19 Greenbelt will be developed in 4.36 Ha which is about 35.1% of the total acquired area. A 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Out of 4.36 ha. area earmarked for greenbelt development, at present 5000 nos. of trees have already been planted in 2.24 ha. area. Additionally, 6000 trees shall be planted covering area more than 2.12 Ha.
- 7.20.20 It was informed by the project proponent during the meeting that while finalizing the EMP for the project, a Briquette Plant of capacity 27,000 TPA has been considered to utilize the Tailing waste generated from the Iron Ore Beneficiation Plant and to utilize other solid wastes. Accordingly, capacity of the Iron Ore Beneficiation Plant is reduced from 2,01,000 TPA throughput to 1,67,300 TPA.
- 7.20.21 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.20.22 Name of Environment Consultant – **M/s. Vardan Environet, Gurgaon** [S.No. 156, List of QCI Accredited Consultant Organizations (Alphabetically) Rev. 73, February 08, 2019].
- 7.20.23 The aforesaid proposal was considered in the 4th meeting of the Re-constituted EAC (Industry-I) held during 20-22nd February, 2019. After detailed deliberations, the Committee sought the following additional information for further re-consideration of the proposal.
- Annual production data for the last five years shall be submitted.
 - Update the flow sheet for iron ore beneficiation plant shall be submitted.
 - Details of quantity of raw materials and finished products to be transported through road and rail shall be submitted.
 - Particulate matter emissions from the process stacks shall be less than 30 mg/Nm³.
 - Confirmation that no reheating furnace shall be installed and no slime pond be provided.
 - No ground water shall be abstracted for the project.

- vii. Scheme for ground water recharge shall be submitted. The recharge can be done within the factory premises and outside the factory premises also.
- viii. AAQ modelling shall be redone along with the reasons for reporting high level $GLC_{max} 22.96 \mu g/m^3$ with respect to SO_2 shall be submitted.
- ix. Autocad layout plan with appropriate legends and scale shall be submitted.
- x. Scheme for 100% utilization of the solid waste inter-alia including slime management shall be submitted.
- xi. Water drawl permission from the Competent Authority for the existing and expansion project activity shall be submitted.
- xii. Authenticated English translation of public hearing proceedings shall be submitted as per point no. iii of generic ToR.
- xiii. Point wise issues raised during the public hearing in verbatim shall be prepared along with time bound action plan with fund allocation for the implementation of the issues raised in public hearing.
- xiv. Revised CER based on the issues raised in the public consultation and need based assessment.

7.20.24 Point wise reply to the aforesaid additional details were uploaded by the project proponent online on Parivesh web portal on 18th April, 2019. Brief summary of the same as presented during the meeting is given as below:

- i. Annual production data for the last five years shall be submitted.

Reply: Annual production data of the existing sponge iron unit for last five years (2013-14 to 2018-19) have been submitted and the production level varies between 48457 - 52749.250 TPA.

- ii. Update the flow sheet for iron ore beneficiation plant shall be submitted.

Reply: Updated flow sheet of Iron Ore Beneficiation plant has been submitted.

- iii. Details of quantity of raw materials and finished products to be transported through road and rail shall be submitted.

Reply: The details of the raw materials and product transportation is furnished as below:

S.No.	Raw Material	Quantity (TPA)	Source	Transport	
				Rail	Road
1	Iron Ore	167300	Kaliga Mining Corporation, Odisha Kamaljeet Singh Ahuwalia, Odisha Kay Pee Enterprise, Odisha Serajuddin & Company, Odisha Tarini Mineral Pvt. Ltd., Odisha	Odisha to railway siding of Barkakhana, Bhurkunda – approx. 350 km	Railway siding to plant site – 7 km

S.No.	Raw Material	Quantity (TPA)	Source	Transport	
				Rail	Road
			Indrani Patnaik, Odisha		
2	Coal (Central Coal fields Ltd.)	189000	Ashoka, Jharkhand Piparwar, Jharkhand Amrapali, Jharkhand Magadh, Jharkhand	--	Jharkhand to plant site -80 km
3	Dolomite	23000	Jai Maa Bhagabati Enterprise, Jharkhand	--	Jharkhand to plant site-60 km
4	Pig Iron / Scrap	14200	Electosteels Ltd, Bokaro, Jharkhand Atibir Industries Company Ltd., Giridih, Jharkhand Tata Steel, Jamshedpur	--	Jharkhand to plant site -150 km

Product transportation

S.No.	Place	Distance by road (In km)
1	Jharkhand	10 – 170
i.	Jamshedpur	170
ii.	Dhanbad	120
iii.	Bokaro	82
iv.	Giridih	161
2	Bihar - Patna	290
3	Chhattisgarh - Raipur	635
4	Rajasthan - Jaipur	1232
5	Punjab- Chandigarh	1469

- iv. Particulate matter emissions from the process stacks shall be less than 30 mg/Nm³.

- v. Confirmation that no reheating furnace shall be installed and no slime pond be provided.
- vi. No ground water shall be abstracted for the project.
Reply: Undertaking from project proponent in this regard has been submitted.
- vii. Scheme for ground water recharge shall be submitted. The recharge can be done within the factory premises and outside the factory premises also.
Reply: Rain Water Harvesting will be carried out through two recharge ponds and 11 RWH pits. It is anticipated that 1,45,266 m³ will be recharged annually. Scheme has been prepared and is approved by Ground water directorate, Jharkhand.
- viii. AAQ modelling shall be redone along with the reasons for reporting high level GLC_{max} 22.96 µg/m³ with respect to SO₂ shall be submitted.
Reply: AAQ modelling has been re-done using AERMOD model and the results are within the permissible NAAQS.
- ix. Autocad layout plan with appropriate legends and scale shall be submitted.
Reply: Revised Layout plan indicating appropriate legends and scale has been submitted.
- x. Scheme for 100% utilization of the solid waste inter-alia including slime management shall be submitted.
Reply: The scheme for 100 % utilization of solid waste is given as below:

Item	Generation	Utilization		Remarks
		Recycled / Reused	Sold	
<i>Sponge Iron Plant (Existing)</i>				
Iron Ore Dust	1,800	1,800	--	Will be utilized in the proposed Briquette Plant for Briquette making.
Dolo-char	22,000	22,000	-	Will be used as fuel in proposed AFBC Boiler
<i>Captive Power Plant (Proposed)</i>				
Fly-Ash	18,000	-	18,000	Will be given to Cement Plants and Fly ash Bricks making units.
Bottom Ash	7,000	--	7,000	Will be given free of cost to nearby Brick Kilns for use in Kiln as fuel
Coal Fines	7,000	7,000		Will be used in the proposed AFBC Boiler / DRI Kiln.
<i>Steel Making Shop (Proposed)</i>				
Bag Filter Dust	2,200	2,200	--	Will be utilized in the proposed Briquette Plant for Briquette making.
Slag	13,200	1,320	11,880	Approx. 10 % slag will be recycled after metal recovery and remaining slag shall be crushed and used as aggregates as

				construction materials.
Scale from Billet Caster	350	350	--	Will be utilized in the proposed Briquette Plant for Briquette making.
Rolling Mill (Proposed)				
Mill Scale	1,150	1,150	--	Will be utilized in the proposed Briquette Plant for Briquette making.
Iron Ore beneficiation plant (Proposed)				
Iron Ore fines from dewatering screen	20,000	20,000		Will be Utilized in proposed briquette Plant
Tailing waste (Cake from Press Filter)	1,800	-	--	Cake from Filter Press will be disposed-off in landfill
Bag Filter dust	1,500	1,500	-	Will be Utilised in the proposed briquette Plant
Total	96,000	59,520	34,680	Recycle/Reuse – 59.7% Sold / Given to other Units – 38.4% Dumped – 1.9%

- xi. Water drawl permission from the Competent Authority for the existing and expansion project activity shall be submitted.
Reply: Central Water Commission, DVRR Unit vide their letter dated 16.03.19 granted concurrence for drawl of 0.51 MGD water per year from Damodar River at Changarha, Barkakhana, Ramgarh.
- xii. Authenticated English translation of public hearing proceedings shall be submitted as per point no. iii of generic ToR.
Reply: Central Water Commission, DVRR Unit vide their letter dated 16.03.19 granted concurrence for drawl of 0.51 MGD water per year from Damodar River at Changarha, Barkakhana, Ramgarh.
- xiii. Point wise issues raised during the public hearing in verbatim shall be prepared along with time bound action plan with fund allocation for the implementation of the issues raised in public hearing.

No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Budget
1	Mr Rustom Ansari, Mr. Mohd. Hakkim, Mr. Mannovar	<ul style="list-style-type: none"> Pollution is affecting Crop, Cattles and nearby habitation. The 	<ul style="list-style-type: none"> Company has already installed the 6 nos. of bag filter and 2 ESPs. For the propose expansion additionally 1 ESP and 4 bag filter systems will be 	18 month	Budget Allocation for Air Pollution Control

No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Budget
	Aalam, Mr. Rajender badiya Village – Chaingada Mr. Prakash Giri, Mr. Ravinder Mundda, Mr. Madeshvar Badiya, Mrs. Meena Devi, Mrs. Poonam Devi Mohd. Akhtar Ansari Mr. Balkeshwar singh Mr Yugal Kishor Mr. Rajeshwar Singh Mrs. Jatiley Devi, Mr Anwar Hussain Village – Hehal Mr Gangadar Badiya Village – Masmohna (Pere	environmental control equipment are not in working condition all the time • No CSR activities by Project proponent for social welfare development of the villagers.	installed to control the pollution. • The sensible heat of DRI gas will be used in WHRB boilers and waste dolo-char will be used in AFBC Boiler which will help in reducing the pollution. • Interlocking system with the pollution control facility shall be installed. • Pollution control equipment shall be regularly maintained • Plant shall be shut down when pollution control equipment is down or under maintenance • Medical facilities will be provided to the local villagers under CER activities. • Community Health Check-up programs such as periodically medical check-up camps, blood donation camps and health awareness programs on child and mother care, health and hygiene practices shall be conducted under CSR. • Efforts will also made by the company's management to keep the local area clean to reduce the spread of diseases. • Company will provide the infrastructure facilities, Medical facilities like; Education facilities, under the CER activity.	0.6-1 year	Equipment: Capital Cost : Rs. 700 lakhs Recurring Cost: Rs. 78 Lakhs/year Rs. 50 Lakhs

No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Budget
	Panchyat) Mr. Nageshwar Mundda Village – Dhurgi (Panchayat)				
2	Mr. Giri shankar Mehtao Village - Chanigada	<ul style="list-style-type: none"> • He asked for providing safe drinking water. Water is not potable due to pollution. 	<ul style="list-style-type: none"> • Installation of Hand Pumps in Hehal, Chaingara, Masmohna, Durgi and Barakhana Villages • Cost of Installation of Hand Pump- No. of 4 hand Pumps in each Village 50,000x4x5villages=Rs.10 lacs • Rain Water Harvesting System in villages-Cost of the scheme- 50,000x2x5=about Rs 5 lacs • Construction of Ponds in village - Estimated Cost- Rs 20 lacs 	1 year	Rs. 35.00 lakhs
3	Mrs Babita Devi, Mr. Vikram Malhaar, Mr. Bejnath Thakur, Village - Hehal	<ul style="list-style-type: none"> • Employment for the local people 	<ul style="list-style-type: none"> • Expansion project will be generating around 396 direct employments and many indirect employments for the villagers. • Preferences will be given to villagers on the basic of their Qualification • Vocational Training Center for youth of Hehal & Chaingara villages • Short term courses for skill up gradation for villagers • Training centers for women (stitching, Embroidery, tailoring etc.) 	1 year	Rs. 20.00 Lakhs

- xiv. Revised CER based on the issues raised in the public consultation and need based assessment.

Sl. No.	Area of Concern	Name of the Village Represented in PH / SIA	Action Plan	Budget Allocated (in Lakhs)	Time Frame for Implementation from the date of EC
1	Drinking Water	Hehal Chaingara Masmohna Durgi Barkakana	Installation of 4 nos. of Hand Pumps in each of Hehal, Chaingara, Masmohna, Durgi and Barkakana Villages = Rs.10 lacs Installation of Rain Water Harvesting in 5 villages = Rs 5 lacs. Construction of Ponds in 5 villages - Estimated Cost- Rs 20 lacs	35	1 year
2	Health Care	Hehal Chaingara Masmohna Durgi Barkhakhana	Ambulance 24x7 for 5 villages = (20 Lakhs + Misc. 2 lacs) = 22 lacs Up gradation of local PHC (Chaingara PHC and Hehal PHS) by providing equipment and development in infrastructure - 8 lacs	30	3-6months
3	Educational Development	Hehal Chaingara Masmohna Durgi Barkakana Bhurkunda	Construction of Toilets in the following Schools (Rs. 50,000 x 6 Schools + Misc. 1 Lakhs = 4 Lakhs): Primary School Hehal Government Primary School, Masmohna Girls Middle School, Bhurkunda Government School, Barkakana Primary school, Durgi School, Chaingara Sponsoring Computers in Schools of 5 villages = 4 lacs Installation of Water coolers in 6 Schools = 4 lacs Infrastructure (Table, Chair etc.) + educational aids in Schools = 3 lacs	15	1 - 1.5 years

Sl. No.	Area of Concern	Name of the Village Represented in PH / SIA	Action Plan	Budget Allocated (in Lakhs)	Time Frame for Implementation from the date of EC
4	Infrastructure Facility	Hehal Chaingara Masmohna Durgi Barkakana Bhurkunda	Construction of approach road from Hehal Village to the Plant = 14 lakhs	20	1-2year
			Installation of Street Lights in 4 Villages = 6 lacs Construction of Nallas for proper drainage in Hehal, Chaingara and Barkakana villages = 15 Lacs	15	1 year
5.	Employment Opportunity	Hehal Chaingara	Vocational Training Center for Educated youth of villages Short term courses for skill up gradation for villagers	20	1 year
6.	Community Development & Support	Hehal Chaingara Durgi	Distribution of fruit bearing seedlings to the villagers of Hehal village	10	3-6 months
Total				145	

Observations of the Committee: -

7.20.25 The committee noted that additional information furnished by the project proponent is satisfactory and adequate.

Recommendations of the Committee: -

7.20.26 After detailed deliberations, the Committee recommended for environmental clearance under the provisions of EIA Notification, 2006 for the project cited above subject to following specific and general conditions:

A. Specific conditions

- i. Particulate matter in the Stack emissions shall not exceed 30mg /Nm³.
- ii. Water for its plant operations shall be sourced by the project proponent from Damodar River, and no ground water shall be abstracted by them.
- iii. Project proponent shall undertake rain water harvesting and recharge, and the quantum of water so channelized shall be more than the water consumption in the project area.
- iv. The CER activities shall be implemented within a period of 3 years utilizing the earmarked funds of Rs.1.45 crores.

B. General conditions

I. Statutory compliance:

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015(Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. The project proponent shall install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.
- vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.

- vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- viii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- ix. The project proponent shall use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- x. The project proponent shall provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.
- xi. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- xii. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. Adhere to 'Zero Liquid Discharge'.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.

- vii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- viii. The projectproponent shall practice rainwater harvesting to maximum possible extent.
- ix. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

- i. The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.
- ii. Practice hot charging of slabs and billets/blooms as far as possible.
- iii. Ensure installation of regenerative type burners on all reheating furnaces.
- iv. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- v. Provide the project proponent for LED lights in their offices and residential areas.

VI. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces
- iii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- iv. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

VII. Green Belt

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

IX. Corporate Environment Responsibility

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

competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

- v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the plants shall be implemented.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
 - i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

- ii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- viii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- ix. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- x. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xi. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

7.21 Environmental clearance for expansion of Ferro Alloys unit with 5x9 MVA submerged electric arc furnaces (SiMn- 84,474 TPA, FeMn - 1,03,958 TPA) and Captive Power Plant of 62 MW (including existing 12 MW power plant) by **M/s.MSP Sponge Iron Ltd.** at Village Manuapalli, Tehsil & district - Raigarh, **Chhattisgarh**. [Proposal No. IA/CG/IND/89345/2018, MoEFCC File No. J-11011/178/2010-IA.II(I)] – **Reconsideration for grant of Environmental Clearance under para7 (ii) of EIA Notification - regarding.**

The project proponent vide their e-mail dated 29/05/2019 expressed their inability to attend the meeting on 30/05/2019 and requested to consider the proposal in forthcoming EAC meeting. The Committee agreeing to the request of the project proponent, recommended to consider the proposal in the forthcoming EAC meeting.

- 7.22 Proposed Expansion from 0.6 MTPA Non-Recovery Coke Oven Plant with 40 MW Power Plant to 1.0 MTPA Integrated Steel Plant, 1.2 MTPA Non-Recovery Coke Oven Plant with 205 MW Power Plant by **M/s. Bengal Energy Limited** located at Dauka, Tentulmuri, District Mednipur, West Bengal [Proposal No. IA/WB/IND/98718/2017, MoEF&CC File No. J-11011/28/2008-IA-II(I)] – **Reconsideration for grant of Environmental Clearance based on ADS reply – regarding.**

M/s. Bengal Energy Limited has made an online application vide proposal no. IA/WB/IND/98718/2017 dated 9th March, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance 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 proposal is appraised at Central level.

Details submitted by the Project Proponent:

- 7.22.2 The expansion project of M/s. Bengal Energy Limited located at Dauka, P.O-Tentulmuri, PS-Naraingarh, in Paschim Medinipur district of West Bengal. was initially received in the Ministry on 15.05.2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] in their 19th meeting held 8th-9th June 2017 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 21.06.2017 vide Lr. No. J-11011/28/2008-IA-II (I)].
- 7.22.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry on 15.03.2019 vide Online Application No. IA/WB/IND/98718/2017.
- 7.22.4 The project of M/s Bengal Energy Ltd located at-Dauka, P.O-Tentulmuri, PS-Naraingarh, in Paschim Medinipur district of West Bengal is for expansion from 0.6 MTPA Non-Recovery Coke Oven and 40 MW power plant to 1.0 MTPA Integrated Steel Plant, 1.2 MTPA Non-Recovery Coke Oven and 205 MW power plant. Existing project was accorded environmental clearance vide Lr.no J-11011/28/2008-IA II (I) dated 2nd January 2009. The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide Lr. No.102-279/EPE/438, dated 28.11.2018, in which minor non-compliances were pointed out for immediate action. Subsequently, project proponent submitted action taken report and received closure report on 06.03.2019. The proposed capacity for different products for new site area as below:

Facility	Existing Configuration	Existing capacity in TPA	Proposed configuration	Proposed capacity in TPA	Final capacity In TPA	Product	End use
Non-Recovery CO Plant	1x0.6 MTPA	6,00,000	1x0.6 MTPA	6,00,000	12,00,000	Lam Coke	MBF
CPP(Coke Oven gas)	1x40 MW	40 MW	1x40 MW	40 MW	80 MW	Elec. Power	Internal use/Sale
DRI Kiln	-	Nil	4x500 TPD	6,40,000	10,88,000	Sponge Iron	EAF & IF
			4x350 TPD	4,48,000			

Facility	Existing Configuration	Existing capacity in TPA	Proposed configuration	Proposed capacity in TPA	Final capacity In TPA	Product	End use
CPP (DRI)	-	Nil	68 MW		68 MW	Elec. Power	Internal use/Sale
MBF, 2.7T/m ³ day	-	Nil	2x320m ³	5,96,000	5,96,000	Hot Metal	EBF & IF
Sinter Plant 1x60m ² 2T/m ² .hr, 340days	-	Nil	1x60m ²	10,00,000	10,00,000	Sinter	MBF
EBF with LF, 16H/day, 325days	-	Nil	2x80T	8,32,000	8,32,000	Liq. Steel	LF
LF	-	Nil	1x25T			Holding Liq. steel	CCM
C C M	-	Nil	2,500 TPD	8,15,000	8,15,000	Steel Billet	Sale
IF 15H/day, 325 days	-	Nil	3x20T	2,92,500	2,92,500	Liq. Steel	CCM
C C M	-	Nil	1,000 TPD	2,80,000	2,80,000	Steel Billet	Sale
CPP (BF gas fired)	-	Nil	1x22 MW	22 MW	22 MW	Elec. Power	Internal use/Sale
AFBC	-	Nil	1x35 MW	35 MW	35 MW	Elec. Power	Internal use/Sale
A S U	-	Nil	120 TPD	1,200 m ³ /hr	1,200 m ³ /hr	Oxygen Nitrogen	Use in MBF & EBF

7.22.5 The total land required for the project is 161.87 ha industrial land. 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.

7.22.6 The topography of the area is flat and reported to lies between to 22° 14' 25.92'' N to 22° 15' 27.68'' N Latitude and 87° 22' 53.37'' E to 87° 23' 34.69'' E Longitude in Survey of India topo sheet No. F45 J8 at an elevation of 32m AMSL. The ground water table reported to ranges between 1.85m to 3.90m below the land surface during the post-monsoon season and 4.29m to 8m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 75m. Further, the stage of groundwater development is reported to be 50.25% for both core and buffer zone and thereby these are designated as safe areas.

7.22.7 Project area does not fall in any national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. or the core and buffer zone thereof. The area also is not reported to form part of corridors for Schedule-I fauna.

- 7.22.8 Imported coking coal will be used to make LAM coke in 1.2 MTPA non-recovery coke oven for use in MBF. Dry quenching of coke by Nitrogen will prevent water pollution and waste heat recovered will produce steam for generation of about 8MW power. Waste heat recovery of coke oven gas will generate 80MW power. Using iron ore fines and dust of lime stone, dolomite, IF/EAF flue dust, BF dust & sludge as well as coke dust iron ore agglomerate sinter will be produced, which will be used along with lumpy iron ore, Oxygen & coke in MBF to produce 0.596 MPTA hot metal, part of which will be casted to pig iron and both these products will be utilized in EAF & IF. Top pressure recovery Turbine will generate 2.5 MW power.
- 7.22.9 Sponge Iron will be manufactured in 4x500 TPD & 4x350 TPD DRI kilns and used in 3x20T IF & 2x80T EAF with LF along with hot metal/Pig iron to produce liquid steel, which will be casted in CCM and thus 1.0 MTPA steel billets will be manufactured for sale. AFBC boiler will be set up to generate 35 MW power fully utilising dolchar generated from DRI kilns with fresh coal support. This generation will be reduced to 24.5 MW as and when power is generated from Coke Dry Quenching & TRT of MBFs.
- 7.22.10 EAF & IF slags after iron recovery will be used as construction material for road construction and filling of low lying land. Granulated Blast Furnace slag and Power plant Fly & bottom ash will be sold to Cement plants. DRI dust to be dumped in abandoned coal mines with due permission, to be used in filling low lying land.
- 7.22.11 An Air separation unit will be set up to produce Oxygen & Nitrogen by liquefaction of air and fractional distillation. Both will be utilized in process.
- 7.22.12 The targeted production capacity of the project is 1.0 MTPA Steel billet. The Iron ore for the plant would be procured from Banspani mines of Barbil Odisha and Coking coal to be imported from Canada through Dhamra port, non-coking coal from Talcher coal mines of Odisha and Dolomite from Katni. The ore transportation will be done through Rail & Road through Environment compatible vehicle and fully covered.
- 7.22.13 The fresh water requirement of the project is estimated as 13,165 m³ /day, the required water will be drawn from Kangsabati river. The permission for drawl of 600m³ /hour has been taken from Irrigation & water ways Department, Govt. of WB as per recommendation of WBIDC, vide Lr. No-17/1-4 m-26(06)Pt, dated 23/03/2010.
- 7.22.14 The power requirement of the project is estimated as 153 MW, and captive generation will be 205 MW, hence balance power will be sold.
- 7.22.15 Baseline Environmental Studies were conducted during Post-Monsoon season i.e. from 1st November, 2017 to 31st January 2018., Ambient air quality monitoring has been carried out at 8 locations during 01.11.2017 to 31.01.2018, and the data submitted indicated: PM₁₀ (61.9 µg /m³ to 92.3 µg/m³), PM_{2.5} (27.2 to 43.5 µg/m³), SO₂ (6.1 to 9.6 µg/m³) and NO_x (10.5 µg/m³ to 18.9 µg/m³),CO 342-473 µg/m³. The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 2.53 µg/m³ with respect to the PM₁₀, 1.49 µg/m³ with respect to PM_{2.5}, 34.11 µg/m³ with respect to the SO₂ and 44.65 µg/m³ with respect to the NO_x.
- 7.22.16 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH:7.1 to 7.5, Total Hardness 88 to 116 mg/l, Chlorides: 26.4 to 36 mg/l, Fluoride:0.08

to 0.32 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 7.23 to 7.64; DO: 4.8 to 6.8 mg/l and BOD: 5.0 to 8.8mg/l & COD 18-32 mg/l.

- 7.22.17 Noise levels are in the range of 43.6 to 49.6 dBA for day time and 30.2 to 49.3dBA for night time.
- 7.22.18 It has been reported that there are no settlement in the core zone of the project. No R&R is involved.
- 7.22.19 It has been reported that a total of 29,66,830 TPA of solid waste will be generated due to the project, out of which 2,72,000 TPA dolchar will be used in Power Plant for generation of power, 3,17,670 TPA will be consumed in Sinter plant and 4,36,010 TPA will be supplied/sold to cement plant, 1,20,000 TPA will be used as construction material and balance 18,21,150 TPA DRI ash & dust will be dumped in abandoned mines with due permission from authority. It has been envisaged that an area of 6.22ha 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.
- 7.22.20 It has been reported that the Consent to Operate from the West Bengal. State Pollution Control Board has been renewed vide Memo. N0-5899-2359/WPB (HRO).K/2009, dtd. 05.05.2017 up to 31.3.2022.
- 7.22.21 The Public hearing of the project was held on 15.05.2018 at Dauka, under the chairmanship of Sri S.K.Mina, IAS, Addl.District Magistrate (G) DLLRO, Paschim Medinapur for expansion of 0.6 MTPA Non-Recovery Coke oven and 40 MW power plant to 1.0MTPA Integrated steel, 1.2 MTPA Non-Recovery Coke-Oven & 205 MW power plant. Points raised in hearing by public and reply & commitment of Sri Navin Maheshwari, Director of M/s BEL, who represented the management have been given below.

S.N	Name of Participant	Issues raised by Participants	Commitment of P P
1	Sri Sarat Pramanik, Tentulumuri	Source of water for the plant and concern on pollution due to expansion	Water requirement will be met from nearby river for which the company has requisite permission. Pollution control norms of statutory authorities will be followed & proper control measures will be taken for abatement of pollution. Green belt will be further strengthened.
2	Sri Subod Dey, Khorigaria Sri Sukumar Das, Khorigaria	Concern on pollution due to expansion, its control so as to provide a better environment for local village.	Pollution control norms of statutory authorities will be followed & proper control measures will be taken for abatement of pollution. Green belt will be further strengthened.
3	Sri Mantu Behari Patra	Enquired about development of the area	CSR activities are being carried out regularly and will also continue on

S.N	Name of Participant	Issues raised by Participants	Commitment of P P
		due to expansion	regular basis.
4	Sri Anil Singh, Banspukuria Sri Dipak Pal, Tentulmuri	Employment provision for local people and their safety aspects.	The issue will be addressed.
5	Sri Badal Patra, Tentulmuri	Requested the proponent to assist local people for health protection and provide food like gur and channa to the labours.	The issue will be addressed.
6	Sri Durgapada Das, Khorigaria Sri Dhananjoy Bhuiya, Khorigaria Sri Bhadreswar Singh, Nangunia	Provision of training programs for skill development to local and employment opportunities.	The issue will be addressed.
7	Sri Sujit Khara, Malka	Concern about control of pollution and employment opportunities for locals.	Pollution control norms of statutory authorities will be followed & proper control measures will be taken for abatement of pollution. Green belt will be further strengthened.

7.22.22 An amount of Rs. 1810.00 lakhs of the project cost have been earmarked to be spent towards the sustainability of project as well benefit of the public as per issues raised during public hearing and SIA study of the project area. Fund allocation and time of completion are as given below.

S.No.	Item	Description	Ist Yr (lacs)	2nd Yr (lacs)	3rd Yr (lacs)	Total
1	Refreshers course to technical persons, on advanced industrial training and practical exposure to industries, like process, safety, disaster etc.	Rent Establishment + Training Material + Stipend+ faculty	60	60	60	180

S.No.	Item	Description		Ist Yr (lacs)	2nd Yr (lacs)	3rd Yr (lacs)	Total
2	Development of water shed and renovation of water bodies in Banspukuria, Tentulmuri villages	12 Nos of New & Existing water bodies @ 4 Nos/Yr. @ Rs 400000	Digging, Paving, de-siltation & removal of Aquatic weeds	16	16	16	48
3	Construction of village community center and its renovation	3500000/ Village	3 Villages with community hall, recreational and study centers	35	35	35	105
4	Strengthening of approach roads	Proposing 4 km CC Approach & Village Roads	Rs 1200000./Km for widening & strengthening	48	48	48	144
5	Adoptation of primary schools and Anganwadi Centres	3 Schools & 3 Anganwadi centres	Renovation of the school building, construction of toilets, provide bench & desk	25	25	25	75
6	Technical and Infrastructural aid to farmers.	Providing deep irrigation points with electricity, supply of high yield seeds, fertilizer to poor farmers. The villages will be decided in consultation with local administration.		35	30	65	130
7	Promote artisans	Hand loom and Dhokra metal casting are famous cottage industries of the area are in ruined condition to be resumed with modernisation		15	22	18	55
8	Swatch Bharat Mission	Providing Tractors, Back Hoe cum toploader, dust bins and development of the dump yard		300	300	225	825

S.No.	Item	Description	Ist Yr (lacs)	2nd Yr (lacs)	3rd Yr (lacs)	Total
9	Energy efficient street light	Electrification of the village with energy efficient LED bulbs.	77	78	76	231
10	Plantation and distribution of saplings in and around the villages	Adoptation of 5 villages for plantation and distribution of saplings	5.4	7.2	4.4	17
11	Total expenditure		1810			

7.22.23 The capital cost of the project is Rs.4943 Crores and the company will invest 155 Crore (about 4 % of total project cost) as capital investment towards implementation of Environmental Management Plan. The Annual recurring cost will be about 18 crore details are as follows.

Category	Capital Cost (INR Cr)	Recurring Cost (INR Cr)
Air pollution Equipments	111.65	8
Water Pollution Control Machinery & Construction	28	3
Rainwater Harvesting	2.5	0.8
Occupational Health	1.5	1
Green Belt Development	0.10	0.03
Environmental Monitoring	1.1	0.5
Solid Waste management	3.2	1.5
Safety & Disaster Management	5.3	2.5
EMS & Capacity Development	1.75	1
Total	155.1	18.33

7.22.24 Greenbelt has already been developed in 56 Ha of land which is about 34.5% of the total acquired area. A wide greenbelt, consisting of at least 3 tiers around plant boundary would be developed.

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

7.22.26 Name of the consultant: GLOBALTECH Enviro Experts Pvt. Ltd. [S.No. 77, List of Accredited Consultant Organizations (Alphabetically) Rev. 74, March 07, 2019].

7.22.27 The aforesaid proposal was considered in the 5th meeting of the Re-constituted EAC (Industry-I) held during 27-29th March, 2019. After detailed deliberations, the Committee sought the following additional information for further re-consideration of the proposal.

- i. Dedicated environment management cell shall be established at the plant site and details shall be submitted.
- ii. Revised Corporate Environment Policy inter-alia including reporting mechanism for non-compliances/deviations/emergencies shall be submitted.
- iii. Scheme for emission control by way of waste heat recovery boiler to meet the statutory norms shall be submitted.
- iv. Confirmation regarding provision of fourth hole extraction system and waste heat recovery system in the Electric Arc Furnaces shall be furnished.
- v. Present level of emissions from existing coke oven batteries as prescribed in G.S.R.No. 277(E) dated 31/03/2012 shall be submitted.
- vi. The Air quality modelling data needs to be reviewed to assess the worst case scenario and provide control measures required to address such occurrences.
- vii. Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be submitted by the project proponent.

7.22.28 Point wise reply to the aforesaid additional details were uploaded by the project proponent online on Parivesh web portal. Brief summary of the same as presented during the meeting is given below:

- i. Dedicated environment management cell shall be established at the plant site and details shall be submitted.
Reply: Details regarding dedicated environment management cell has been submitted.
- ii. Revised Corporate Environment Policy inter-alia including reporting mechanism for non-compliances/deviations/emergencies shall be submitted.
Reply: Revised Corporate Environment Policy has been submitted.
- iii. Scheme for emission control by way of waste heat recovery boiler to meet the statutory norms shall be submitted.

Reply: As per the document submitted, 40 MW power is being generated from the coke oven off gas. From 4x500 TPD DRI kiln, flue gas at about 1050⁰C will pass through four nos. of WHRB to produce about 40 MW power. The flue gas temp. after WHRB will reduce to about 120⁰C there by control heat emission to atmosphere. From 4x350 TPD DRI kiln, flue gas at about 1050⁰C will pass through two nos. of WHRB to produce about 28MW power. The flue gas temp. after WHRB will reduce to about 120⁰C there by control heat emission to atmosphere.

- iv. Confirmation regarding provision of fourth hole extraction system and waste heat recovery system in the Electric Arc Furnaces shall be furnished.
Reply: The project proponent assured to provide fourth hole extraction system and waste heat recovery system in the Electric Arc Furnaces.

- v. Present level of emissions from existing coke oven batteries as prescribed in G.S.R.No. 277(E) dated 31/03/2012 shall be submitted.

Reply: The emissions from the existing coke oven batteries is furnished as below:

Emission from	Standards in GSR No. 277 (E) dt.31.03.2012 for batteries	Present level of emission from existing Coke Oven Batteries of M/s BEL
leakage from door	10 (PLD)*	0
leakage from charging lids	1(PLL)**	0
leakage from any Covers	4(PLO)***	0
Charging emission	75	16
SO ₂ (mg/Nm ³)	800	79.98-97.58
NOx (mg/Nm ³)	500	78.51-87.95
Particulate matter (mg/Nm ³)	50	26-33

- vi. The Air quality modelling data needs to be reviewed to assess the worst case scenario and provide control measures required to address such occurrences.

Reply: The AAQ modeling has been redone and the results are furnished as below:

	GLC for worst case APCs fail(in µg/m³)	GLC with APC (in µg/m³)
PM ₁₀	97.15	5.33
PM _{2.5}	73.51	3.88
SOx	35.01	10.90
NOx	6.44	6.44

- vii. Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be submitted by the project proponent.

Reply: The details of the raw materials transportation is given as below:

Material	Gross Capacity in TPA	Source	Mode of Transport
Coking Coal	16,80,000	Imported from Australia	Rail from port to railway siding inside factory.
Non-Coking Coal	17,96,780	Imported from Australia	
Iron Ore	19,98,800	Barbil, Banspani	Rail from mine end to

Material	Gross Capacity in TPA	Source	Mode of Transport
			siding
Iron Ore fines	7,68,000	Barbil, Banspani	Rail to siding inside
Dolomite	1,36,000	Biramitrapur	Rail/Road
Lime stone	1,39,000	Biramitrapur	Rail/Road

The details of the product transportation are given as below:

Material	Gross Capacity in TPA	Mode of Transport
Lam Coke	12,00,000	Rail
Steel Billets	1,09,5000	Rail & Road

- Full quantity of Metallurgical coal and Thermal shall be imported from Australia.
- Presently, these raw materials are being unloaded at Paradeep Port / Haldia port and from port, project proponent takes the services of Indian Railway to their plant.
- Arrangement of wagon tripper for proper loading & unloading of raw materials and product to export.
- Material transported through road will be through environmental compatible vehicles only.
- Material transported through rail or road to be fully covered to avoid spillage.

Observations of the Committee: -

7.22.29 The committee noted that additional information furnished by the project proponent is satisfactory and adequate. The Committee also noted the submission of the Project Proponent that installation of CDQ was not possible for the combined capacity of 1.2 MTPA of the coke plant, as the existing coke oven plant (0.6 MTPA) was in operation. CDQ can be retro fitted only during rebuilding of the battery. PP also mentioned the fact that proven technology for CDQ for capacities below 0.8 MTPA was not available at present.

Recommendations of the Committee: -

7.22.30 After detailed deliberations, the Committee recommended for environmental clearance under the provisions of EIA Notification, 2006 for the project cited above subject to following specific and general conditions:

A. Specific conditions

- The proposed 0.6 MTPA coke oven battery shall be designed with modified wet quenching tower with the provision for retrofit for CDQ whenever appropriate technology becomes available.

- ii. No groundwater shall be abstracted by the project proponent except for drinking purposes.

B. General conditions

I. Statutory compliance:

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012(Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants)as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions.
- iv. The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.
- v. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- vi. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and

manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

- vii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- viii. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- ix. Secondary emission control system shall be provided at SMS Converters.
- x. Pollution control system in the steel plant shall be provided as per the CREP Guidelines of CPCB.
- xi. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- xii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- xiii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- xiv. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).
- xv. Land-based APC system shall be installed to control coke pushing emissions.
- xvi. Monitor CO, HC and O₂ in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.
- xvii. Vapour absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
- xviii. In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NO_x control facility shall be provided to meet the prescribed standards.
- xix. The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.
- xx. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xxi. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.
- xxii. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.
- xxiii. Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;
- v. Adhere to 'Zero Liquid Discharge'
- vi. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- viii. Tyre washing facilities shall be provided at the entrance of the plant gates.
- ix. CO₂ injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.
- x. The project proponent shall practice rainwater harvesting to maximum possible extent.
- xi. Treated water from ETP of COBP shall not be used for coke quenching.
- xii. Water meters shall be provided at the inlet to all unit processes in the steel plants.
- xiii. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

- i. The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.
- ii. Coke Dry Quenching (CDQ) shall be provided for coke quenching for both recovery and non-recovery type coke ovens;
- iii. Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.
- iv. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
- v. Use hot charging of slabs and billets/blooms as far as possible.
- vi. Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.
- vii. Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.
- viii. Restrict Gas flaring to < 1%.
- ix. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- x. Provide LED lights in their offices and residential areas.
- xi. Ensure installation of regenerative type burners on all reheating furnaces.

VI. Waste management

- i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.
- ii. In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery.
- iii. Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery type coke ovens).
- iv. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
- v. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.
- vi. Used refractories shall be recycled as far as possible.
- vii. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall

install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.

- viii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- ix. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
- x. The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens

VII. Green Belt

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms /

conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.

X. Miscellaneous

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

- under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
 - viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
 - ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
 - x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
 - xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 - xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
 - xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
 - xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
 - xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

7.23 Expansion of Sponge Iron Plant (from 1,20,000 TPA to 1,38,000 TPA), Rolling mill (90,000 TPA), Iron Ore crushing & Beneficiation plant (2,70,000 TPA), Slag Crushing plant (16,200 TPA) and Captive Power plant (4x2 MW WHRB; 1x10 AFBC) **by M/s Alope Steels Industries Private Limited** located at Village Budhakhap, P.O - Karma,

Dist. - Ramgrah, **Jharkhand** [Online Proposal No. IA/JH/IND/53261/2016; MoEFCC File No. J-11011/205/2016-IA-II] – **Reconsideration for grant of Corrigendum in Environmental Clearance – regarding.**

M/s Alope Steels Industries Private Limited made an application vide online proposal no. **IA/JH/IND/53261/2016** dated 28th August, 2018 seeking corrigendum to the environmental clearance granted for the proposed expansion of Sponge Iron Plant (from 1,20,000 TPA to 1,38,000 TPA), Rolling mill (90,000 TPA), Iron Ore crushing & Beneficiation plant (2,70,000 TPA), Slag Crushing plant (16,200 TPA) and Captive Power plant (4x2 MW WHRB; 1x10 AFBC) located at Village Budhakhap, P.O - Karma, Dist. - Ramgrah, Jharkhand vide Letter No. J-11011/205/2016-IA-II, dated 23/07/2018.

7.23.2 The aforesaid proposal was considered in the 36th EAC - Industry 1 meeting held during 9-10th October, 2018 wherein the EAC recommended to issue corrigendum in the EC dated 23/07/2018 as furnished below:

Para No.	As per the EC issued by MoEF&CC	Correction required		
Subject	Expansion of Sponge Iron Plant (from 1,20,000 TPA to 1,38,000 TPA) Rolling Mill (90,000 TPA), Iron Ore Crushing & Beneficiation plant (2,70,000 TPA), Slag Crushing plant (16,200 TPA) and Captive Power Plant (4x2 MW WHRB; 1x10 AFBC) located at Village Budhakhap, P.O – Karma, Dist.- Ramgarh, Jharkhand by M/s Alope Steels Industries Private Limite. – Environmental Clearance regarding.	Subject of EC may be corrected as: “Expansion of existing 1,20,000 TPA Sponge Iron Plant for addition of Steel Melting Shop for production of 1,08,000 TPA of Billets), Rolling mill (90,000 TPA TMT Bar), Iron Ore crushing & Beneficiation plant (2,70,000 TPA), Slag Crushing plant (16,200 TPA), Captive Power plant 18 MW (4x2 MW WHRB: 1x10 MW AFBC) and Briquetting unit (40,100 TPA).....”		
3.0	The project of M/s Alope Steel Industries Pvt. Ltd., located in Budhakhap village, P.O. - Karma, Ramgarh District, Jharkhand State is for expansion of the existing plant for production of 0.12 MTPA of Sponge Iron by installation of new facilities for production of Steel Melting Shop for 0.108 MTPA of Billets, Rolling Mill for production of 0.09 Million tons of rolled product with 18 MW Power Plant and 0.27 MTPA of Ore Crushing & Beneficiation plant. EC for the existing project was not required as the project was installed prior to EIA Notification, 2006 and the project cost was less than 100 Cr. The proposed project facilities and the cost are as below.	The product mix of the plant is to corrected as “.....expansion of existing plant for production 0.12 MTPA of Sponge Iron by installation of new facilities for production of Steel Melting Shop for 0.108 MTPA of Billets, Rolling Mill for production of 0.09 MTPA of rolled product with 18 MW Power Plant, 0.27 MTPA of Ore Crushing & Beneficiation Plant, 0.0162 MTPA Slag Crushing plant, and 0.0401 MTPA of Briquetting unit for Iron Ore fines”		
	S.No.	Project Particulars	Cost Rs.	Total Capital cost (1+14+15) – 20835 (in place of 20385)

Para No.	As per the EC issued by MoEF&CC		Correction required
		(in lakhs)	
	Existing		
1	Existing Sponge Iron Plant	2975	
	Proposed		
2	SMS (3X12 T induction furnace + CCM)	1600	
3	Power Plant (18 MW)	6200	
4	Bar Mill	4000	
5	Iron Ore Crushing and Beneficiation facility with filter press	550	
6	Briquetting plant	600	
7	Slag crushing facility	60	
8	Utilities & Central services	1500	
9	Engineering and Project management	500	
10	Contingencies	690	
11	Plant cost without IDC (2 to 10)	15700	
12	Interest during construction	1000	
13	Margin money for working capital	1000	
14	Cost of expansion project with IDC (11+12+13)	17700	
15	Enterprise Social Commitment Budget	160	
	Total Capital Cost (1+14+15)	20385	
7.0	The raw materials required for the expansion project are be Iron Ore 2,25,000 TPA; Coal – 1,92,000 TPA; Dolomite – 3000 TPA; Pig Iron/Scrap – 13,642 TPA. The raw material sourced from local market and transported by road.		The raw material required for the expansion project it to be corrected as “.....Iron ore-2,70,000 TPA;.....”
16.0	The Public hearing of the project was held on 13.05.2017 at Nav Prathamik Vidyalya, Vill- Budhakhap, Sub Division- Mandu, P.O- Karma, District- Ramgarh, Jharkhand		“.....under the Chairmanship of Mrs. Jyotsna Singh , Dy. Magistrate.....”

Para No.	As per the EC issued by MoEF&CC	Correction required
	under the Chairmanship of Sri Dinesh Prasad Singh, Dy. Magistrate for setting up of 18 MW Power Plant, Steel Melting Shop of 108,000 TPA Billet Production and Rolling Mill for 90,000 TPA TMT Br production with ore crushing and Beneficiation Plant of 2,70,000 TPA throughput and Slag Crushing Unit. The issues raised during public hearing which, inter alia, are concern over health of children, villagers and cattle due to pollution; effect on crop/ agriculture due to pollution from the plant; concern over water level going down in the area; Increase of development fund being given to the affected villages; employment to educated people in the nearby villages.	

7.23.3 Based on the EAC recommendations, the file was processed in the Ministry wherein it was noted that there are substantial corrections made in the Environmental Clearance accorded on 23rd July, 2018 and decided to refer back to the EAC again for comprehensive review of the proposal again.

7.23.4 Accordingly, the proposal was again referred back to the EAC. The project proponent and their consultant namely **M/s Vardan Environet.**, S.L. No. 160 in QCI List of Accredited Consultant Organizations (Alphabetically) Rev. 76, May 06, 2019 again made a presentation before the Committee.

Details submitted by the project proponent

7.23.5 M/s. Alope Steels Industries Private Limited made an application vide online proposal no. IA/JH/IND/53261/2016 dated 9th January, 2018 along with the EIA/EMP report and Form sought for environmental clearance under the provisions of the EIA Notification, 2006 for the expansion of the existing sponge iron plant 1,20,000 TPA.

7.23.6 The units envisaged in the original proposal of M/s. Alope Steels Industries Private Limited is given as below:

	Production facility	Plant configuration	Production Capacity (TPA)
	Existing		
1.	Sponge iron plant	4x100 TPD	1,20,000 TPA
	Proposed		
2.	Steel Making Shop, Induction Furnaces and	3x12 T	1,08,000 TPA

	Billet Caster		
3.	Rolling Mill – TMT Rebar Mill	15 stand mill with direct hot charging	90,000 TPA
4.	Power Plant Waste Heat Boilers AFBC boiler	4 x2 MW 1x10 MW 1	18 MW
5.	Iron Ore Crushing & Beneficiation Plant	80-100 TPH single stream (throughput)	2,70,000 TPA
6.	Slag Crushing Plant	Single stream 8 TPH	16,200 TPA

7.23.7 The aforesaid proposal was considered in the 28th meeting of EAC (Industry 1) wherein the Committee advised the project proponent to explore the possibility of setting up of briquetting plant. Thereafter, the proposal was again reconsidered by the EAC in its 32nd meeting held during 11-13th June, 2018 wherein the project proponent has committed to establish Briquetting unit for Iron Ore fines with a capacity of 40,100 TPA and accordingly reduce the capacity of Iron Ore Crushing & Beneficiation Plant from 2,70,000 TPA to 2,25,000 TPA. The revised product slate is given as below:

	Production facility	Plant configuration	Production Capacity (TPA)
	Existing		
1.	Sponge iron plant	4x100 TPD	1,20,000 TPA
	Proposed		
2.	Steel Making Shop, Induction Furnaces and Billet Caster	3x12 T	1,08,000 TPA
3.	Rolling Mill – TMT Rebar Mill	15 stand mill with direct hot charging	90,000 TPA
4.	Power Plant Waste Heat Boilers AFBC boiler	4 x2 MW 1x10 MW 1	18 MW
5.	Iron Ore Crushing & Beneficiation Plant	80-100 TPH single stream (throughput)	2,25,000 TPA
6.	Slag Crushing Plant	Single stream 8 TPH	16,200 TPA
7.	Briquetting unit for Iron Ore fines		40,100 TPA

In the subject matter and product mix (*para no. 3*) of the EC accorded by the Ministry on 23/07/2018, the aforesaid product slate was not appearing. Further, there was a factual correction in the total capital cost of the project as INR 20835 instead of INR 20385

(para no. 3) and changes in the iron ore requirement due to the reduction in the capacity of the iron ore beneficiation plant and setting up of briquetting plant **(para no. 7)**. In addition, there was error in the Officer details who has presided over the public consultation held on 13/05/2017. In view of this, project proponent requested the Ministry to grant corrigendum in the EC dated 23/07/2018 as furnished below:

Para No.	As per the EC issued by MoEF&CC	Correction required																		
Subject	Expansion of Sponge Iron Plant (from 1,20,000 TPA to 1,38,000 TPA) Rolling Mill (90,000 TPA), Iron Ore Crushing & Beneficiation plant (2,70,000 TPA), Slag Crushing plant (16,200 TPA) and Captive Power Plant (4x2 MW WHRB; 1x10 AFBC) located at Village Budhakhap, P.O – Karma, Dist.- Ramgarh, Jharkhand by M/s Alope Steels Industries Private Limite. – Environmental Clearance regarding.	Subject of EC may be corrected as: “Expansion of existing 1,20,000 TPA Sponge Iron Plant for addition of Steel Melting Shop for production of 1,08,000 TPA of Billets), Rolling mill (90,000 TPA TMT Bar), Iron Ore crushing & Beneficiation plant (2,70,000 TPA), Slag Crushing plant (16,200 TPA), Captive Power plant 18 MW (4x2 MW WHRB: 1x10 MW AFBC) and Briquetting unit (40,100 TPA).....”																		
3.0	The project of M/s Alope Steel Industries Pvt. Ltd., located in Budhakhap village, P.O. - Karma, Ramgarh District, Jharkhand State is for expansion of the existing plant for production of 0.12 MTPA of Sponge Iron by installation of new facilities for production of Steel Melting Shop for 0.108 MTPA of Billets, Rolling Mill for production of 0.09 Million tons of rolled product with 18 MW Power Plant and 0.27 MTPA of Ore Crushing & Beneficiation plant. EC for the existing project was not required as the project was installed prior to EIA Notification, 2006 and the project cost was less than 100 Cr. The proposed project facilities and the cost are as below.	The product mix of the plant is to corrected as “.....expansion of existing plant for production 0.12 MTPA of Sponge Iron by installation of new facilities for production of Steel Melting Shop for 0.108 MTPA of Billets, Rolling Mill for production of 0.09 MTPA of rolled product with 18 MW Power Plant, 0.27 MTPA of Ore Crushing & Beneficiation Plant, 0.0162 MTPA Slag Crushing plant, and 0.0401 MTPA of Briquetting unit for Iron Ore fines”																		
	<table border="1"> <thead> <tr> <th>S.No.</th> <th>Project Particulars</th> <th>Cost Rs. (in lakhs)</th> </tr> </thead> <tbody> <tr> <td colspan="3">Existing</td> </tr> <tr> <td>1</td> <td>Existing Sponge Iron Plant</td> <td>2975</td> </tr> <tr> <td colspan="3">Proposed</td> </tr> <tr> <td>2</td> <td>SMS (3X12 T induction furnace + CCM)</td> <td>1600</td> </tr> <tr> <td>3</td> <td>Power Plant (18 MW)</td> <td>6200</td> </tr> </tbody> </table>	S.No.	Project Particulars	Cost Rs. (in lakhs)	Existing			1	Existing Sponge Iron Plant	2975	Proposed			2	SMS (3X12 T induction furnace + CCM)	1600	3	Power Plant (18 MW)	6200	Total Capital cost (1+14+15) – 20835 (in place of 20385)
S.No.	Project Particulars	Cost Rs. (in lakhs)																		
Existing																				
1	Existing Sponge Iron Plant	2975																		
Proposed																				
2	SMS (3X12 T induction furnace + CCM)	1600																		
3	Power Plant (18 MW)	6200																		

Para No.	As per the EC issued by MoEF&CC			Correction required	
	4	Bar Mill	4000		
	5	Iron Ore Crushing and Beneficiation facility with filter press	550		
	6	Briquetting plant	600		
	7	Slag crushing facility	60		
	8	Utilities & Central services	1500		
	9	Engineering and Project management	500		
	10	Contingencies	690		
	11	Plant cost without IDC (2 to 10)	15700		
	12	Interest during construction	1000		
	13	Margin money for working capital	1000		
	14	Cost of expansion project with IDC (11+12+13)	17700		
	15	Enterprise Social Commitment Budget	160		
		Total Capital Cost (1+14+15)	20385		
7.0	The raw materials required for the expansion project are be Iron Ore 2,25,000 TPA; Coal – 1,92,000 TPA; Dolomite – 3000 TPA; Pig Iron/Scrap – 13,642 TPA. The raw material sourced from local market and transported by road.				The raw material required for the expansion project it to be corrected as “.....Iron ore-2,70,000 TPA;.....”
16.0	The Public hearing of the project was held on 13.05.2017 at Nav Prathamik Vidyalaya, Vill- Budhakhap, Sub Division- Mandu, P.O- Karma, District- Ramgarh, Jharkhand under the Chairmanship of Sri Dinesh Prasad Singh, Dy. Magistrate for setting up of 18 MW Power Plant, Steel Melting Shop of 108,000 TPA Billet Production and Rolling Mill for 90,000 TPA TMT Br production with ore crushing and Beneficiation Plant of 2,70,000 TPA throughput and Slag Crushing Unit. The issues raised during public hearing which, inter alia, are concern over health of				“.....under the Chairmanship of Mrs. Jyotsna Singh, Additional District Magistrate.....”

Para No.	As per the EC issued by MoEF&CC	Correction required
	children, villagers and cattle due to pollution; effect on crop/ agriculture due to pollution from the plant; concern over water level going down in the area; Increase of development fund being given to the affected villages; employment to educated people in the nearby villages.	

7.23.8 The project proponent informed during the meeting there are no substantiate changes have been sought in the EC dated 23/07/2018 and the changes sought are factual in nature and already part of the records of the Ministry.

Observations of the Committee:

7.23.9 The Committee observed there are no substantial changes have been sought by the project proponent in the Environmental Clearance dated 23/07/2018 and the changes sought are factual in nature and already part of the records of the Ministry.

Recommendations of the Committee

7.23.10 The Committee considered the proposal and recommended for issuance of Corrigendum as requested by the project proponent.

7.24 Expansion of Integrated Cement Plant (Clinker, Cement & WHRS) along with installation of Solar Power Plant by **M/s Dalmia Cement (Bharat) Limited** at Villages: Chinnakomerla&Dugganpalli, Mandal: Mylavaram, District: YSR Kadapa, **Andhra Pradesh** [Proposal No. IA/AP/IND/104846/2019, MoEF&CC File No.J-1101176-IAII(I)] – **Prescribing of Terms of Reference - regarding.**

M/s. Dalmia Cement (Bharat) Ltd made an online application in the prescribed format along with Form-1 and other reports to the Ministry online on 8th May 2019 *vide* Online Application No. IA/AP/IND/104846/2019 dated 18th May 2019 for proposed ToRs to undertake EIA study for proposed expansion of the existing cement plant as per EIA Notification 2006. 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.

7.24.2 The existing project was accorded environmental clearance *vide* letter no J-11011/76/2007-IA-II(I) dated 05th April, 2007 in the name of M/s. Eswar Cements Pvt. Ltd.; which has been transferred in the name of M/s. Dalmia Cement (Bharat) Ltd. *vide* letter no. J-11011/76/2007-IA-II (I) dated 05th Sept., 2007. Consent to Operate was accorded by Andhra Pradesh State Pollution Control Board *vide* letter no. APPCB/KNL/TPT/102/HO/CFO/2015, validity of CTO is up to 30th day of Nov., 2020. The expansion is proposed at existing unit at Village Chinnakomerla&Dugganpalli, Mandal: Mylavaram, District: YSR Kadapa (Andhra

Pradesh) to set up the plant for manufacturing of cement/clinker based on dry process technology.

- 7.24.3 The land area acquired for the plant is 160 ha (out of which, 140 ha is Plant & Colony and 20 ha is Proposed Solar Power Plant); which is industrial land. No forest land is involved. Out of total (plant & colony area) 140 ha, 46.2 ha (i.e. 33% of the total plant & colony area) has already been developed under greenbelt / plantation. Same will be maintained in future.
- 7.24.4 No National Park / Wildlife Sanctuary / Biosphere Reserve/ Tiger Reserve/ Elephant Reserve 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.
- 7.24.5 Total project cost is approx. 2100 Crores rupees. The existing manpower for the plant is 750 persons. Proposed additional employment generation from proposed project will be 575 direct employments (regular & contractual) during operation phase and about 2000 during construction phase and 3000 indirect employments.
- 7.24.6 The targeted production capacity of Integrated Cement Plant - Clinker (5.85 MTPA), Cement (6.56 MTPA), WHRS (27 MW) along with installation of Solar Power Plant (12 MW). The Limestone is being / will be transported by covered conveyer belt, Iron ore, Bauxite, Fly ash & Slag and Chemical Gypsum is being / will be transported through road and / or through rail.
- 7.24.7 The proposed capacity for different products for new site area is as below:

Unit	Granted Capacity as per EC dated 5 th April 2007	Existing Installed Capacity (Line - I)	Additional Proposed Capacity		Total capacity after expansion
			Existing Line - I	New Line - II	
Clinker (MTPA)	2.6	2.6	Nil	3.25	5.85
Cement (MTPA)	4.06	2.5	1.56	2.5	6.56
WHRS (MW)	NA	12*	Nil	15	27
CPP (MW)	40	Nil	Nil	Nil	Nil
Solar Power Plant (MW)	NA	Nil	Nil	12	12

***Under implementation in line with the Consent to Establish obtained from APPCB vide letter no 102/APP/CFE/RO-TPT/HO/2007 dated 7th Sept 2018.**

- 7.24.8 The electricity load of 60 MW will be sourced from proposed WHRS, Solar Power Plant and Grid sub-station of Andhra Pradesh Electricity Board.
- 7.24.9 Proposed Raw materials required for the project are Limestone; which is being / will be sourced from Nawabpeta Captive Mine; Bauxite is being / will be purchased from Rajahmundry; Iron Ore is being / will be purchased from Bellary; Chemical Gypsum

- is being / will be purchased from Tuticorin; Fly ash is being / will be purchase from Rayalseema thermal Power Plant and/or AP GENCO, Nellore; Slag is being / will be purchased from JSW Bellary. Fuel consumption is being / will be mainly South African Coal; which is being / will be purchased from South Africa through Krishnapatnam port, Indian Coal is being / will be purchased from Telangana & other if any, Petcoke (Imported) is being / will be purchased from Saudi Arabia through Krishnapatnam Port and Petcoke (Indian) is being / will be purchased from MRPL, others in any.
- 7.24.10 Water Consumption after the proposed expansion will be 2735 KLD; which will be sourced from Existing Rainwater Sump at Plant & Mine site and Ground Water. RO reject water & boiler blow down water will be used for dust suppression after proper neutralization. At various stages water used for cooling will be total absorbed / evaporate throughout the process. Domestic wastewater generated from plant will be treated in STP and treated water will be used for greenbelt development / plantation.
- 7.24.11 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:

- 7.24.12 The proposed expansion of cement plant from 2.5 MTPA to 6.56 MTPA is based on the dry process technology. The proposed solar power plant (12 MW) is not under purview of EIA Notification, 2006.

Recommendations of the Committee:

- 7.24.13 After detailed deliberations, the Committee recommended the project proposal for prescribing the following ToRs for undertaking detailed EIA and EMP study in **addition to the generic ToRs enclosed at Annexure-1 read with additional ToRs at Annexure-2:**
- i. Public Hearing shall be conducted by the concerned State Pollution Control Board.
 - ii. The issues raised during public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, inter alia, contain the year-wise activities with corresponding financial allocations.
 - iii. The project proponent shall carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- 7.25 Proposed Modernization & Expansion of DCBL Dalmiapuram Cement Plant Clinker Production Enhancement from existing 2.410 MTPA to 3.230 MTPA; Cement

Production Enhancement from existing 4.020 MTPA to 5.814 MTPA ha. by **M/s. Dalmia Cement (Bharat) Limited** located at survey no. 9, 10, 11, 12 etc., Village Palangantham, Taluk and District, **Tamil Nadu** [Proposal No. IA/TN/IND/104861/2019, MoEF&CC File No.J-11011/68/2004-IAII(I)] – **Prescribing of Terms of Reference - regarding.**

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant.

- 7.26 Proposed Integrated Cement Project - Clinker (3.25 MTPA), Cement (2.5 MTPA), CPP (27 MW), WHRS (15 MW) and D.G. Set (1000 KVA) by **M/s. Dalmia Cement (Bharat) Limited** located at Village: Kharora, Tehsil: Tilda, District: Raipur, **Chhattisgarh** [Proposal No. IA/CG/IND/100795/2019, MoEFCC File No. J-11011/163/2019-IAII(I)] – **Reconsideration for grant of Terms of Reference based on ADS reply – regarding.**

M/s. Dalmia Cement (Bharat) Limited made application vide online proposal no. IA/CG/IND/100795/2019 dated 30th March, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. 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

- 7.26.2 M/s. Dalmia Cement (Bharat) Ltd. (DCBL) was declared as a Preferred Bidder and was granted LOI for “Kesla-II limestone block” for specified end use of clinker/cement in Tehsil Tilda, District Raipur. TOR for the mining lease was granted by MoEFCC, New Delhi *vide* letter J-11015/13/2018-IA.II(M) dated 08th June, 2018. Now, DCBL is proposing to setup an Integrated Cement Project - Clinker (3.25 MTPA), Cement (2.5 MTPA), CPP (27 MW), WHRS (15 MW) and D.G. Set (1000 KVA) at Village: Kharora, Tehsil: Tilda, District: Raipur (Chhattisgarh). It is envisaged to set up the plant, based on Dry process technology. The project proponent submitted an application in the prescribed format along with Form-1 and other reports to the Ministry online on 30th March, 2019 *vide* Online Application No. IA/CG/IND/100795/2019.
- 7.26.3 M/s. Dalmia Cement (Bharat) Ltd. is proposing a new Integrated Cement Project: Clinker (3.25 MTPA), Cement (2.5 MTPA), CPP (27 MW), WHRS (15 MW) and D.G. Set (1000 KVA).
- 7.26.4 The alternate site analysis carried out by the project proponent are summarized as below:

PARTICULARS	Option 1	Option 2 (Selected Site)	Option 3	Remarks
Location	Village Nahardih	Village Kharora	Village Kesla	--
Area, Ha	102	102.6	102	--
Bounding Box Maximum (Degrees Minutes Seconds)	21°26'25.0406", 81°57'08.0858"	21°25'23.1224" 81°55'29.2000"	21°25'13.7616" 81°57'26.5261"	--
Bounding Box Minimum (Degrees Minutes Seconds)	21°26'02.9038" 81°56'05.3211"	21°24'33.9051" 81°54'38.2996"	21°24'24.2732" 81°56'18.00	--
SH - 9	~5.8 km	~ 2.0 km	~2.2 km	From accessibility point of view and minimum load on environment due to transportation, Option 2 is recommended.
Ease of connectivity to existing road	Approach road to SH-9 is single lane road passing through the ML area. It passes through densely habited area / market before connecting the Highway.	Tilda-Simga road (~0.16 km) is double lane; approach from site is free from any habitation and it ultimately connects to SH-9.	Approach road to SH-9 is single lane and highly habited Kesla village road.	
Siliari Railway station	~18.5 km	~16 km	~19.2 km	Option 2 is recommended by seeing ease of railway siding from the proposed
Tilda Railway station	~19 km	~18 km	~21.6 km	Kharsia-Durg Railway Corridor. It will avoid:
Kharsia-Durg Railway Corridor proposed by Chhattisgarh Railway Corporation Limited for Industries	~0.5 km Railway siding from proposed link will need steep curve and extra area front from rail link side.	Kharsia - Durg Rail Corridor is passing to the eastern boundary of project site. There will not be any requirement for purchasing of more land for railway siding	~1.52 km It is far away and also had difficulties (due to passing from mines area and distance) to take tapping from proposed rail link. It will also require more land	<ul style="list-style-type: none"> • Any incremental pollution load • Purchase of additional land and • Disturbance of the local settlements.

- 7.26.5 Site chosen by the project proponent is site 2. The proposed unit will be located at Village: Kharora, Tehsil: Tilda, District: Raipur (Chhattisgarh).
- 7.26.6 The land area for the proposed project is 102.6 ha; most of which is private land. No forest land is involved. The project area falls in the revenue village identified as **Kharora Development/ Investment area** as notified by Directorate of Town and Country Planning, Chhattisgarh, Naya Raipur, Housing and Environment Department, Govt. of Chhattisgarh *vide* its notification no 2316/2379/32/06 dated 21st Nov., 2006 under the Chhattisgarh Nagar Tatha Gram Nivesh Adhiniyam, 1973 (No. 23 of 1973). The entire land is yet to be acquired for the proposed project. The proposed project shall require about 76.5 ha for setting up of the plant, allied infrastructure & colony. Additionally, an area of about 25.1 ha (33%) will be required for Greenbelt development. A linear covered conveyor belt is proposed over an area of ~1.0 ha (~0.5 km length). Thus; total land required for setting of the proposed project is ~ 102.6 ha. However, cumulative green area in the form of gardens, lawns and above proposed greenbelt shall be maintained in overall 33% of the proposed project area i.e. 33.85 ha.
- 7.26.7 No National Park / Wildlife Sanctuary / Biosphere Reserve/ Tiger Reserve/ Elephant Reserve, etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.
- 7.26.8 Total project cost is approx. Rs. 1800 Crores. Proposed employment generation from the project will be approx. 865 direct employment and 1000 - 1500 indirect employment.
- 7.26.9 The targeted production capacity of proposed Integrated Cement Project is: Clinker (3.25 MTPA), Cement (2.5 MTPA), CPP (27 MW), WHRS (15 MW) and D.G. Set (1000 KVA). Part of the clinker will be transported to split Grinding Units (GU). The Limestone will be transported through covered Conveyor Belt (by road initially and during emergency/breakdown situation). Laterite / Bauxite, Clay / shale, Low grade iron / Morrum will be transported by road and gypsum will be transported by rail/road. The proposed capacity for different products for new site area is as below:

Name of Unit	Proposed Capacity
Clinker (MTPA)	3.25
Cement (MTPA)	2.5
CPP (MW)	27
WHRS (MW)	15
D.G. Set (KVA)	1000

- 7.26.10 The electricity load of 45 MW will be sourced from proposed CPP (27 MW), WHRS (15 MW) and from the State Grid. Company has also proposed to install 1000 KVA DG Set.

- 7.26.11 Proposed Raw materials required for the project are Limestone; which will be sourced from proposed Captive auctioned Limestone Mine. Laterite/ Bauxite, Clay/Shale, Low grade iron/Morrum will be purchased from local markets. Fly ash will be sourced from Captive Power Plant and IPPs like GMR Chhattisgarh Power Project, NTPC SIPAT etc. Gypsum will be sourced from Vizag etc. Slag will be sourced from nearby steel plant. Fuel for Cement Plant & CPP will be Indigenous coal; which will be sourced from SECL/Open Market / E-Auction / Raigarh / Bilaspur & Imported coal (South Africa/ Indonesia) through Paradeep port; Petcoke for Cement plant will be sourced from Jamnagar/ Saudi/ US/India, Through Paradeep port.
- 7.26.12 Water Consumption for the proposed project will be 2800 KLD; which will be sourced from Ground water & other means after obtaining necessary permission from regulatory authorities. The proposed cement plant will be based on zero Liquid Discharge (ZLD). Domestic wastewater generated from Plant & colony will be treated in STP and the treated water will be utilized for greenbelt development/ plantation. Wastewater from CPP & RO reject will be treated in ETP and treated water will be re-used for greenbelt development/ plantation, dust suppression.
- 7.26.13 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.26.14 Name of the consultant: M/s. J.M. EnviroNet Pvt. Ltd. [S.No. 92, List of Accredited Consultant Organizations (Alphabetically) Rev. 75, April 10, 2019].
- 7.26.15 The aforesaid proposal was considered in the 6th REAC meeting held during 29-30th April, 2019 wherein the Committee deferred the consideration of the proposal and sought the following information which shall be incorporated in the updated PFR to be submitted by the project proponent.
- i. Analysis of the site options along with land use classification shall be furnished for all three proposed sites by the project proponent.
 - ii. Additionally, geological features of all the three proposed sites shall also be furnished by the project proponent.
 - iii. Water balance study and detailed water requirement shall be submitted by the project proponent.
 - iv. Proportion of total water requirement to be met through the surface water usage shall be furnished by the project proponent with justification.
 - v. Detailed transportation plan using the available railway siding facility to ferry raw materials and finished products shall be provided by the project proponent.
 - vi. Project proponent shall optimally utilize the waste heat recovery system for kilns.
 - vii. Option to use high pressure boiler for AFBC and air cooled condensers shall be studied and furnished by the project proponent.

7.26.16 Point wise reply of additional details sought by REAC (Industry - 1) was uploaded online at Parivesh webportal on 10th May, 2019 and the requisite details are furnished as below:

Point No.	Additional Detail Sought	Reply
i.	Analysis of the site options along with land use classification shall be furnished for all three proposed sites by the project proponent.	To study the land use pattern of three alternative sites, land use / land cover maps have been prepared based on satellite imagery. The Option - 1 is mainly covered by fallow land & few proportion of crop land and also situated near to human settlement. Option - 2 is dominantly covered by Fallow land and rest of the land, features the open scrub land. Option - 3 is covered mostly by fallow land & with area having crop land. Thus, By Seeing Land use pattern and other environmental parameters of all the sites, Option 2 is feasible for proposed project.
ii.	Additionally, geological features of all the three proposed sites shall also be furnished by the project proponent.	<p>The area around all three alternative sites is a small part of Chhattisgarh Supergroup, Chandrapur Group and Raipur Group.</p> <ul style="list-style-type: none"> ○ The area comprises of <ul style="list-style-type: none"> ● Dolomite ● Limestone ● Shale of Chandi formation of Raipur group. ○ All bedding planes observed to be horizontal to sub-horizontal (dipping 2-3° towards north-west) having strike towards NE-SW direction. ○ No major structural disturbances like folds, faults and unconformity observed in the area. ○ At site option no-1, limestone is exposed at the surface due to weathering effect; it is converted into nodules of various shapes and sizes. The other 2 sites (including feasible site option 2) are covered with soil followed by shell/clay.
iii.	Water balance study and detailed water requirement shall be submitted by the	Water requirement for the Proposed Cement Project is estimated to be about 2800 KLD; which will be sourced from Ground water. The

Point No.	Additional Detail Sought	Reply												
	project proponent	<p>break up for water requirement is mentioned below in the table.</p> <table border="1" data-bbox="799 479 1396 779"> <thead> <tr> <th data-bbox="799 479 1082 555">Purpose</th> <th data-bbox="1082 479 1396 555">Proposed Requirement (KLD)</th> </tr> </thead> <tbody> <tr> <td data-bbox="799 555 1082 593">Cement Plant</td> <td data-bbox="1082 555 1396 593">2000</td> </tr> <tr> <td data-bbox="799 593 1082 631">CPP & WHRS</td> <td data-bbox="1082 593 1396 631">500</td> </tr> <tr> <td data-bbox="799 631 1082 669">Domestic</td> <td data-bbox="1082 631 1396 669">150</td> </tr> <tr> <td data-bbox="799 669 1082 745">Greenbelt/ Plantation</td> <td data-bbox="1082 669 1396 745">150</td> </tr> <tr> <td data-bbox="799 745 1082 779">TOTAL</td> <td data-bbox="1082 745 1396 779">2800</td> </tr> </tbody> </table>	Purpose	Proposed Requirement (KLD)	Cement Plant	2000	CPP & WHRS	500	Domestic	150	Greenbelt/ Plantation	150	TOTAL	2800
Purpose	Proposed Requirement (KLD)													
Cement Plant	2000													
CPP & WHRS	500													
Domestic	150													
Greenbelt/ Plantation	150													
TOTAL	2800													
iv.	Proportion of total water requirement to be met through the surface water usage shall be furnished by the project proponent with justification.	<p>Water requirement for the proposed Cement Project is estimated to be about 2800 KLD; which is proposed to be sourced from Ground water. Moreover, during course of mining, when the mining pits will be developed, rain water harvested in excavated pits may also be used to augment the part of water requirement along with other rain water harvesting and water conservation/recycling-reuse measures in plant.</p> <p>Presently, the demand cannot be met by the surface water as there is no Perennial River/ Nala within 20 km radius area from selected site. Only ponds, tanks and a canal are located which cater to other local requirements and are not sufficient to meet the water requirement for this proposed project. Moreover,</p> <ul style="list-style-type: none"> ○ Raipur area falls in safe zone mentioned in (Ground Water Brochure of Raipur District, Chhattisgarh 2012-2013 by CGWB, North Central Chhattisgarh Region). ○ Ground water development stage in entire district (Raipur) is 36.7 % & entire tehsil, it is 34.61% with no significant decline in either pre-monsoon or post-monsoon. 												
v.	Detailed transportation plan using the available railway siding facility to ferry raw materials and finished	Kharsia to Durg railway Corridor proposed by Chhattisgarh Railway Corporation limited (CRCL) is under development stage. Once the proposed rail corridor is commissioned, railway												

Point No.	Additional Detail Sought	Reply
	products shall be provided by the project proponent.	<p>siding will be developed. Thereafter transportation of Gypsum, Indigenous / Imported Coal / Pet coke, Clinker and Cement will be done by rail to the extent possible. Raw materials such as Clay / Shale, Slag, Low grade iron / Morrums, Laterite / Bauxite, Fly Ash & Fuels such as Coal & Petcoke will be transported through road, as the sources for the above mentioned raw materials and fuels are located in nearby areas having distance ranging from 2 km to 300 km, thus due to reduced proximity, it would not be feasible to transport the materials through rail.</p> <ul style="list-style-type: none"> ○ Gypsum & Clinker to Grinding Units and also Cement will be transported through rail for long distances. ○ Cement to cater the requirements of local market will be transported by road.
vi.	Project proponent shall optimally utilize the waste heat recovery system for kilns.	Based on experience and technical studies carried out by the company for similar product configurations, the optimum power which can be generated through heat recovery system from kiln is 15 MW. However, during our detail engineering, possibility for any further increase in generating capacity will be explored.
vii.	Option to use high pressure boiler for AFBC and air-cooled condensers shall be studied and furnished by the project proponent.	Company have already proposed FBC and air-cooled condensers in the proposal. Company is committed to use high pressure boiler as suggested. The tentative specifications of CPP with high pressure boiler have been submitted.

Observations of the Committee: -

7.26.17 The committee noted that additional information furnished by the project proponent is satisfactory and adequate.

Recommendations of the Committee: -

7.26.18 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study

in addition to the generic ToR enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- i. Action plan for railway siding for transportation of materials shall be furnished by the project proponent.
- ii. Provision of air-cooled condenser shall be made by the project proponent to conserve water.
- iii. Rainwater harvesting plan shall be prepared and furnished by the project proponent.
- iv. Public Hearing is to be conducted by the concerned State Pollution Control Board.
- v. The issues raised during the public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, inter alia, contain the year-wise activities with corresponding financial allocations.
- vi. The project proponent should carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility plan as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.

7.27 Expansion of Integrated Cement Plant - Clinker (3.2 to 5.5 MTPA), Cement (3.0 to 5.0 MTPA), CPP (30 to 45 MW) & WHRB (15 to 27 MW) along with Proposed Standby Boiler (100 TPH) & D.G. Set (2180 KW) by **M/s. Emami Cement Limited** located at Villages: Risda&Dhandhani, Tehsil: Balodabazar, District: Balodabazar – Bhatapara, **Chhattisgarh** [Proposal No. IA/CG/IND/104113/2019, MoEF&CC File No.J-11011/309/2013-IAII(I)] – **Prescribing of Terms of Reference - regarding.**

M/s. Emami Cement Limited made application vide online proposal no. IA/CG/IND/104113/2019 dated 2nd May, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. 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

- 7.27.2 M/s. Emami Cement Limited proposes for an expansion of existing manufacturing unit for - Clinker (3.2 to 5.5 MTPA), Cement (3.0 to 5.0 MTPA), CPP (30 to 45 MW) & WHRB (15 to 27 MW) along with Proposed Standby Boiler (100 TPH) & D.G. Set (2180 KW) at Villages: Risda & Dhandhani, Tehsil: Balodabazar, District: Balodabazar - Bhatapara (Chhattisgarh). It is proposed to set up the plant for expansion based on dry process technology.
- 7.27.3 The existing project was accorded Environmental Clearance:
- Cement (3.0 MTPA): *Vide* letter no. J-11011/309/2013-IA (II) dated 07th Feb., 2019.

- Clinker (3.2 MTPA): *Vide* letter no. J-11011/309/2013-IA (II) dated 08th Sept., 2016 and amended on 06th Nov., 2017 (reg. outsourcing of limestone in existing cement plant).
- CPP (30 MW): *Vide* letter no. J-11011/372/2007-IA (II) dated 31st Oct., 2011; which was subsequently amended on 30th Dec., 2013 (reg. plant area & type of cement manufactured) & 01st Feb., 2016 (reg. outsourcing of clinker, use of Petcoke&Agro waste and change in configuration of CPP).

Consent to Operate was accorded by Chhattisgarh Environment Conservation Board:

- Cement (3.0 MTPA): *Vide* letter no. 8550/TS/CECB/2019 Dated 28.03.2019
- Clinker (3.2 MTPA): *Vide* letter no. 7341/TS/CECB/2019 Dated 29.01.2019
- CPP (30 MW): *Vide* letter no. 7341/TS/CECB/2019 Dated 29.01.2019

- 7.27.4 The proposed Unit will be located at Villages: Risda & Dhandhani, Tehsil: Balodabazar, District: Balodabazar - Bhatapara (Chhattisgarh).
- 7.27.5 The land area acquired for the proposed plant is 188.35 ha, which is an industrial land. No forest land involved. The entire land has been acquired for the project. Out of the total plant area (137.532 ha), 62.22 ha (i.e. approx. 45% of the total plant area) has already been developed under greenbelt / plantation. Same will be maintained in future.
- 7.27.6 No National Park / Wildlife Sanctuary / Biosphere Reserve/ Tiger Reserve/ Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule -I fauna.
- 7.27.7 Total project cost is approx. 1500 Crores rupees. Proposed employment generation from proposed project will be 410 direct employments and 2400 indirect employments.
- 7.27.8 The targeted production capacity of Integrated Cement Plant: Clinker (5.5 MTPA), Cement (5.0 MTPA), Captive Power Plant (45 MW) & WHRS (27 MW), Standby Boiler (100 TPH) and D.G. Set 2180 KW. The Limestone for the plant would be transported by covered conveyer belt, Gypsum (Chemical / Phospho / treated / mineral), Slag, Iron (ore / fines / red mud / tailent / laterite), Bauxite and Bed ash will be transported by Rail / Road, Fly ash and Sand (Stone/River) will be transported by road. The proposed capacity for different products for new site area is as below:

S. No.	Particulars	Unit	Existing Capacity (Line - I)	Additional Capacity		Total Capacity after expansion
				Through Optimization & Modification in Existing Line - I	New Line - II	
1.	Clinker	MTPA	3.2	0.3	2.0	5.5
2.	Cement	MTPA	3.0	Nil	2.0	5.0

3.	CPP	MW	30	Nil	15	45
4.	WHRB	MW	15	Nil	12	27
5.	Standby Boiler	TPH	NA	Nil	100	100
6.	D.G. Set	KW	NA	Nil	2180 { =1000 +480+ 350+350}	2180

- 7.27.9 The electricity load of 73.2 MW will be sourced from CPP, WHRB & CSEB Grid and D.G Set (for emergency). Company has also proposed to install 2180 KW D.G. Set.
- 7.27.10 Proposed Raw materials required for the project are Limestone; which will be sourced from Captive Mines, Gypsum (Chemical / Phospho / treated / mineral) will be purchased Indigenous / Imported from Paradip port, Fly ash will be sourced from Own CPP and Nearby area (GMR / KSK / DB), Slag will be purchased from Nearby area (BSP / Tata), Iron (ore / fines / red mud / tailent / laterite) will be purchased from CMDC & Nearby area, Bauxite will be sourced from Balco & Nearby area; Sand (Stone/River) will be sourced from Nearby area (Mahanadi / Shivnath) and Bed ash will be sourced from Own CPP & Nearby area. Fuel requirements for the project are Pet Coke Indigenous/ Imported will be sourced from Reliance and Imported via Vizag port respectively, Indian / Imported Coal will be sourced (Korba SECL)/ Indonesian / African, Dolochar from nearby Sponge Iron Plant respectively. HSD Indian / Imported for D.G. Set will be sourced from HP/BP/ Reliance.
- 7.27.11 Water Consumption for the proposed expansion project will be 7041 KLD; which will be sourced from *Ground Water & Mine Pit Water*. Water used for cooling is being / will be partially absorbed in the process and/or partially subjected to evaporation and recycling and hence, no wastewater is being / will be discharged from the plant premises. Domestic wastewater generated from the plant is being / will be treated in STPs (3 nos.) with treatment capacity of 150 KLD (50 KLD each) and the treated water is being / will be utilized for greenbelt development / plantation. Wastewater generated from CPP will be used for dust suppression after proper neutralization.
- 7.27.12 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.27.13 Name of the consultant: M/s. J.M. EnviroNet Pvt. Ltd. [S.No. 92, List of Accredited Consultant Organizations (Alphabetically) Rev. 76, May 06, 2019].

Observations and Recommendations of the Committee:

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

- i. Action plan for railway siding for transportation of materials shall be furnished by the project proponent.
- ii. Provision of air-cooled condenser shall be made by the project proponent to conserve water.
- iii. Rainwater harvesting plan shall be prepared and furnished by the project proponent.
- iv. Public Hearing is to be conducted by the concerned State Pollution Control Board.
- v. The issues raised during the public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, inter alia, contain the year-wise activities with corresponding financial allocations.
- vi. The project proponent should carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility plan as per the norms of the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.

7.28 Expansion of enhancement of Sponge Iron production from 54,000 TPA to 174,000 TPA, Installation of 3 x 20 Ton Induction Furnaces with Billet Caster for production of 180,000 TPA Billets, Rolling Mill for production of 174,000 TPA Rolled Products along with 24 MW Captive Power Plant by **M/s. Sundaram Steels Private Limited** located at B-7, Phase-III, Bokaro Industrial Area, Balidih, Bokaro, **Jharkhand** [Proposal No. IA/JH/IND/102711/2019, MoEF&CC File No.J-11011/128/2010-IAII(I)] – **Prescribing of Terms of Reference - regarding.**

M/s. Sundaram Steels Private Limited made application vide online proposal no. IA/JH/IND/102711/2019 dated 18th April, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

- 7.28.2 **M/s Sundaram Steel and Power Ltd.** proposes to expand the existing plant by enhancement of Sponge Iron production from 54,000 TPA to 174,000 TPA, Installation of 3 x 20 Ton Induction Furnaces with Billet Caster for production of 180,000 TPA Billets, Rolling Mill for production of 174,000 TPA Rolled Products along with 24 MW Captive Power Plant.
- 7.28.3 Environmental Clearance (EC) for the existing plant was granted by MoEFCC vide file No. J-11011/128/2010-IA-II (I) on 14/01/2011 for installation of 2x90 TPD Sponge Iron Plant along with 8 MW Captive Power Plant. CTE for Production of 180 TPD Sponge Iron was granted by Jharkhand State Pollution Control Board vide Memo No. N-11 on 19/03/2009.

- 7.28.4 Specific condition no. (viii) of the EC was amended by Ministry of Environment, Forest & Climate Change (MoEF&CC) vide file No. J-11011/128/2010-IA-II (I) dated 21/12/2011, from “All the char from the DRI plant shall be utilized in the AFBC boiler of power plant and no-char shall be disposed of anywhere else. AFBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning” to “As per the MoU signed between M/s Sundaram Steel and Power Limited, Bokaro and M/s Shakambhari Ispat & Power Ltd., Purulia, the char from the DRI plant shall be supplied for utilization in its AFBC boiler without disposing it elsewhere till the Captive Power Plant is commissioned. Commissioning of second DRI kiln shall not be started without 8 MW captive power plant. The char should be supplied through covered trucks to prevent fugitive emissions”.
- 7.28.5 During 2016, another 1x90 TPD DRI Kiln was installed and CTO for 180 TPD Sponge Iron production was issued by JSPCB vide Ref. No. JSPCB/HO/RNC/CTO/706990/2016/562 dated 14/09/2016 valid till 30/06/2019.
- 7.28.6 The Company, earlier applied for expansion for which an application was filed with MoEF& CC vide Proposal no. IA/JH/IND/51429/2014 and F.No. EC/SEIAA/2014-15/307/2014/460. It was dropped due to Environmental consultant not taking up the case after EDS.
- 7.28.7 The proposed unit will be located within the existing plant area of 10.10 Ha. at B-7, Phase-III, Bokaro Industrial Area, Balidih, Bokaro, Jharkhand-827014. Project does not envisage additional land for the expansion. No forestland involved. Of the total area, 3.33 ha (33%) land will be used for green belt development.
- 7.28.8 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.
- 7.28.9 Total project cost is approx. Rs.159 crores. Employment generation from proposed project will be 521 direct employments.
- 7.28.10 The Raw material for the plant would be procured from local and from other state depend upon the quality. The ore transportation will be done through NH-23 Bokaro to Ramgarh is at a distance of 1.18 Km from the project site. The proposed capacity for different products for new site area as below:

Production Facility	Plant Size		Final Configuration After Expansion	Total Production
	Existing	Proposed		
Sponge Iron	2 x 90 TPD (54,000 TPA)	2 x 200 TPD	2 x 90 TPD (180 TPD) & 2 x 200 TPD (400 TPD)	174,000 TPA
Induction Furnaces and CCM	-	3 x 20 T	3 x 20 T (600 TPD)	180,000 TPA
Rolling Mill – TMT Rebar Mill	-	580 TPD	580 TPD	174,000 TPA
Captive Power Plant	-	AFBC 12 MW WHRB 12 MW	AFBC 12 MW WHRB 12 MW	24 W

- 7.28.11 Total requirement of power for the unit is 23.0 MW from CPP. DG sets existing 500 kVA will be augmented with additional 3 x 500 kVA DG set.

Proposed raw material and fuel requirement for project are:

Raw Material	Existing in TPA	Proposed in TPA	Total after Expansion in TPA
Iron Ore	86,940	193,200	280,140
Coal	70,740	157,200	227,940
Dolomite / Limestone	2,160	4,800	6,960
Ferro Alloys	--	3,600	3,600
Coal (for AFBC)	--	90,000	90,000

- 7.28.12 The total water requirement after the expansion is estimated to be 1570 KLD and Waste water generated will be recycled after appropriate treatment as the company will implement 'Zero Liquid Discharge (ZLD). Water requirement for the present use is being met from ground water. After expansion surface water shall be used, will be sourced from BIADA.
- 7.28.13 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 7.28.14 Name of Environment Consultant – M/s. Vardan Environet.S.L. No. 160 in List of Accredited Consultant Organizations (Alphabetically) Rev. 76, May 06, 2019.

Observations and Recommendations of the Committee:

- 7.28.15 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**
- i. PP shall adopt 100 % hot charging process, and shall not install any reheating furnace.
 - ii. Provision of air-cooled condenser shall be made by the PP to conserve water.
 - iii. Rainwater harvesting plan shall be shall be prepared and furnished by the PP.
 - iv. PP shall ensure that the plant is designed to achieve the particulate emission level of less than 30 mg/m³.
 - v. Public Hearing is to be conducted by the concerned State Pollution Control Board.
 - vi. The issues raised during the public hearing and commitment of the project proponent to address the same shall be compiled and submitted in a time bound action plan. The action plan shall, *inter alia*, contain the year-wise activities with corresponding financial allocations.
 - vii. The project proponent should carry out a social impact assessment of the project and submit the ensuing Corporate Environment Responsibility plan as per the norms of

the Ministry's Office Memorandum issued vide F.No. 22-65/2017-IA.III dated 1/05/2018.

- 7.29 Proposed expansion of existing Steel Plant by installation of Sponge Iron Plant with 5x100 TPD DRI Kilns, 4x25 T Induction Furnaces, 1x50 TPH Coal Washery, 0.6 MTPA Iron Ore Beneficiation & 0.6 MTPA Palletization Plant & 22 MW capacity Captive Power Plant along with the product mix change of existing 2x7 MVA Submerged Arc furnaces by **M/s. Jai Balaji Industries Limited** located at G-1, Mangalpur Industrial Complex, P.O.-Baktarnagar, P.S. Raniganj, District – Paschim Burdwan, **West Bengal** [Proposal No. IA/WB/IND/101899/2019, MoEF&CC File No.J-11011/290/2018-IAII(I)] – **Prescribing of Terms of Reference - regarding.**

M/s. Jai Balaji Industries Limited made application vide online proposal no. IA/WB/IND/101899/2019 dated 22nd May, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Observations of the Committee

- 7.29.2 The Committee noted that proposed plant configuration and lay out has not been adequately furnished by the project proponent.

Recommendations of the Committee

- 7.29.3 After detailed deliberations, the Committee recommended to return the proposal in present form to review the proposed plant configuration and lay out.
- 7.30 Proposed expansion the existing plant premises by **M/s Sakthi Ferro Alloys India Pvt. Limited** located at Village Vasanadu, Nadumuru village Panchayath, Kuppam, District Chittoor, **Andhra Pradesh**. - [Proposal No. IA/AP/IND/101553/2019; MoEF&CC File No. IA-J-11011/166/2019-IAII(I)] – **Prescribing of Terms of Reference - regarding.**

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant.

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 (Quantative) 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

Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

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)

Co-ordinates (lat-long) of all four corners of the site.

Google map-Earth downloaded of the project site.

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.

Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

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)

A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area

- i. Geological features and Geo-hydrological status of the study area shall be included.
- ii. 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)
- iii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- iv. R&R details in respect of land in line with state Government policy

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

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

- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife
6. **Environmental Status**
- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
 - ii. AAQ data (except monsoon) at 8 locations for PM₁₀, PM_{2.5}, SO₂, NO_x, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
 - iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
 - iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
 - v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
 - vi. Ground water monitoring at minimum at 8 locations shall be included.
 - vii. Noise levels monitoring at 8 locations within the study area.
 - viii. Soil Characteristic as per CPCB guidelines.
 - ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
 - x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
 - xi. Socio-economic status of the study area.
7. **Impact Assessment and Environment Management Plan**
- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
 - ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
 - iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport

- of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
 - v. Details of stack emission and action plan for control of emissions to meet standards.
 - vi. Measures for fugitive emission control
 - vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
 - viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
 - ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
 - x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
 - xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
 - xii. Action plan for post-project environmental monitoring shall be submitted.
 - xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. Occupational health

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

- iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
9. Corporate Environment Policy
- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. Corporate Environment Responsibility (CER)
- i. To address the Public Hearing issues, an amount as specified under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018 amounting to Rs.crores, shall be earmarked by the project proponent, towards Corporate Environment Responsibility (CER). Distinct CER projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These CER projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above CER budget
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.
- ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

ANNEXURE-2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

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

--

ADDITIONAL ToRS FOR PELLET PLANT

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

ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

1. A note on pulp washing system capable of handling wood pulp shall be included.
2. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp

mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln

3. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.
4. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.
5. A commitment that no extra chlorine basebleaching 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
INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE**

1. Details of proposed layout clearly demarcating various units within the plant.
2. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
3. Details on design and manufacturing process for all the units.
4. 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.
5. Details on requirement of raw materials, its source and storage at the plant.
6. 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).
7. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
8. Details on toxic content (TCLP), composition and end use of chrome slag. Details on the recovery of the Ferro chrome from the slag and its proper disposal.

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

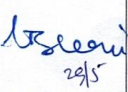
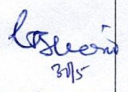
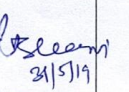
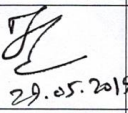
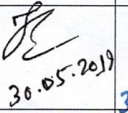
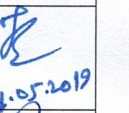
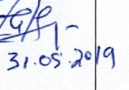
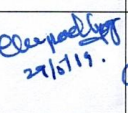
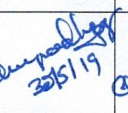
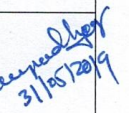
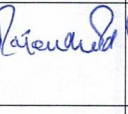
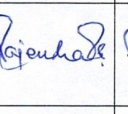
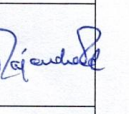
1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with 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



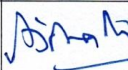
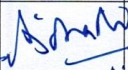
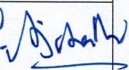
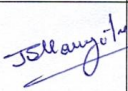
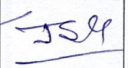
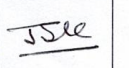
Executive summary of the report in about 8-10 pages incorporating the following:

- 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

**LIST OF PARTICIPANTS IN 7th MEETING OF EAC (INDUSTRY-I) HELD
ON 29th to 31st MAY, 2019**

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE		
			29 th	30 th	31 st
1	Dr. Chhavi Nath Pandey, IFS(Retired) Email: pandeychhavinath55@gmail.com	Chairman	ABSENT	ABSENT	ABSENT
Members					
2.	, Representative of Central Pulp and Paper Research Institute, Saharanpur.	Member	ABSENT	ABSENT	ABSENT
3.	, Representative of Indian Meteorological Department, New Delhi.	Member	ABSENT	ABSENT	ABSENT
4.	Dr. G. Bhaskar Raju Email: gbraju55@gmail.com	Member	 29/5	 30/5	 31/5/19
5.	Dr. Jagdish Kishwan, IFS (Retd.) Email: jkishwan@gmail.com	Member	 29.05.2019	 30.05.2019	 31.05.2019
6.	Dr. G.V. Subramanyam Email: sv.godavarthi@gmail.com	Member	ABSENT	ABSENT	 31.05.2019
7.	Shri. Ashok Upadhyaya Email: ahupadhy@rediffmail.com	Member	 29/5/19.	 30/5/19	 31/05/2019
8.	Shri. R.P. Sharma Email: rpsh2@hotmail.com	Member			
9.	Shri. Sanjay Deshmukh Email: sanjaydeshmukh@mu.ac.in	Member	ABSENT	ABSENT	ABSENT

MoM of 7th meeting of the Re-constituted EAC (Industry-I) held during 29-31st May, 2019

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE		
			29 th	30 th	31 st
10.	Prof. S.K. Singh Email: sksinghdee@gmail.com singhsk@email.com	Member			ABSENT
11.	Dr. R. Gopichandran Email: r.gopichandran@vigyanprasar.gov.in	Member	ABSENT	ABSENT	ABSENT
12.	Shri. Jagannath Rao Avasarala Email: avasaralajagan@gmil.com	Member			
13	Shri. J.S. Kamyotra Email: kamyotra@yahoo.co.in	Member			
14.	Shri. Aravind Kumar Agrawal Director, MoEF&CC Email: dirind-moef@gov.in	Member Secretary	