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

SUMMARY RECORD OF THE TENTH (10th) MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE HELD DURING 22-23RD AUGUST, 2019 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER THE PROVISIONS OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA) NOTIFICATION, 2006.

The tenth 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 22-23rd August, 2019 in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim. The minutes of 9th meeting held during 30-31st July, 2019 were confirmed by the EAC and already uploaded on Parivesh portal.

22nd August, 2019

10.1 Increase in clinker production from 3 MTPA to 4 MTPA and cement production from 5 MTPA to 6 MTPA through up-gradation and optimization of plant parameters/capacity utilization by **M/s. Maihar Cement (A division of Century Textile & Industries Limited)** located at Maihar Cement Post Sarla Nagar, District **Satna**, **Madhya Pradesh** - [Online Proposal No. IA/MP/IND/73253/2018, File No. J-11011/113/2018-IAII(I)] **– Environment Clearance - regarding.**

Project Proponent informed the Ministry vide letter dated 16.08.2019 that due to unavoidable circumstances, they are unable to attend the meeting. They requested the Ministry to consider the proposal in the next EAC meeting. Therefore, Consideration of the proposal was deferred.

10.2 Enhancement of Clinker Production from Existing 3.185 MTPA to 4.685 MTPA by installation of 3rd Kiln (Line-III) of 1.50 MTPA capacity, Cement Production : Existing 3.65 MTPA (No Change on Expansion) & Addition of Waste Heat Recovery Boilers (7 Nos.) for 27 MW Power Generation & Downsizing of existing 42 MW Thermal Power Generation to 24 MW by **M/s. Ramco Cements Limited** located at Kumarasamy Rajanagar Cement plant, Village Jayantipuram, Jaggayapeta Mandal, District Krishna, **Andhra Pradesh**– [Online Proposal No. IA/AP/IND/112312/2014 File No. J-11011/403/2006-IAII(I)] **– Environment Clearance regarding.**

10.2.1 M/s Ramco Cements Ltd (RCL) made an online application in the prescribed format along with Form-2, EIA Report and other reports to the Ministry on 25thJuly, 2019 videProposal No.IA/AP/IND/112312/2014 for seeking Environmental Clearance for expansion of the existing cement plant as per the provisions of 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.

Details submitted by the project proponent

10.2.2 RCL had established Cement Plant at Kumaraswamy Raja Nagar (KSR Nagar) in the Year 1986. The plant was expanded with two process lines (Lines I & II). Now,the cement plant has the production capacity of 3.185 MTPA Clinker and 3.65 MTPA cement of various grades (OPC, PPC, PSC, etc).

10.2.3 Part of Clinker from KSR Nagar Cement Plant is transported to RCL Grinding Units at Visakhapatnam and Kolaghat which are expanded, i.e., each unit with capacity of 2.0 MTPA cement grinding. RCL is also establishing a cement grinding unit of 0.90 MTPA in the State of Odisha at Haridaspur (District Jajpur). Therefore, to meet requirement of increased demand of clinker, RCL proposed to add a 3rd Kiln, only for clinker, in KSR Nagar Cement Plant as Line-III for 1.50 MTPA.

10.2.4 Proposed Clinker production enhancement from existing 3.185 MTPA to 4.685 MTPA by the addition of 3rd Kiln of 1.5 MTPA capacity is based on Precalciner Technology with **no change to existing Cement production capacity of 3.650 MTPA** i.e., no change in cement production on Expansion.

10.2.5 The proposal includes the installation of Waste Heat Recovery Boilers (WHRB) in the existing and proposed kilns. A total of 27 MW (3x9 MW) power generation is envisaged and the existing Captive Thermal Power Plant (CPP) will be downsizedfrom 42 MW to 24 MW.

10.2.6 The existing project was accorded Environmental Clearance vide Lr.no. MoEF F.No. J-11011/403/2006-IA-II (I) dated 29.09.2016. The Status of compliance of earlier EC was obtained from Regional Office, Chennai vide Lr. No. F. No. EP/12.1/2016-17/7/AP/1345, dated 17.08.2018. There are no non-compliances reported by Regional officer.

10.2.7 Consent for Operate was accorded by Andhra Pradesh State Pollution Control Board vide Lr. No. APPCB/VJA/VJA/488/HO/CFO/2017 dated 04.04.17 validity of CFO is up to 31.01.2022.

10.2.8 The proposed unit will be located within the existing plant premises at S.F. Nos. 235, 236, 238, 240, etc., Village: Jayanthipuram, Taluk : Jaggayapeta, District : Krishna, State : Andhra Pradesh.

10.2.9 The land area acquired for the existing Cement Plant Complex is 329.0 ha and no additional land is required for the proposed expansion being within the industrial premises.No Government Land/Forest Land is involved. The entire land has been in the possession of RCL. Of the total area of 329.00 ha, 172.745 ha (52.50 %) land will be used for green belt development.

10.2.10 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. Reserved Forest is falling within the 10 km from the boundary of the project site.

10.2.11 No Objection Certificate (NOC) for the Industry has been issued by the Divisional Forest Officer, Krishna Division, Vijayawada.

10.2.12 Total Project Cost is about Rs. 680.0 Crores for proposed expansion. The existing project cost is Rs.1,040.31 Cr.An EMP Budget of Rs.3.50 Cr. is earmarked additionally for the proposal with an operating cost of Rs.0.75 Cr. per annum.

10.2.13 The proposed expansion will generate direct employment to additional 50 nos of persons. 388nos of persons are working in the existing complex.

10.2.14 The targeted production capacity of the clinker is 4.685 MTPA with no change in Cement Production of 3.65 MTPA. The limestone for the plant would be supplied by captive mines in the Region viz. Jayanthipuram North Band & South Band Mines and Ravirala (Forest) Mine.

10.2.15 The ore transportation to the crusher will be done through road and from crusher to the cement plant by conveyors. The proposed capacity for different products for new site area as below:

Name of Unit	**No. of Units**		**Capacity of each Unit**	**Production Capacity**
Clinker	Existing	Kiln-1	1.610 MTPA	**4.685 MTPA**
		Kiln-2	1.575 MTPA	
	Proposed	**Kiln-3**	**1.500 MTPA**	
Cement	Existing	Lines I & II	3.650 MTPA	**3.650 MTPA**
	Proposed	-	0	
Waste Heat Recovery Boilers	Existing		-	**27 MW**
	Proposed : 7 Nos.		**(3x9=) 27 MW**	
Captive Thermal Power Plant	Existing		2x18 MW 1x6 MW Total 42 MW (Turbine)	**24 MW** (Turbine Capacity) (by downsizing 1x18 MW)
	Proposed		-	
Standby DG Sets	Existing		4.0 MW	**4.0 MW**
	Proposed		-	

10.2.16 The electricity load of 13.5 MW will be met from the existing sources within the plant viz. CPPs, WHRBs/Grid.

10.2.17 Raw material and fuel requirement for project are 6.57 MTPA limestone and 0.63 MTPA imported coal respectively. The requirement of limestone would be fulfilled by existing captive mines.

10.2.18 Water Consumption for the proposed project will be additional 752 m^3/day water for the Line-III (Equipment Cooling 240 m^3/day & Domestic Use 12 m^3/day) and WHRBs (Makeup water for Boilers, etc. m^3/day). The total water demand on expansion will be 5,850 m^3/day (due to downsize of 1x18 MW CPP) against the existing demand of 5,900 m^3/day. The water demand will be within the permitted 7,000 m^3/day.

10.2.19 Domestic sewage to the tune of 10 m^3/day will be generated on expansion in addition to existing 660 m^3/day and will be treated in the Combined STP of 700 m^3/day capacity and used for green belt development.

10.2.20 Industrial wastewater generation will be 990 m^3/day which will be treated in existing Neutralization Pit and treated wastewater of 500 m^3/day will be reused for equipment cooling in the cement plant and balance 490 m^3/day will be used for green belt and dust control measures. Thus, 'Zero Effluent Discharge' is adopted.

10.2.21 Baseline Environmental Studies were conducted during Winter season i.e. from 1st January 2019 to 31st March 2019. Ambient air quality monitoring has been carried out at 12 locations and the data submitted indicated:$PM_{2.5}$ (17.0 to 43.0 µg/m^3), PM_{10} (22.0 µg/m^3 to 63.0 µg/m^3), SO_2 (6.0 to 16.0 µg/m^3) and NOx (7.0 to 21.0 µg/m^3). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 4.57 µg/m^3 with respect to the PM_{10}, 3.11 µg/m^3 with respect to the SO_2 17.79 µg/m^3 with respect to the NO_x.

10.2.22 Ground water quality has been monitored in 11 locations in the study area and analysed. pH: 7.46 to 7.65, Total Hardness: 110 to 190 mg/l, Chlorides: 74 to 104 mg/l, Fluoride: 0.06 to 0.15 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 8 locations. pH: 7.26 to 7.68; DO: 4.4 to 5.2 mg/l and BOD: 1 mg/l. COD from 2 to 4 mg/l.

10.2.23 Noise levels are in the range of 40.1 to 48.7 dBA for daytime and 38.4 to 45.4 dBA for night time.

10.2.24 The Public hearing of the project was held on 28.06.2019 at the Plant Premises under the Chairmanship of the Collector & District Magistrate, Krishna District for Addition of 3rd Kiln (Line-III) for 1.50 MTPA Production (Clinker Production Enhancement from Existing 3.185 MTPA to 4.685 MTPA; Cement Production - Existing 3.65 MTPA (No Change on Expansion)) & Addition of Waste Heat Recovery Boilers (7 Nos.) for 27 MW Power Generation & Downsizing of existing 42 MW Thermal Power Generation to 24 MW. The following are the issues raised during PH & commitment of the project proponent:

- Veterinary camps.
- Construction of Sri Rama Temple & Goddess Mysamma Temple
- Construction of RO plants.
- Employment opportunities (including for women) / Job mela.
- Construction of Hospitals.
- Infrastructure Facilities.
- Water supply for agricultural land.
- Medical camps.
- Improve greenery / Plantation.
- Introducing Intermediate courses for training.
- Construction of check dams on Paleru river.
- Supply of drinking water through Tankers.
- Construction of ITI college.
- Introduction of Cement Technology course in local colleges.

10.2.25 An amount of Rs.5.0 Crores out of project cost of Rs 680 Crores (as per Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May, 2018) has been earmarked for Corporate Environment Responsibility (CER) duly considering public hearing issues.

10.2.26 The capital cost of the proposed expansion project is Rs. 680 Crores and cost for environmental protection measures is proposed as Rs. 35.0 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 1.75 Crores/annum. The employment generation is 50 people during operation of the proposed expansion and 100 people during construction of the proposed units.

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

EMP Measure	**Capital Cost (in Rs. Crores)**	**Operating Cost (in Rs. Lakhs per Annum)**
Air Pollution Control Equipment's & stacks	34.50	150.00
Water Pollution Control Measures	0.15	15.00
Noise Pollution Control Measures	0.10	1.00
Addl. Greenbelt Development	0.20	7.00
Rain Water Harvesting	0.05	2.00
Total	**35.0**	**175.0**

10.2.28 Greenbelt is developed in an area of 130.24 Ha. (39.59 %) in the exiting plant, an additional greenbelt of 42.505 Ha. (12.78 %) Will be developed along with the proposed expansion proposal. Hence total greenbelt after proposed expansion will be 172.745 ha. (52.37 %). Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 1,50,000 saplings will be planted and nurtured in 172.745 hectares in 5 years.

10.2.29 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:

10.2.30 The Committee observed following:

i. CER details furnished in the EIA report is not as per the Ministry's OM dated 1st May 2018.
ii. PP is abstracting the groundwater at the rate of 7000 m^3/day.
iii. The proposed Waste Heat Recovery System (WHRS, 27 MW) is appreciably higher than the current industrial practices.
iv. For the baseline study, all 12 parameters specified in NAAQS 2009 have been monitored. However, the committee noted some unusual data trends.
v. Information on provision of co-processing is not furnished in the report.

10.2.31 During meeting, the Project Proponent submitted the following information vide letter Ref: 09/RCL/JPM Expn/EC/2019 dated 22nd August 2019 to the Committee:

i. Allocation of Rs.5.00 Cr. for CER to addressissues raised in Public Hearing and identified in need based assessment study, *viz.*, infrastructure development in local area, Skill Development Centre, Education, Health as part of Capital Expenditure to be implemented within two years.
ii. Commitment for not abstraction of ground water further for industrial activities and utilisation of water from mine pit discharge.
iii. As per the Design and DPR by M/s. FLSmidth& M/s. Thermax, each Kiln can generate about 8 MW with cooler mid tap arrangement (Recycling of Cooler vent gases once again for Heat Recovery). However, Turbine capacity will be 27 MW.
iv. Online records of AAQ data.
v. Installation of cooler with ESP and exploring the possibility to achieve dust emission from bag filter less than 20mg/Nm^3.
vi. A bio gas plant of 200 kg/day which is in operation for kitchen waste utilisation.
vii. Installation and implementation of High Efficiency Low Primary Air, Low NO_x Nova Flame Kiln Burner for main firing in the Kiln and Low NOx Inline-Calciner with provision of meal split to reduce hot zone. Optimisation of Process & Quality is ensuring better homogenisation of Raw Mix for energy efficient burning with low excess air to comply with the new Emission Norms. However, for Co-processing, suitable Technology will be adopted to keep the NOx levels always within the Limits.

Recommendations of the committee:

10.2.32 After detailed deliberations, the Committee recommended the project for grant of Environmental Clearance under the provisions of the EIA Notification, 2006 subject to following specific and sector specific general conditions as per the Ministry's OM No.22-34/2018 IA-III dated 09.08.2018 as applicable.

Specific Conditions:

i. Emissions from bag filter should be below 10mg/Nm^3.
ii. CER activities shall be implemented within 2 years.
iii. No groundwater shall be abstracted for industrial activities.

10.3 Proposed expansion of paper production from 300 TPD To 600 TPD along with CPP of 14 MW by **M/s. Satia Industries Limited** located at Village Rupana, District Muktsar**, Punjab** [Online Proposal No. IA/PB/IND/61921/2015, File No. J-11011/196/2014-IAII(I)]**– Environment Clearance - regarding.**

10.3.1 M/s Satia Industries Ltd (RCL) made an online application in the prescribed format along with Form-2, EIA Reports and other reports to the Ministry online application on 6th August, 2019 vide Proposal No. IA/PB/IND/61921/2015 for seeking Environmental Clearance for expansion of the existing pulp and paper industry as per EIA Notification 2006. The proposed project activity is listed at S. No. 5(i) Cement Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

10.3.2 The Proposal ofM/s Satia Industries Limited located in Village: Rupana, District:Sri Muktsar Sahib, State: Punjab was initially received in the Ministry on 28th December 2018for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 4th meeting held on 20th February 2019 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 16thApril 2019, videLr. No. IA-J-11011/196/2014-IA.II(I).

10.3.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on20thJuly 2019vide Online Application No.IA/PB/IND/61921/2015.

10.3.4 The project of M/sSatia Industries Limited located inRupanaVillage,Sri Muktsar Sahib District, Punjab State is for enhancement of production capacity of writing & printing paper from 300 TPD to 600 TPD and expansion of co-gen Power Plant capacity from 30 MW to 44 MW. The existing project was accorded environmental clearance vide lr.no. J-11011/196/2014-IA-II (I) dated 29th May, 2018.

10.3.5 The Status of compliance of earlier EC was obtained from Regional Office, Chandigarh vide Lr. No. 5-309/2011-RO(NZ)/123-125, dated 05/08/2019. There are no non compliances reported by Regional Officer. The proposed capacity for different products for new site area as below:

S. No	Product	Capacity				Remarks
		Unit	Existing	Proposed	Total	
1.	Writing and Printing Paper	TPD	300	300	600	**Expansion**
2.	Co-generation Captive Power Plant	MW	30	14	44	

10.3.6 The total land required for the project is 18.4341 ha. No /Forestland involved.The entire land has been acquiredfor the project. The Arniwala canal passes nearby the project area.It has been reported that Arniwalacanal water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

10.3.7 The topography of the area is flat terrain and reported to lies between 30°25'20.77"N to 30°25'07.20"N Latitude and 74°31'02.53"E to 74°31'19.67"E Longitude in Survey of India topo-sheet No.H43I6/H43I7 and H43I10/H43I11, at an elevation of 31.4m AMSL. The ground water table reported to ranges between 0.06-7.78 m below the land surface during the post-monsoon season and 0.67-7.43 m below the land surface during the pre-monsoon season. There will be no ground water extraction.

10.3.8 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 for corridor for Schedule-I fauna.

10.3.9 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process.

S. No.	Type	Source	Quantity, TPD			Disposal
			Existing	Proposed	Total	
Hazardous Waste						
1.	ETP Sludge	ETP	10.00	7.00	**17.00**	Disposedto local cardboard manufacturers.
2.	Lime Sludge	Causticizing	173.00	54.35	**227.35**	Calcination in Cement Plants
Solid Waste						
1.	Fly Ash	Boiler House	63.75	51.25	**115.00**	For brick manufacturing & filling of the low lying areas

10.3.10 The targeted production capacity of the writing & printing paper is 600 TPD and CPP is 44 MW. The Raw material for the plant would be procured from local area. The raw material transportation will be done through Road.

S.No	Name of Raw Materials	Existing (TPD)	Proposed (TPD)	Total (TPD)
1.	Imp. Waste Paper	0.0	35.3	35.3
2	Imp. Wood Pulp	0.0	32.6	32.6
3	Paper Additives	7.5	4.4	12.0
4	Soap Stone	65.6	52.3	118.0
5	Wheat Straw, Sarkanda, Bagasse	533.0	105.0	638.0
6	Wood Chips	150.0	205.6	355.6
7	Caustic	130.4	52.3	182.8
8	Liquid Oxygen	6.1	3.5	9.6
9	Chlorine Dioxide	3.4	4.6	8.0
10	Oxy Bleach Booster	0.0	4.4	4.4
11	Lime	95.2	32.2	127.4
	Total	991.4	528.8	1520.3

Fuel Requirement

S. No.	Fuel	Quantity, TPD			Source
		Existing	Proposed	Total	
1.	Rice Husk	500	400	900	Local Suppliers
2.	Black Liquor	400	300	700	In-House

10.3.11 The water requirement of the project is estimated as 24,000 m^3 /day, Out of which 24,000 m^3/day of will be obtained from the Arniwala Canal andThe permission for drawl of surface water has been obtained vide Lr. No. 14/04/2011- (2)/1338801/1 date 23/10/2018.

10.3.12 The power requirement of the project is estimated as 32 MW, which will be obtained from the In-house CPP.

10.3.13 Baseline Environmental Studies were conducted during winter season i.e. from 1st December 2018 to 28thFebruary, 2019. Ambient air quality monitoring has been carried out at 8 locations during 1stDecember 2018 to 28thFebruary 2019 and the data submitted indicated: PM_{10} (62.5 μg/m^3 to 88.6μg/m^3), $PM_{2.5}$ (32.8to 48.3μg/m^3), SO_2 (9.6to 16.7μg/m^3) and NOx (14.2to 21.5μg/m^3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 1.09 μg/m^3 with respect to the PM_{10}, 1.91 μg/m^3 with respect to the SO_2 0.44 μg/m^3 with respect to the NOx.

10.3.14 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 7.04to 7.94, Total Hardness: 112to 1200 mg/l, Chlorides: 40 to 875mg/l,Fluoride: 0.4to 0.7mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 3 locations. pH: 7.23 to 7.75; DO: 4.9to 5.1mg/l and BOD: <4 to 6mg/l. COD from 10to 16mg/l.

10.3.15 Noise levels are in the range of 49.8 to 77.4dBA for daytime and 42.8to72.1dBA for nighttime.

10.3.16 It has been reported that there are not any people habitation in the core zone of the project. No R&R is involved. It has been envisaged that no families to be rehabilitated, which will be provided compensation and preference in the employment.

10.3.17 It has been reported that a total of 356.35 TPD of waste will be generated due to the project, out of which 115.00 TPD fly ash will be used in brick manufacturing & filling of the low lying areas, 227.35 TPD lime sludge will be used in calcination in cement plants. 17 TPD of ETP sludge will be disposed to local cardboard manufacturers. It has been envisaged that an area of 6.0832 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.

10.3.18 It has beenreportedthattheConsenttoEstablish/ConsenttoOperatefromthe Punjab State Pollution Control Board obtained vide No. CTOA/Fresh/MKS/2018/7687794 and CTOW/Fresh/MKS/2018/7687650 dated 09/07/2018 and consent is valid up to 31/03/2023.

10.3.19 The Public hearing of the project was held on 04/07/2019 at 12.00 pm at the main gate of the industry located in the revenue estate of village Rupana under the chairmanship of Dr. Richa Sharma (IAS), Dr. Manoharlal Chauhan, Environmental Engineer (Mega) PPCB- Patiala, Shri Ravi Pal, Asstt. Environmental Engineer, PPCB-Regional Office Bhatinda for enhancement of production capacity of writing & printing paper from300 to 600 TPD andCo-Gen Power Plant(30 MW to 44 MW), under the category 5(i), "A". The issues raised during public hearing are such as Water Usage, Employment Generation etc. All the queries have been answered satisfactorily. An amount of 3.75

crore (0.75 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

10.3.20 The capital cost of the project is Rs. 500 Cr. and the capital cost for environmental protection measures is proposed as Rs. 15 Cr. The annual recurring cost towards the environmental protection measures is proposed as Rs. 1.0 Cr/annum. The employment generation from the proposed project / expansion is 500.

10.3.21 Greenbelt will be developed in 6.0832 ha which is about 33% of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare.Additional 4063 saplings will be planted and nurtured in 2.4379 hectares in 5 years.

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

Observations and recommendations of the Committee:

10.3.23 EIA report is not as per the Appendix -III of EIA Notification, 2006. Therefore, the committee returned the proposal in the present form.

10.4 Steel Plant of **M/s. Vedanta Limited** (Formerly M/s. Sesa Industries Limited)located at Village Amona/ Navelim Taluka Bicholim District North Goa, Goa [MoEF&CC File No. J-11011/946/2007-IA.II(I)] – **Compliance to the NGT order dated 4th December 2017 in Original Application No. 111 of 2017 in the matter of Shri.RamachandraVaman Vs M/s Sesa Goa Ltd &Ors regarding.**

10.4.1 M/s. Vedanta Ltd (formerly M/s. Sesa Goa Ltd) is operating steel plant at villages Amona and Navelim, Taluka Bicholim, District North Goa. The present case is with reference to NGT order dated 4th December 2017 in Original Application No. 111 of 2017 in the matter of Shri.RamachandraVaman Vs M/s Sesa Goa Ltd &Ors.

Brief on Court Case:

10.4.2 In 2010, a writ petition was filed in the High Court of Bombay, at Goa against the expansion project which was subsequently converted into a PIL bearing No. WP No. 4 of 2011. The Hon'ble High Court of Bombay vide judgment dated 6.3.2012 dismissed the PIL. This order of the Hon'ble High Court came to be challenged by way of appeal before the Hon'ble Supreme Court of India in form of SLP No. 31647/2012. The Hon'ble Supreme Court vide its order dated 7.11.2016 had transferred the matter (the SLP) to NGT Principal Bench at Delhi for consideration as denovoand uninfluenced by the view taken by the High Court. The Principal Bench of NGT Delhi on 4th December 2017 disposed of the case with following directions.

'Ministry of Environment, Forest and Climate Change to examine, if any, additional or further conditions that are required to be imposed on the Project Proponent for grant of Environmental Clearance, particularly keeping in view of the facts that the two units which clearly appear to be distinct units and hardly fall within the ambit and scope of

the word expansion, used in EIA Notification 2006. For this purpose, the applicant is at liberty to submit his suggestions to Ministry of Environment, Forest and Climate Change within two weeks. If the suggestions are not filed within two weeks to Ministry of Environment, Forest and Climate Change then the Ministry of Environment, Forest and Climate Change to proceed in accordance with law and pass appropriate order as expeditiously as possible'

10.4.3 In response to Hon'ble NGT orders, the applicant submitted the representation vide letter dated 01.02.2018. The issues raised in the representation are related to air pollution due to pig iron plant, seepage of wastewater, permission from Village Panchayat etc.

Action taken by the Ministry:

10.4.4 A hearing was held on 16thJuly 2018 in the chamber of Shri. Sharath Kumar Pallerla (Director). Both the petitioners and personnel from M/s Vedanta Ltd were presented. The petitioners alleged that due to proximity of the plant, the villagers are being affected by dust generated by the plant operations and nearby agriculture lands are contaminated by the seepage from project site. Further, the petitioners requested to consider the suggestions made in their representation and to make these as implementable conditions. The representative of M/s.Sesa Goa Ltd stated that they are complying the all the conditions of Environmental Clearance and also agreed to comply the additional conditions, if any advised by the Ministry to abate the pollution.

10.4.5 Regional Office, Bangalore and Goa State Pollution Control Board conducted a joint site inspection on 31.08.2018 in pursuance with the Ministry's request on the above representation. The site inspection report was submitted to the Ministry vide letter dated 07.09.2018 with some additional points for consideration of the Ministry.

10.4.6 In the meanwhile, the Ministry prescribed ToRs vide letter dated 06.03.2019 and consolidated proposal for modernization and expansion of the project which involves all the units (3 blast furnaces, coke plant and other facilities) considering recommendation of the EAC (Industry-1) meeting held during 9th -11thJanuary, 2018.

10.4.7 Decision on the additional points suggested by Regional Office was required to be taken. Accordingly, the competent authority in the Ministry referred the matter to EAC for deliberation to take decision on those additional points.

Observations of the Committee

10.4.8 Committee observed despite the fact that entire compound is divided into two parts by the internal industrial estate road, this physical separation had already been bridged through overhead conveyor, overhead gas pipeline, power distribution lines. For this connectivity, NOCs/permissions had been obtained by PP from the following competent authorities.

i. The Notification declaring industrial area dated 22.02.2001.

ii. The layout plan showing all the units of Value Added Business (Vedanta Ltd)

iii. Chart showing the inter-dependence and inter-connection of all the industrial units of Value Added Business

iv. NOC for overhead crossing of BFG line and coke conveyor across public road dated 14.04.2011

v. Extension of validity of NOC dated 14.03.2011 vide letter dated 29.04.2014

vi. Latest ground rent deposit receipt of 2019 for using government property dated 25.04.2019

vii. Letter to Sesa Goa by GIDC dated 13.06.2019 enclosing letter from GIDC to Sarpanch of village Panchayat Navelim dated 17.04.2013 alongwith approved plan

viii. GIDC letter of approval of revised plan for expansion of coke plant dated 15.02.2012.

ix. Approval from State electrical inspectorate for energizing 33KV cable from plant to substation of electricity department across the road dated 13.11.2014

x. Technical clearance from town planning department for overhead structural bridge for coke conveyor and BFG pipeline dated 23.01.2012

xi. Order from District Magistrate for diversion of traffic during proposed construction of overhead crossing of bridge carrying BFG pipeline and coke conveyor along with drawing of the site dated 12.09.2014

xii. NOC from Chief Electrical Engineer from evacuation of power dated 03.11.2014

xiii. Invoices of pig iron sold with same GST number irrespective of being produced from any furnace no.1,2 or 3.

xiv. Acceptance letter of E-auction ore to Vedanta Ltd as sample for raw material sourcing.

xv. Management Structure of Vedanta Ltd -Value Added Business.

10.4.9 It is also observed that the entire complex administratively functioning as single entity as is seen by the fact that both the parts have a common ownership, common administrative offices and functions, common places for raw material and marketing, common financial returns etc.

10.4.10 Therefore, though these two parts are spatially separated by internal industrial road but in terms of operations and management they are *defacto* one single entity.

10.4.11 The committee also examined the issues flagged in the joint inspection report of Regional Office, Bangalore and Goa Pollution Control Board, and also reviewed the conditions of Environmental Clearance dated 3rd June,2009as directed by NGT vide its order dated 4th December 2017 in the matter of 2017 in the matter of Shri. Ramachandra Vaman Vs M/s Sesa Goa Ltd &Ors.

Recommendations of the Committee

10.4.12 After deliberations, the committee recommended the following additional conditions to be added to the existing EC conditions.

a. Additional filter beds, arrester walls shall be provided along the storm water drainage for settlement of suspended particles and to prevent siltation. The runoff water shall be diverted in to settling ponds to prevent any siltation of river / nallahs / fields.

b. All the transportation roads within the project premises shall be fully asphalted / concreted in a phased manner to ensure the reduction of fugitive emissions and to get a clear runoff during monsoon.

c. Regular monitoring of ground water quality shall be carried out in one open well each in three villages i.e., Amona, Navelim and Maina villages in post and pre-monsoon seasons and the results shall be submitted to GSPCB under intimation to RO, MoEF&CC Bangalore.

d. One additional Continuous Ambient Air Quality Monitoring Station (CAAQMS)in consultation with GSPCB shall be established within the project premise towards the adjoining villages, and monitoring reports shall be submitted to the Goa State Pollution Control Board (GPCB) and CPCB.

e. Additional sprinkling arrangement in the raw material stacking area shall be done to control the fugitive dust within the project premise.

f. Secondary emission generated during charging, tapping of metal, slag tapping may be controlled by providing canopy hoods at proper elevation connected to air pollution control device without interfering with the production process.

g. The NOx and CO levels should be monitored at workplace at regular intervals (minimum once a week)and controlled.

h. Monthly monitoring of BaP, Pb, HC, VoCs shall be conducted and report shall be submitted to GSPCB and CPCB.

i. Performance evaluation of all air pollution control devices should be carried out through competent agencies as per the predetermined maintenance protocol of each equipment and report submitted to GSPCB and CPCB.

j. The tree density in the existing greenbelt should be increased by planting local species within the project boundary areas adjoining villages as CPCB guidelines.

k. All the above conditions shall also be incorporated in the six monthly report submitted to Regional Office, Bangalore, MoEF&CC.

10.4.13 The above mentioned opinion regarding the nature of functioning of complex as a single entity and also the above mentioned additional conditions have been arrived at through detailed deliberations by the committee. The committee recommended that the MoEF&CC may appropriately appraise Hon'ble NGT about therecommendation of the committee.

10.5 Expansion of Steel Plant by expanding Sponge Iron from 1,20,000 TPA to 3,18,000 TPA, MS Billets from 105000 TPA to 3,72,300 TPA, Rolling Mill from 100000 TPA to 300000 TPA, Submerged Arc Furnace (SAF) from 15000 TPA to 30000 TPA & Captive Power Plant from 16 MW to 42 MW including Waste Heat Recovery Boiler (WHRB) by **M/s Damodar Ispat Limited** located at Jamuria Industrial Estate, Village Ikra&Damodarpur,

Tehsil Jamuria, District Paschim Bardhaman, **West Bengal** [Online Proposal No. IA/WB/IND/113831/2019, File No. J-11011/366/2010-IAII(I)]**– Prescribing of Terms of Reference – regarding**

10.5.1 M/s. Damodar Ispat Limited has made application vide online proposal no. IA/WB/IND/113831/2019 dated 07/08/2019 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 (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

10.5.2 Damodar Ispat Limited proposes for Expansion of Steel Plant by expanding Sponge Iron from 1,20,000 TPA to 3,18,000 TPA, MS Billets from 105000 TPA to 3,72,300 TPA, Rolling Mill from 100000 TPA to 300000 TPA, Submerged Arc Furnace (SAF) from 15000 TPA to 30000 TPA & Captive Power Plant from 16 MW to 42 MW including Waste Heat Recovery Boiler (WHRB) at Jamuria Industrial Estate, Village Ikra & Damodarpur, Tehsil Jamuria, District Paschim Bardhaman, West Bengal.

10.5.3 The existing project was accorded environmental clearance vide letter no. J-11011/366/2010-IA.II(I) EC dated 1/04/2012& validity extended till 01/04/2022 and Consent to Operate for 50 TPD Direct Reduced Iron Unit (DRI)was accorded by West Bengal Pollution Control Board vide lr. no. 1822- WPBA/Red (Bwn)/Cont (535)/06 dated 16th August, 2018. Validity of CTO is up to 31st August, 2023.

10.5.4 The unit is located atJamuria Industrial Estate, Village Ikra&Damodarpur, Tehsil Jamuria, District Paschim Bardhaman, West Bengal. The latitude and longitude of the project site is 23º41'40.83" N to 23º41'59.49" N and 87º5'35.35" E to 87º5'35.35" E respectively.

10.5.5 Existing Plant area is 40.44 acres (16.37 ha). Additional land required for the expansion is 38 acres (15.37 ha). Hence, after expansion total plant area will be 78.44 acres (31.74 ha). It is already an industrial land. No/forestland involved. The entire land has been acquired for the project. 13.34 acres (5.4 ha) i.e. 33% of the existing plant area has already been covered under greenbelt & plantation. After expansion approx. 33% of the total plant area i.e. 25.88 acres (10.5 ha) will be developed under greenbelt & plantation.

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

10.5.7 Total project cost is approx. Rs. 837.19 Crore rupees. The existing manpower requirement is 910 persons (190 direct + 720 indirect). Additional employment generation from expansion project will be 1093 persons (218 direct +875 indirect).

10.5.8 The targeted production capacity of the Sponge Iron is 318000 TPA(1x 350 & 1X 600 TPD DRI Plant)TPA. MS Billets is 372300 TPA {8X15 Ton IF (Induction Furnace) & 1X30 Ton LF (Laddle Furnace)}, Rolling Mill(300000 TPA(310 TPD & 625TPD of rolled/bars/light structure), Submerged Arc Furnace (SAF) is 30000 TPA (2X9 MVAof

Fe-Mn/ Si-Mn), Waste Heat Recovery Boiler (WHRB) is 21 MW(35 TPH & 70 TPH), Captive Power Plant is 19 MW (1X 32 TPH & 50 TPH FBC boiler) and Billet Caster is 2X2 Strand. The Iron Ore would be procured from Orissa & Jharkhand and Iron Ore Pellets from Nearby plants e.g. Super Smelters Ltd, Shyam Sel etc. The ore transportation will be done through rail and road. The existing, proposed and total capacity for different products for expansion are as below:

S. No.	**Plant**	**Capacity as per granted EC dated 2nd April, 2012 & validity extension 24th May, 2019 till 1st April, 2022 (Under Planning & Implementation)**	**Additional Capacity Proposed**	**Total Capacity After Proposed Expansion**
1.	Sponge Iron	120000 TPA (1X 350 TPD DRI Plant)	198000 TPA (1X 600 TPD DRI Plant)	318000 TPA (1x 350 & 1X 600 TPD DRI Plant)
2.	MS Billets	105000 TPA {2X15 Ton IF (Induction Furnace) & 1X30 Ton LF (Laddle Furnace)}	267300 TPA {6X15 Ton IF (Induction Furnace)}	372300 TPA {8X15 Ton IF (Induction Furnace) & 1X30 Ton LF (Laddle Furnace)}
3.	Rolling Mill	100000 TPA (310 TPD of rolled/bars/light structure)	200000 TPA (625 TPD of rolled/bars/light structure)	300000 TPA (310 TPD & 625TPD of rolled/bars/light structure
4.	Submerged Arc Furnace (SAF)	15000 TPA (1X9 MVA of Fe-Mn/ Si-Mn)	15000 TPA (1X9 MVA of Fe-Mn/ Si-Mn)	30000 TPA (2X9 MVA of Fe-Mn/ Si-Mn)
5.	Waste Heat Recovery Boiler (WHRB)	7 MW (35 TPH)	14 MW (70 TPH)	21 MW (35 TPH & 70 TPH)
6.	Captive Power Plant	9 MW (1X 32 TPH FBC boiler)	12 MW (50 TPH FBC boiler)	21 MW (1X 32 TPH & 50 TPH FBC boiler)
7.	Billet Caster	---	2X2 Strand	2X2 Strand
8.	Railway Siding with wagon Tippler			

10.5.9 The electricity load of 84.3 MW will be procured from 42 MW CPP and balance from West Bengal State Power Grid/DVC. Company has existing one DG set of 380 KVA and proposes to install 3x2000 kVA DG Set.

10.5.10 Total raw material and fuel requirement for project:

S. No.	Required Raw Material	Estimated Quantity (in TPA)			Source of Raw Material	Mode of Transportation	Distance from Project Site (Km)
		Existing	Additional	Total after expansion			
I	Sponge iron						
1	Iron Ore / Iron Ore Pellets	1,74,000	3,36,600	510600	Iron Ore – From Orissa & Jharkhand	Rail	250-280 KM
					Iron Ore Pellets – Nearby plans e.g. Super Smelters Ltd, Shyam Sel etc.	Road	Within 2 KM
2	Coal (Imported)	1,38,000	2,97,000	435000	To be procured through reputed importers like Adani global Pte limited, Saraogi Global Pte Limited, Swiss Singapore Overseas, Coal India ltd, Avani, JSW Intl, etc	Ship& Rail	Over Sea
3	Dolomite	8,000	13,860	21,860	To be procured from Bhutan	Rail/Road	900-920 KM
II	Steel Melting Shop						
1	Pig Iron	15,750	47,250	63,000	To be procured mainly from Tata Steel, SAIL, etc as well as other reputed suppliers.	Road	22,150-170 KM
2	DRI	99,750	2,13,750	3,13,500	Own Production and other nearby steel mills, if required.	Own	Own
3	Scrap	5,350	20,310	25,660	To be procured through Indica Group	Ship& Rail	Over Sea

S. No.	Required Raw Material	Estimated Quantity (in TPA)			Source of Raw Material	Mode of Transportation	Distance from Project Site (Km)
		Existing	Additional	Total after expansion			
					Limited, Ayaan Global FZE and other reputed suppliers.		
4	Ferro Alloys	2,100	6,300	8400	Silico Manganese from own production / Indsil energy & Electro Chemicals Limited and other suppliers	Own	Own
III	Rebar Mills						
1	Billets	1,05,000	2,67,300	3,72,300	Own Production		
IV	Ferro Alloys Plant: Silico Manganese						
1	Manganese Ore	40,500	40,500	81,000	Import from South Africa / domestic purchase from state of Madhya Pradesh, Karnataka, etc	Rail/Road	900-950 KM
2	Coal / Coke	10,000	10,000	20,000	Import / Local Purchase	Road	Within 10-15 KM
3	Electrode Paste	300	300	600	Purchase from Maharashtra, West Bengal, Karnataka, etc	Road	20-25 KM
4	Oxygen Lancing Pipe, Casting Sheets, etc	150	150	300	Local sources	Road	Within 10-15 KM
V	Captive Power Plants						
1	Indian Coal for CPP	75,000	85,000	1,60,000	Auction – Eastern Coal fields Limited (ECL) and Northern Coal field	Road	20-25 KM

S. No.	Required Raw Material	Estimated Quantity (in TPA)			Source of Raw Material	Mode of Transportation	Distance from Project Site (Km)
		Existing	Additional	Total after expansion			
					Limited (NCL) and suppliers like Adani Enterprises and Agarwal Coal Corporation		

10.5.11 Existing fresh water requirement is 2420 KLPD, additional fresh water requirement for the proposed expansion will be 1758 KLD. Thus, total water requirement for the entire plant shall be around 4178 KLPD (Existing 2420 KLPD + Proposed 1758 KLPD) which will be sourced from Asansol Durgapur Development Authority (ADDA) & Ajay River and wastewater of 820 m^3/day will be generated. Industrial waste water generated will be treated in Effluent Treatment plant and reused in toilet flush, gardening, road sprinkling, floor washing, housekeeping etc. Domestic waste water will be treated in sewage treatment plant.

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

10.5.13 Name of the Consultant: J. M. Environet Pvt. Ltd. (Sl. No. 88 in the List of Accredited EIA Consultants dated 10thJuly 2019, List of Accredited Consultant Organizations (Alphabetically) Rev. 78, July 10, 2019).

Observations of the Committee:

10.5.14 The previous EC is yet to be implemented. It is reported that the facilities for which Environmental Clearance was issued will be commissioned by2020-21.

Recommendations of the Committee:

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

i. Cumulative environmental impact assessment of existing 50 TPD kiln, facilities envisaged in the EC dated 1/04/2012 and the current proposal under consideration shall be carried out and submitted.
ii. The PP should explore the possibility of changing the configuration of Induction Furnaces., i.e., 3x30 T IF in place of 6x15 T.
iii. EIA study *inter alia*should include 'No ground water abstraction'.
iv. Traffic assessment study of materials shall be furnished.
v. Additional green belt in an area of 12.54 acres shall be planned and shown on the layout.
vi. Scheme for rainwater harvesting plan shall be furnished.

vii. CER budget shall be based on treating the project as greenfield project shall be worked out and submitted as the previous EC facilities are yet to be implemented.

10.6 Expansion of existing pellet plant [1.32 (2 x 0.66) Million TPA to 1.92 Million TPA & 1.2 (2 x 0.6) Million TPA to 1.92 Million TPA] by augmentation, process optimization & increasing number of working days/annum and setting up new pellet plant 3.0 Million TPA (2 x 1.5 Million TPA) with producer gas plant 75,000 Nm^3/hr to reach total capacity of 6.84 Million TPA (4 x 0.96 Million TPA + 2 x 1.5 Million TPA) pellet plant with producer gas plant 2,25,000 Nm^3/hr (30 x 7,500 Nm^3/hr) **by M/s. Orissa Metaliks Private Limited (OMPL)** located at village – Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), District Paschim Medinipur, West Bengal [Online Proposal No. IA/WB/IND/114212/2019, File No. J-11011/604/2010-IA.II.(I) & J-11011/182/2012-IA.II.(I)]**– Prescribing of Terms of Reference – regarding**

10.6.1 M/s. Orissa Metaliks Private Limited has made application vide online proposal no. IA/WB/IND/114212/2019 dated 12/08/2019 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 (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

10.6.2 M/s. Orissa Metaliks Private Limited has proposedfor expansion of existing pellet plant [1.32 (2 x 0.66) Million TPA to 1.92 Million TPA & 1.2 (2 x 0.6) Million TPA to 1.92 Million TPA] by augmentation, process optimization & increasing number of working days/annum and setting up new pellet plant 3.0 Million TPA (2 x 1.5 Million TPA) with producer gas plant 75,000 Nm^3/hr to reach total capacity of 6.84 Million TPA (4 x 0.96 Million TPA + 2 x 1.5 Million TPA) pellet plant with producer gas plant 2,25,000 Nm^3/hr (30 x 7,500 Nm^3/hr), 3.0 Million TPA (2 x 1.5 Million TPA) I/O Beneficiation plant and 0.225 Million TPA coke oven plant along with 15 MW WHRB based CPP based on Grate-Kiln-Cooler technology the most energy efficient system for producing Indurated Pellets.

10.6.3 The existing project was accorded environmental clearance vide letter no. J-11011/ 604/2010-IA II(I) dated 01.06.2012, 04.01.2017 & 02.06.2017 and letter no. J-11011 /182/2012- IA II (I) dated 24.02.2015.

10.6.4 Consent to Establish from West Bengal Pollution Control Board for 1.32 MTPA (0.66 MTPA X 2) Pellet Plant, 1.5 MTPA I/O Beneficiation Plant & Producer Gas Plant - 75000 Nm^3/hr vide NOC No-145461 vide memo No-624-2N-76/2015(E) dated 23.09.2016 & 25.07.2017. Consent to Establish for 1.2 MTPA (0.66 MTPA X 2) Pellet Plant & Producer Gas Plant -75000 Nm^3/hr vide NOC No-147039 memo No-403-2N-76/2015(E); dated 09.07.2017 & 12.10.2018. Consent to Operate for pellet plant and producer gas plant with I/O Beneficiation plant vide CO No- 106556 dated 27.12.2017 & CO No-113741 dated 19.03.2019. Validityof CTO is up to 31/10/2021.

10.6.5 The proposedunitwillbelocatedat Village – Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), Dist. Paschim Medinipur in the state of West Bengal.

10.6.6 The land area acquired for the proposed plant "new 3.0 MTPA (2 x1.5 MTPA) Pellet plant with Producer Gas Plant 75000 Nm^3/hr is 11 acres (4.45 hectare) and expansion of existing pellet plant will be done in existing plant premises of 70 acres (28.328 hectare). The in- principal approval for additional 11 acres land is being obtained from WBIDCL. No/forestland involved. Of the total additional area of 4.45 hectare, 1.46 hectare (33%) land will be used for green belt development and out of the total existing 28.328 plant area 9.348 hectare (33%) land is being/ will be developed under green belt and plantation.

10.6.7 No nationalpark/wildlife sanctuary/biosphererereserve/tigerreserve/elephant reserve etc. arereported to be locatedin the coreand buffer zoneof theproject. Thearea also does not report to form corridor for Schedule-Ifauna.

10.6.8 Total project cost is approx. 300 Crores rupees. The existing manpower for the operational plant is 343 (133 regular & 210 contractual). Proposed employment generation from proposed project will be 150 direct employment and 240 indirect employment.

10.6.9 Thetargetedproductioncapacityof thesteel plant is as mentioned in table below. The Iron ore, Coal, Limestone and other raw materials are being/will be transported through rail and/or through road. The proposed capacity for different products for the area is as below:

Name of the Units	**Existing Production Detail**		**Proposed Additional Production**		**Total (Existing + Proposed)**
	EC dated 01.06.2012, 04.01.2017 & 02.06.2017	**EC dated 24.02.2015**	**By Modernization, Argumentation & increasing annual working days**	**New Installation**	
Iron Ore Beneficiation Plant	1.5 Million TPA	1.5 Million TPA	-	-	3.0 Million TPA (2 x1.5 Million TPA)
Pellet Plant	1.32 Million TPA (2 x 0.66 Million TPA)	1.2 Million TPA (2 x 0.6 Million TPA)	1.32 Million TPA (1.32 to 1.92 Million TPA & 1.2 to 1.92 Million TPA)	3.0 Million TPA (2 x1.5 Million TPA)	6.84 Million TPA (4 x 0.96 Million TPA + 2 x1.5 Million TPA)
Producer Gas Plant	75,000 Nm^3/hr (10 X 7,500 Nm^3/hr)	75,000 Nm^3/hr (10 X 7,500 Nm^3/hr)	-	75,000 Nm^3/hr (10 X 7,500	2,25,000 Nm^3/hr (30 X 7,500 Nm^3/hr)

Name of the Units	Existing Production Detail		Proposed Additional Production		Total (Existing + Proposed)
	EC dated 01.06.2012, 04.01.2017 & 02.06.2017	EC dated 24.02.2015	By Modernization, Argumentation & increasing annual working days	New Installation	
				Nm^3/hr)	
Coke oven plant	-	2,25,000 TPA	-	-	2,25,000 TPA
CPP-WHRB based	-	15 MW	-	-	15 W

10.6.10 The existing connected power demand for EC awarded project is 34.71 MW and the additional electricity load of 22.09 MW will be required for proposed project. Total connected power requirement will be 56.80 MW and is being/ will be procured from Captive Power Plant and WBSEDCL (West Bengal State Electricity Transmission Company Limited).

10.6.11 Proposed raw material and fuel requirement for the project are given below:

Sr. No.	Description	Source	Mode of Transport	Distance from Project Site (Km)	Total Quantity (TPA)		
					Existing	Proposed	Total
1	Iron Ore Fines	Barbil, Joda, Orissa	Road/Rail	201	35,29,400	---	35,29,400
2	High graded Iron Ore	Barbil, Joda, Orissa	Road/Rail	201	--	44,24,000	44,24,000
3	Bentonite	Rajasthan/Gujarat	Road/Rail	1500/1800	50,400	(+) 86,400	1,36,800
4	Non Coking Coal	E Auction, Imported	Road/Rail/ Ship	---	75,600	(+) 1,29,600	2,05,200
5	Coking Coal	Purchased from BCCL, Dhanbad Alternate source: Imported	Road/Rail/ Ship	177	3,00,000	--	3,00,000
6	Limestone	Birmitrapur, Orissa / Bilaspur, Raipur MP	Road/Rail	264/541	50,400	(+) 86,400	1,36,800

10.6.12 Water Consumption after the proposed expansion will be 53.6 m^3/hr and no waste water will be generation. Domestic waste water will be treated in STP and Company is/ will

follow "the zero wastewater discharge concept" and the entire wastewater is/will be recycled to the plant for greenbelt development & plantation, dust suppression.

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

10.6.14 Name of the consultant: Visiontek Consultancy Services Pvt. Ltd. [S.No. 155, List of Accredited Consultant Organizations (Alphabetically) Rev. 78, July 10, 2019].

Observations of the Committee:

10.6.15 The committee observed the following.

i. The proposal lacks clarity on the modifications and capacity enhancement required.
ii. More than 1300 m^3/day of groundwater is being abstracted and no details on exploring the possibility of withdrawal of surface water adjacent perennial Kasai River.
iii. The satellite image does not corroborate the stated 29% greenbelt as furnished.
iv. Existing layout is congested. The proponent could not justify the facts reported in their application.

Recommendations of the Committee

10.6.16 Therefore, the committee after detailed deliberations, decided to conduct site visit to verify the ground situation by a sub-committee comprising of Shri.R.P.Sharma, Shri.J.S.Kamyotra along with a representative of MoEF&CC.

10.7 Low Carbon Ferro Alloys Plant with capacity 18,000TPA over an area of 4.5Acre by **M/s. Mohashakti Ferroalloys Pvt Ltd** located at Bargada Village, Bayree of **Jajpur District, Odisha** [Online Proposal No. IA/OR/IND/97783/2019, File No. IA-J-11011/75/2019-IA.II (I)] **– Amendment in Terms of Reference for inclusion of Manganese Roasting Unit of 6000 TPA capacity – regarding**

10.7.1 M/s. Mohashakti Ferroalloys Private Limited has made an online application vide proposal no. IA/OR/IND/97783/2019dated 30/07/2019 along with Form 3 sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. IA-J-11011/75/2019-IA.II (I) dated 08/05/2019 for inclusion of Manganese Roasting Unit of 6000 TPA capacity.

Details submitted by the project proponent

10.7.2 M/s. Mohashakti Ferroalloys Private Limited was accorded Terms of Reference (ToR) by the Ministry vide letter no. IA-J-11011/75/2019-IA.II (I) dated 08/05/2019 for the following units located at Bargada Village, Bayree of Jajpur District, Odisha:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Proposed Production			
Low Carbon Ferrochrome	1(One)	6000 Tons per Annum	6000 Tons per Annum

Existing Unit (CTE Obtained by OSPCB, Bhubaneswar)			
Low Carbon Ferromanganese	1(One)	6000 Tons per Annum	6000 Tons per Annum
Ferro Vanadium	1(One)	3000 Tons Per Annum	3000 Tons Per Annum
Ferro Molybdenium	1(One)	3000 Tons Per Annum	3000 Tons Per Annum
Alumina Bricks (From Generated Slag)	1(One)	10000 Nos per Annum	10000 Nos per Annum

10.7.3 It was informed that baseline study was conducted during the period of March to May 2019 and the EIA report is presently under preparation.

10.7.4 M/s. Mohashakti Ferroalloys Private Limited has now sought for amendment in Terms of Reference for inclusion of Manganese Roasting Unit of 6000 TPA capacity. It was informed that due to the addition of Manganese Roasting Unit of 6000 TPA capacity there will be no other changes in the scope of the project for which ToRwas accorded by the Ministry on 08/05/2019.

10.7.5 Name of the consultant: Kalyani Laboratories Private Limited [S.No. 91, List of Accredited Consultant Organizations (Alphabetically) Rev. 78, July 10, 2019].

Observations and recommendation of the Committee

10.7.6 The Committee considered the proposal, and after detailed deliberations, recommended the proposal for amendment in the ToR letter no. IA-J-11011/75/2019-IA.II (I) dated 08/05/2019 as cited above.

10.8 Expansion of MS Ingot / MS Billet production from 57,600 TPA to 204,200 TPA and Rolled Production from 88,200 TPA to 200,000 TPA by **M/s. Kashi Vishwanath Steels Private Limited l**ocated at Narain Nagar Industrial Estate, Bazpur Road, Kashipur**District - Udham Singh Nagar, Uttarakhand** [Online Proposal No. IA/UK/IND/111794/2019, File No. J-11011/195/2019 IA.II(I)] **– Amendment in Terms of Reference with respect to specific ToR No.(i) regarding ground water drawl regarding.**

10.8.1 M/s. Kashi Vishwanath Steels Pvt. Ltd., has made an online application vide proposal no. IA/UK/IND/111794/2019 dated 22nd July, 2019 along with copies of Form – 3 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.

10.8.2 The proposal for expansion of existing project by increasing production of MS Ingot / MS Billet production from 57,600 TPA to 204,200 TPA and Rolled Production from 88,200 TPA to 200,000 TPA was prescribed ToRs for conducting detailed EIA study with following specific Terms of Reference as recommended by EAC in its meeting held during 29-31st May 2019 vide letter File No. J-11011/195/2019 IA.II(I) dated 10th July 2019.

i. No ground water abstraction is permitted.
ii. Rain water harvesting and recharge shall be more than the water consumption.
iii. Stack emissions shall be maintained below 30 mg/Nm^3.
iv. PP shall develop green belt in an additional area of 2 ha outside the project site within the study area. The existing green belt needs improvement.
v. Detailed engineering drawing showing shop wise details of facilities installed, storage yard for raw materials and products and green belt shall be furnished.
vi. PP shall not use producer gas for reheating.
vii. Details of metal recovery plant including treatment of the wastewater shall be provided.
viii. PP shall ensure 100% waste utilization.

10.8.3 Now, Project Proponent has made application for amendment in ToRs pertaining to abstraction of ground water. PP has made application to CGWA for the same.

10.8.4 Project Proponent vide letter dated 22/08/2019 requested the Ministry to withdrew the proposal.

Observations and recommendation of the Committee

10.8.5 The Committee after detailed deliberations, acceded to the request of project proponent for withdrawal of the proposal cited above.

10.9 Proposed Expansion of Clinkerisation Plant (4.0 to 8.0 MTPA) along with Captive Power Plant (55 to 160 MW) by **M/s. UltraTech Cement Limited** located at Village Vayor, Taluka - Abdasa, District Kutch, **Gujarat** [Online Proposal No. IA/GJ/IND/113014/2015, File No. J-11011/398/2007-IAII(I)]**– Environment Clearance regarding.**

10.9.1 M/s. UltraTech Cement Limited has made an online application vide proposal No. IA IA/GJ/IND/113014/2015 dated 2/08/2019 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(b) Cement Plants under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

10.9.2 The proposed expansion of Clinkerization Plant (4.0 to 8.0 MTPA) along with Captive Power Plant (55 to 160 MW) of M/s.UltraTech Cement Limited (Unit: Sewagram Cement Works) located at Village: Vayor, Taluka- Abdasa, District - Kutch (Gujarat)was initially received in the Ministry on 16thFebruary, 2015 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006.

10.9.3 The project was appraised by the Expert Appraisal Committee (Industry)[EAC (I)]during its 35thmeetingheld ondated 26th- 27th March, 2015and 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 05th August, 2015 *vide*letter no. J-11011/398/2007-IA II (I) and

extension of validity of the same for another one year has also been obtained from MoEFCC, New Delhi on 16th August, 2018.

10.9.4 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 02nd August, 2019 *vide* Online Application No. IA/GJ/IND/113014/2015.

10.9.5 The project of M/s. UltraTech Cement Limited (Unit: Sewagram Cement Works) located in Vayor Village, Abdasa Taluka, Kutch District, Gujarat State is for proposed expansion of Clinkerization Plant (4.0 to 8.0 MTPA) along with Captive Power Plant (55 to 16o MW) at Village - Vayor, Taluka- Abdasa, District - Kutch (Gujarat). The existing project was accorded Environmental Clearance vide letter no. J-11011/398/2007.IA II(I) dated 04th August, 2008 and same has been transferred toM/s. UltraTech Cement Limited (UTCL) vide letter dated 22nd July, 2015.

10.9.6 The *Status* of compliance of earlier EC was obtained from Regional office, Bhopal *vide* letter no. 5-194/2008 (ENV) 271 dated 10.08.2016.

10.9.7 Details of production capacities after expansion are given in below table:

Units	Existing capacity	Additional capacity	Total capacity after expansion
Clinker (MTPA)	4.0	4.0	8.0*
Cement (MTPA)	7.2	Nil	7.2
Captive Power Plant (MW)	55	105	160
Desalination Plant (KLD)	6700	Nil	6700
D.G. Set (MW)	20	Nil	20

***Clinker will also be sent to Sister Grinding Units of UltraTech Cement Ltd.*

10.9.8 The proposed expansion will be carried out within the existing Plant premises, no additional land will be required; the existing plant and colony area is 699.84 ha. The entire land is totally under the possession of M/s. UltraTech Cement Limited (Unit: Sewagram Cement Works). No forest land is involved. No River passes through the project area. It has been reported that seven water body i.e. Khari River; RakhadiNadi, BarkhaNadi; BerwallNadi; BhalyawalTalav; GolayNadi and KasadwaliNadi exist within the study areaand modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

10.9.9 The topography of the area is almost flat and reported to lies between 23°24' 38.80" N to 23°27' 15.83" N Latitude and 68°40' 51.38" E to 68°43' 45.91" ELongitude in Survey of India toposheet no. 41A/10 & 41a/11 (Restricted) at an elevation of about 29- 56 m. The ground water level reported to ranges between 7.5 m to 16.5 m below the land surface during the post- monsoon season. Based on the hydro-geological study, it has been reported that the stage of groundwater development in the area is reported to 22.9 % and thereby, these are designated as Safe area.

10.9.10 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

authenticated list of flora and fauna provided through the Primary survey and Secondary data reports the presence of Two Schedule-I fauna i.e., Indian Peafowl (*Pavocristatus*) and Chinkara (*Gazellabennettii*) were found within 10 km radius of the study area.

10.9.11 The raw materials required for the proposed expansion of clinkerization plant are limestone, clay & laterite. The clinkerizationplant is based on Dry Process Technology for Cement manufacturing with Pre -heater and Pre- calcinerTechnology.

Clinker process mainly comprises of the following steps:

- Transport of excavated limestone from mine site to plant
- Raw Mix Preparation & Homogenization
- Pre-heating and Calcinations
- Clinker cooling
- Clinker storage

No waste will be generated during Clinker / Cement manufacturing process.

10.9.12 The targeted production capacity of the Clinker (8.0 MTPA), Cement (7.2 MTPA), CPP (160 MW) and Desalination Plant (6700 KLD) & D.G. Set (20 MW). Limestone will be sourced from the Captive Limestone Mine; which will be sourced through by Road/Proposed covered conveyer belt; Clay will be sourced from Ashapura China Clay Mines / Captive Clay Mine through Road and Laterite will be sourced from Captive Baranda Laterite Mine through road.

10.9.13 Water requirement for the project is estimated as6340 m^3/day; which will be sourced from the Desalination Plant/ground water. Environment clearance for the drawl of (6700 KLD) water from desalination plant is obtained from MoEFCC, New Delhi vide letter no. J- 11011/398/2007-IA. II (I) dated 04th August, 2008; Further name change in EC *vide* letters dated 15th April, 2011, 05th Sept., 2014 and 22nd July, 2015.

10.9.14 Total power requirement after proposed expansion is estimated as 125 MW; which will be sourced from which is being / will be sourced from Captive Power Plant& D.G. Set (for back-up).

10.9.15 Baseline Environmental Studies were conducted during Post Monsoon Season i.e. from Oct., to Dec 2017. Ambient air quality monitoring was carried out at 9 locations during 01stOct., 2017 to 31st Dec., 2017 and the data submitted indicated: PM_{10} (56.9 to 89.8 µg/m^3), $PM_{2.5}$ (27.3 to 46.5 µg/m^3), SO_2 (6.1 to 12.3 µg/m^3) and NO_2 (13.9 to 24.4 µg/m^3).The results of the modeling study indicates that the maximum increase of GLC for the proposed Project is1.98 µg/m^3 with respect to the PM, 4.91 µg/m^3 with respect to the SO_2, 6.45 µg/m^3 with respect to the NO_x.

10.9.16 Ground water quality has been monitored at 8 locations in the study area and analyzed. pH: 7.25 to 8.08, Total Hardness: 102.0 to 989.4mg/l, Chlorides: 201.86 to 910.16, Fluoride: 0.78 to 1.90 mg/l. Heavy metals are within the limits. Surface water samples were not collected as the above locations as all the water bodies are seasonal and were found dry during the study period.

10.9.17 Noise levels are in the range of 51.9to 60.1 Leq dB (A) for day time and 41.5 to 55.3 Leq dB(A) for night time.

10.9.18 It has been reported that there is no population / habitation in the core zone of the project. No R&R is involved.

10.9.19 No solid waste will be generated in the cement manufacturing process. Dust collected from various air pollution control equipments being/will be totally circulated into the process. STP Sludge will be utilized as manure for greenbelt development within the plant premises. Fly ash generated from captive thermal power plant is being / will be utilized in cement manufacturing process. No hazardous waste is being / will be generated except the used oil which is being / will be collected in drums, temporarily stored at earmarked place and is being / will be sold to the authorized CPCB recyclers. It has been envisaged that an area of 232.0ha will be developed as greenbelt within the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

10.9.20 It has been reported that the Consent to operate for the Existing capacities from the Gujarat Pollution Control Board is obtained *vide* Consent Order no. AWH 98120 dated 25th Dec., 2018; *vide* Consent Order No. AWH-98039 dated 24th Dec., 2018; *vide* Consent Order No. AWH-98104 dated 25th Dec., 2018; *vide* Consent Order No. AWH-98039 dated 24th December, 2018.

10.9.21 Public hearing of the project was held on 12thFeb., 2019at 11:00 am at Sewagram Cement Works colony, Opp. M/s UltraTech Cement Ltd. (Koteshwar Gate)under the chairmanship of Shri KuldipsinhJhala, (G.A.S.), Resident Additional Collector and Additional District Magistrate, Kutch as representative of District Magistrate and District Collector, Kutch supervised and presided over the Public hearing proceedings for Proposed Expansion of Clinkerization Plant (4.0 to 8.0 MTPA) along with Captive Power Plant (55 to 16o MW) at Village - Vayor, Taluka- Abdasa, District - Kutch (Gujarat)under the Gujarat Pollution Control Board. The issues raised during public hearing are employment, Pollution, Education, Health, Plantation, CSR activities related and road related Issues.

10.9.22 The capital cost of the project was proposed Rs. 3500 Cr. at the time of project proposal, but looking in to recent project cost considering the cost effective technological up-gradation the revised project cost is Rs.1500 Cr. The capital cost for environmental protection measures is proposed for an amount of Rs. 90 Cr. The annual recurring cost towards the environmental protection measures is proposed as Rs. 15 Cr/annum. The employment generation from the proposed expansion project is 2891 persons.

10.9.23 Greenbelt will be developed in 232.0 ha;which is about 33% of the total project area. out of which 120.30 ha area have already been developed under greenbelt / plantation and remaining 111.70 ha area is proposed to be developed under greenbelt / plantation and will be developed along the plant boundary as per CPCB/MoEFCC, New Delhi guidelines. Local and native species will be planted with a proposed density of 1500 trees per hectare.

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

Observations and recommendations of the Committee:

10.9.25 After detailed deliberations, the committee deferred the proposal with recommendation of revised EIA report incorporating, inter alia, the following.

i. Certified compliance report of existing EC and CRZ clearance from Regional Office of MoEF&CC shall be furnished.
ii. Pet cokeis not permitted to be used as fuel in power plant.
iii. Plan for no -groundwater -abstraction.
iv. CER to be revisedfor a period of three years.
v. Proposal for safe disposal of rejects of the desalination plant.
vi. Action plan for improvement of greenbelt shall be furnished.
vii. Feasibility of installing high pressure boiler for optimal energy recovery.
viii. Rainwater harvesting plan for more than 100 % of the consumption and its monitoring and measurement plan.
ix. CRZ clearance obtained for the desalination plant shall be furnished.

10.10 Expansion of MS Billets / MS Ingots Production from 1,00,000 to 1,45,000 TPA TMT Bars / Structural steel Production from 1,00,000 TPA to 3,00,000 TPA Producer Gas plant (Gasifier) capacity from 6000 m^3 /hr to 18,000 m^3 /hr by **M/s. Hindupur Steel & Alloys Private Limited** located at Plot No. 29, APIIC Gollapuram Industrial Park (Phase-3), Gollapuram (Village), Hindupur (Mandal), Anantapur (District), **Andhra Pradesh**-[Online Proposal No. IA/AP/IND/3712/2012, File No. J-11011/250/2011-IAII(I)]**– Environment Clearance - regarding.**

10.10.1 M/s. Hindupur Steel & Alloys Pvt. Ltd. has made an online application vide proposal No. IA/AP/IND/3712/2012 dated 3rd August, 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

10.10.2 The proposed expansion of Steel Plant of M/s. Hindupur Steel & Alloys Pvt. Ltd.located atPlot No.29, APIIC Industrial Park Gollapuaram (Phase-3), Village-Gollapuram, Mandal -Hindupur, District –Ananthapur, Andhra Pradesh was initially received in the Ministry on 22nd July 2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006.

10.10.3 Even though it is a Category – B project, but due to presence of Inter-state boundary at a distance of 0.5 Kms.,from the plant boundary, thisproject becomesCategory 'A' project. Hence the proposal has been submitted to MOEF&CC for Appraisal.

10.10.4 The project was appraised in 21stEAC (Industry – 1) meeting held during 10th–11thAugust, 2017 for prescribing ToR to the expansion project for undertaking detailed EIA study for obtaining Environmental Clearance. Accordingly, the MoEF&CC had

prescribed ToR to the project on vide Lr. No. J-11011 / 250 / 2012- IA II (I) dated 17th August 2017.

10.10.5 Based on the ToR prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 5th November,2018 & 3rd August 2019 (Reply to EDS) vide Online Application No. IA/AP/IND/3712/2012.

10.10.6 The project of M/s. Hindupur Steel & Alloys Pvt. Ltd. is operating an existing Induction Furnace of 30,000 TPA out of total 1,00,000 TPA capacity, 1,00,000 TPA of Rolling Mill & 6000 m3/hr capacity of producer Gas plant. It has been proposed to MS Billets / MS Ingots Production from 1,00,000 to 1,45,000 TPA through Induction Furnace, TMT Bars / Structural steel Production from 1,00,000 TPA to 3,00,000 TPA through Rolling Mill (using Re-heating Furnace / Direct Hot Rolling) & Producer Gas plant (Gasifier) capacity from 6000 m3/hr to 18,000 m3/hr (NOW IT IS PROPOSED DROP) in the existing plant premises. Existing plant is located in 4.05 Ha. (10 acres) of land and proposed expansion will be taken up in the existing plant premises only.

10.10.7 Now it is proposed to drop Producer Gas plant (Gasifier) of 12,000 m^3/hr proposed in expansion proposal

10.10.8 Existing plant received E.C. vide letter no. J-11011/250/2012-IA II (I) dated 22nd June, 2015. Accordingly obtained Consent to Establishment vide order no. 225/APPCB/CFE/RO-KNL/HO/2015 -4299 dated 08/10/2015 from A.P. Pollution Control Board.

10.10.9 Regional Office of MOEF&CC, Chennai has issued Certified compliance report on earlier EC conditions vide letter no . F.No. EP / 12.1 / 2015-16 / 11 / AP / 1917 dated 28th November, 2017 (shown in subsequent slides).

10.10.10 There were certain Non-Compliances/partial compliances in the certified compliance report.

10.10.11 Accordingly, after complying with NCs/Partial compliances raised, we have submitted a letter to the Regional office of MOEF&CC requesting for issue of closure report on NCs/partial compliances as per report dated 15thMay, 2019.

10.10.12 Closure report has been issued by the Regional office of MOEF&CC, Chennai vide F. NO. EP / 12.1 / 2015-16 / 11 / AP / 1155 dated 17thJuly, 2019.

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

Unit	**Product**	**Permitted capacities as per the EC issued on 22nd June, 2015**	**Proposed Expansion capacities**	**Production capacities After Present Proposed Expansion**
Induction Furnaces with CCM	Hot Metal / MS Billets / MS Ingots	1,00,000 TPA (in operation)	45,000 TPA (1x15 MT)	1,45,000 TPA

Rolling Mill (Through Reheating Furnace & Hot charging)	TMT Bars / Rolled Products /Structural Steel	1,00,000 TPA (in operation)	Upgradation of existing unit capacity from 1,00,000 TPA to 1,50,000 TPA + Establishment of Additional 1,50,000 TPA unit Total additional capacity = 2,00,000 TPA	3,00,000 TPA
Gasifier	Producer Gas	6,000 m^3/hr (in operation)	12,000 m^3/hr **(Dropping)**	6,000 m^3/hr

10.10.14 Existing plant is located in 4.05 Ha. (10 acres) of land, comprising of Plot no. 29, APIIC Gollapuram Industrial park and same is in lease from APIIC. Proposed expansion will be taken up in the existing plant premises only. No River / stream passes through the plant area. It has been reported that no natural water body / stream existing the plant area and any modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

10.10.15 The topography of the area is flat with undulation sand reported that the site lies between 13°42'44.39"N to 13°42'49.23"N Latitude and 77°30'50.99"E to 77°31'00.44"E longitude in Survey of India Topo sheet no. 57 G/10 at an elevation of 678 m AMSL. The ground water table reported to ranges between 2.0 to 5.0 mbgl below the land surface during the post-monsoon season and 5.0 to 10.0 mbgl below the land surface during the pre-monsoon season.

10.10.16 There are no Reserved Forests / National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ Elephant Corridors / migratory routes for Birds with in 10 Km. radius of the plant.

10.10.17 There are no Schedule- I fauna exists in the study area. The list of flora and fauna during study period in the study area is furnished in Chapter # 3 of EIA report.

10.10.18 Detailed process provided in the EIA report and list of raw material for the proposed expansion project is given below:

Raw Material	**Quantity (TPA)**	**Sources**	**Distance from the plant(in Kms.)**	**Mode of Transport**
For Steel Melting Shop (MS Billets) – 45,000 TPA				
Sponge Iron	42,000	Hindupur / Bellary	10-250	By road (through covered trucks)
Scrap & End cuttings	8,200	Hindupur	10-15	By road (through covered trucks)
Ferro alloys	2,000	Gollapuram, Hindupur	10-15	By road (through

				covered trucks)
For Rolling Mill (TMT bars & Structural Steel) – 2,00,000 TPA				
Hot Metal M.S. billets	1,45,000 68,000	Proposed SMS Purchased from nearby plants in Industrial Park & outside Industrial Park.	220-250	By road (through covered trucks)
Furnace Oil *	32 KLD	Hindupur Town (or) nearby Depot.	10-15	By road
*** Furnace Oil is not required if Rolled products manufactured through Direct rolling / Hot charging**				

10.10.19 The targeted production capacity of the plant after expansion project is Structural Steel / Rolled product–0.3 million TPA.

10.10.20 Major raw materials will be transported through by Road in Covered Trucks.

10.10.21 Impact on Vehicular Traffic Load due to proposed expansion

Traffic load during the operation of the existing plant (Baseline): 4843 PCU/day

Additional Traffic load during operation of the expansion project: 299 PCU/day

Total Traffic load during operation of existing and proposed expansion: 5142 PCU/day

Traffic Capacity as per the IRC 73: 1980 for Highways : 10000 PCU/day

10.10.22 Water requirement for the present proposal will be 152 KLD. Total water requirement after the proposed expansion will be 283 KLD.Water required for the plant is being / will be supplied by APIIC.APIIC will supply water from PennaAhobilam balancing reservoir. Water Clearance has already been obtained by APIIC for water drawl of 10 MLD from the Penna Ahobilam balancing reservoir.

10.10.23 Total power required for the existing unit & for the proposed expansion units will be 19MW. The required power is being / will be taken from State Grid.

10.10.24 Baseline Environmental Studies were conducted during summer season i.e., from 1st October 2017 to 31st December 2017.Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated:

10.10.25 $PM_{2.5}$ (17.2 to 44.6 μg/m^3), PM_{10} (30.6 to 78.2 μg/m^3), SO_2 (7.3 to 19.4 μg/m^3), NOx (8.0 to 25.1 μg/m^3)& CO (678 to 1225 μg/m^3).

10.10.26 The results of the modeling study indicates that the maximum increase of GLC due to the proposed units & Vehicular emissions will be 1.58 μg/m^3 withrespect to the PM_{10}, 4.9 μg/m^3 with respect to the SO_2, 7.3 μg/m^3 with respect to the NOx& 1.7 μg/m^3 with respect to the CO.

10.10.27 Ground water quality has been monitored in 8 locations in the study area analyzedand the data submitted indicated pH: 7.3 to 8.2, Total Hardness: 145 to 294 mg/l,

Chlorides: 166 to 304 mg/l, Fluoride: 0.32 to 0.94 mg/l. Heavy metals are within the limits.

10.10.28 Surface water samples were taken from 3 locationsin the study area and analysed. The datasubmitted indicated pH: 7.1 to 8.0, DO: 4.1 to 5.4 mg/l, BOD: 1.9 to 2.9 mg/l & COD:7.8 to 10.7 mg/l.

10.10.29 Noise levels are in the range of 43.86dBA to 70.4dBAduringthe study period.

10.10.30 It has been reported that there is no R & R involved, as the plant is situated in Industrial Park.

10.10.31 It has been reported that the following Solid wastes will be generated due to the proposed expansion project which will be stored in storage yard above the ground level.

S.No	Type of Solid waste	From existing Plant (in TPA)	from Expansion (in TPA)	Disposal proposed
1	Slag from IF	9,600	4,500	Presently we are giving slag [from existing SMS] to slag crushing units. The same practice will be followed in proposed expansion also.
2	Mill Scales from Rolling Mill	1000	2000	Mill scales are given to nearby Ferro alloys manufacturing units / casting units. Similar practice will be continued after expansion also.
3	End Cutting from Rolling Mill	4000	8000	Recycled back as raw material in own induction Furnaces

10.10.32 It has been reported that an area of 3.3 Acres (1.34 Ha.) has been developed as Greenbelt to attenuate the noise levels and trap the dust generated due to the project development activities.

10.10.33 It has been reported that the Consent to Operate for existing plant was accorded by Andhra Pradesh Pollution Control Board forInduction Furnace (1,00,000 TPA) is valid upto 30th April 2023& for Rolling Mill (1,00,000 TPA) is valid upto 28.02.2022.

10.10.34 The Public hearing for the proposed project was held on 4th January 2019, at 11:00 A.M at Ground of High School, Village Khajuri, Tehsil Balodabazar, District Balodabazar-Bhatapara, Chhattisgarh under the chairmanship of Additional Collector (ADM cadre).The issues raised during publichearing arePollution, Socio economic activities & employment etc.

10.10.35 The following are the issues raised during PH & commitment of the Project Proponent.

S.No	Issue raised	Management Response	Time schedule	Budgetary allocation
1.	Measures proposed for pollution from the industries in the area.	In the existing plant all required Air emission control measures have been implemented and operated duly complying with the norms. APPCB has issued CTO only after ensuring compliance with the norms and the consent is valid till 28thFebruary, 2022. The certified compliance report issued by the Regional office of MOEF&CC also confirms the compliance of the conditions stipulated in earlier EC. Hence no adverse impact due to the existing plant on environment and health of the people in the area. In the proposed project following environment protection measures will be provided for duly complying with norms stipulated by MOEF&CC / SPCB: Air Emission Control Measures The emission from Induction Furnace are sent through Fume extraction system with Bagfilters (PTFE type) and then discharged through stack of 30 m height. The outlet dust emissions will be less than 50 mg/Nm^3. Paved roads for movement trucks carrying various materials. Covered sheds provided for Raw materials. Net resultant Ground level concentrations during operation of the plant after expansion after superimposing the incremental concentrations over the maximum baseline concentrations are well within the National Ambient Air Quality Standards. Adoption of Zero liquid effluent discharge system. 3.3 acres of Greenbelt is already been developed in the existing plant premises which will further mitigate the emissions. All these environmental protection systems will be installed and operated to comply with the norms. Similarly, in the proposed expansion	Implemented parallel with implementation of the Expansion.	**Rs. 5.0 Crores** is earmarked for Environmental protection, Health & Safety measures for the expansion project.

S.No	Issue raised	Management Response	Time schedule	Budgetary allocation
		also required APCS will be installed. And operated duly complying with the norms.		
2.	Employing people from Bihar, Orissa states and safety measures proposed for them in the plant.	Management has confirmed that only few people from Bihar, Orissa states are working and majority are from local areas only. In the expansion also top priority will be given to local people in employment depending on the qualification. Industrial training also will be provided to unemployed youth in the area and help them in getting jobs in our industry /other industries also. All required safety measures have been provided in the existing plant and similar practice will be continued after the expansion also. EHS professional has also been appointed in the plant to look after Environment, Health & Safety measures including creation of awareness on safety, conduct of mock drills, etc.	2nd year Before commencement of operation	--- Rs. 10 lakhs has been ear marked for safety measures
3.	Mineral water plant in their village and	Management has accepted their request and has given a Cheque of Rs. 1 lakh as advance for the Mineral Water plant. As on date the total amount is handed over to Sarpanch of Gollapuram Village.	1st year	Total Rs. 6.0 Lakhs is earmarked under CER activities
4.	Insurance cover to Employees	Management has replied that all the workers who are working in the existing plant are provided ESIC / Group insurance.	---	---
5.	spillage of steel scrap from the trucks on the roads causing tyre punctures to their vehicles apart from damaging the roads in the area.	Covered trucks are used for transportation of raw materials and finished products. Hence there is no spillage of steel scrap from the trucks on the roads pertaining to our industry. However, as a precautionary measure Industries association in Gollapuramindustrial area can appoint personnel for clearing any such scrap periodically. We will initiate the step in this direction.	1-2 Years	Rs. 10 lakks is earmarked under CER activities for Community & Infrastructure Development
6.	employment to the local villagers to the maximum	In the existing plant also top priority has been given to local villagers. Management assures that even in expansion top priority will always be	--	--

S.No	Issue raised	Management Response	Time schedule	Budgetary allocation
	extent possible.	given to the local villagers in the employment opportunities.		
7.	industry to develop greenbelt to about 45 % of their area instead of restricting to statutory requirement of the 33% of the total area.	Management has informed that, 33 % of greenbelt has already been developed as per the statutory requirement and there is no vacant space in the plant area to develop additional greenbelt. Management has allocated funds under CER activities for Greenbelt Development in nearby village. APIIC has already taken up plantation in the industrial area.	--- 1st year	---- Rs. 4 Lakhs is earmarked under the CER activities for Borewells / RWH pits / Greenbelt Development in nearby villages
8.	Co-ordination committee with sarpanch, villagers, Govt., officials etc.,to be formed for spending of CSR budget in the surrounding villages for developmental activities as per the requirement of the villagers.	Management has informed that a local co-ordination committee will be formed to prioritize the works to be taken up under CER funds.	1st year	Rs. 40 Lakhs is earmarked for the CER activities
9.	Trainingto the unemployed youth in the surrounding villagers for skill development	Training will be imparted to the unemployed youth in the surrounding villagers for skill development and help them in getting employment in our industry / other industries.	1 to 2 years	Rs. 4.0 lakhs is earmarked under CER activities for Computer / IT Training for unemployed youth
10.	Rainwater harvesting (RWH) structures in the area	Rainwater storage tank is already constructed in the plant. 2 nos of additional pits will be constructed in the plant premises.	1st Year	Rs. 4 Lakhs is earmarked under the CER activities for Borewells / RWH pits / Greenbelt Development in nearby villages

S.No	Issue raised	Management Response	Time schedule	Budgetary allocation
11.	Implementation of measures for Rain Water Harvesting for percolation of the rain water into the ground as the rapid industrialization in the area may deplete ground water sources which may adversely effect the agriculture sector which is already facing problems due to scarcity of water in the area.	APIIC will supply water required for the expansion project. APIIC is sourcing water from PennaAhobilam Reservoir. No ground water will be used for plant requirement. Rainwater storage tank is already constructed in the plant. Management has allocated funds under CER activities for additional Rainwater harvesting (RWH) structures in the plant as well as in nearby village. All these measures will help in augmentation of ground water table in the area.	1st Year	Rs. 4 Lakhs is earmarked under the CER activities for Borewells / RWH pits / Greenbelt Development in nearby villages
12.	Compensation and employment to the injured worke	Management has replied that, financial assistance has already been paid by his contractor to the person injured recently in their industry and also assured that the management will provide suitable employment to the injured person immediately, if he is interested to work again in their industry.	---	---
13.	Industries are not taking safety measures resulting accidents and requested the management of the industry to construct hospital in the area.	All required safety measures have been taken up in the existing plant and similar practice will be continued after the expansion. Detailed safety measures are incorporated in EIA report chapter-7. Management of the industry will provide a dispensary in Gollapuram village and also will conduct regular health camps in the village.	2nd year	Rs. 10 Lakhs is earmarked under the CER activities for for Health & Hygiene of the community (Medical Camps, Distribution of Medicines etc.)
14.	Management of the steel industries are taking man power through contract agency from other states such asBihar,	Wages to workers is in accordance with the state government norms. As per our agreement with contractors, they also have to pay minimum wages to all their workers.	--	--

S.No	Issue raised	Management Response	Time schedule	Budgetary allocation
	WestBengal, Uttar Pradesh etc., and notproviding minimum wages to these workmen.			
15.	Steel industries are not providing basic amenities, ESI, Pension, PF etc., to the workmen in their industries andurged the management toprovide safety measuresfor all the workmen in the industry.	Management has replied that all the workers who are working in the existing plant are provided ESI / Workmen ship compensation. In this plant safety measures have been implemented and areincorporated in chapter-7 of EIA report. EHS professional has also been appointed in the plant to look after Environment, Health & Safety measures including creation of awareness on safety, conduct of mock drills, etc.	--	--
16.	Management of the steel industriesto followprovisio ns of the labour act	Management assured that labour acts are being / will be followed.	--	--

10.10.36 An amount of Rs.0.40 Crores out of project cost of Rs. 40 Crores (as per Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1stMay 2018) has been earmarked for Corporate Environment Responsibility (CER) based on public hearing issues. The details of CER proposed are as follows:

S.No.	Major Activity Heads	Years (Rs. In Crores)		Total Expenditure (Rs. in lakhs)
		1st	2nd	
A	**Based on Social Impact Assessment (SIA)**			
1	Community & Infrastructure Development Programmes (construction of 4 nos. of toilets in nearby local schools in Gollapuram, Boirdih, Dhabadih villages under Swachh Bharat (4 nos. @ Rs. 1 lakh / toilet), renovation of Govt. school building in Gollapuram Village (Rs. 4 lakhs) , Providing LED Street lighting in suitable places in Gollapuram &Tumkunta villages (Rs. 2 lakhs)	5	5	10

S.No.	Major Activity Heads	Years (Rs. In Crores)		Total Expenditure (Rs. in lakhs)
		1st	2nd	
2	**Skill Development for unemployed youth** Computer / ITI Training in Hindupur Town for improving computer knowledge and making Industry ready.	2	2	4
3	**Education and Scholarship Programmes** Scholarships to 10 nos. of Merit Students in Govt. Schools of Gollapuram&Tumkunta villages of Rs. 50,000 @ Rs.5000 /student in Class-X. Providing furniture, computers, library, sports equipment etc. for 2 nos. of schools in village @ Rs. 1,50,000/-	1	1	2
4	N,P,K Fertilizers to Gollapuram Gram Panchayat / 5 nos. of RWH pits in Schools, Gram Panchayat office etc. of Gollapuram Village / 500 no. of Saplings planted all along the Village Road.	2	2	4
	Sub Total (B)	**10**	**10**	**20**
B	**Based on Public Consultation**			
1	Mineral Water plant	6	--	6
2	Pond Artificial recharging in Gollapuram village	10	--	10
3	Other Need based activities	2	2	4
	Sub Total (B)	**18**	**2**	**20**
	Total	**28**	**12**	**40**

10.10.37 The employment generation is 50 people during operation of the proposed expansion and 150 people during construction of the proposed units.

10.10.38 The capital cost of the project is Rs.40 Crores and the capital cost for environmental protection measures is proposed as Rs.5.0 Crores.The annualrecurring cost towards the environmental protection measures is proposed as Rs.0.84 Crores/annum.

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

S.No	Item	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Lakhs)
1	Air Emission Management		
	• Fume Extraction systems with Bag filters & Cyclone separator	1.00 0.90	35.0 2.0
	• Chimneys	0.40	1.0
	• CEMS	1.00	0.5
	• CAAQMS	--	2.7
	• Environment Monitoring		
2	Wastewater Management	0.25	5.0

S.No	Item	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Lakhs)
	• Closed circuit system • Settling Tanks & Recycling arrangement • STP	0.20 0.30	2.0 6.0
3	Solid waste Management • Construction of Pucca Platform for slag storage • Slag Handling & disposal • Tar Handling & disposal • Hazardous & Municipal solid waste storage, Handling & disposal	 0.30 0.10 0.05 0.05	 -- 15.0 6.0 2.0
4	Greenbelt development, Land scaping	0.05	1.0
5	Noise Management	0.10	0.8
6	Occupational Health & Safety	0.30	5.0
TOTAL		**5.00**	**84.0**

10.10.40 3.3 acres (1.34 Ha.) of land is earmarked for greenbelt development in the plant premises (including existing). 5 to 10 m wide greenbelt will be developed all around the plant.

10.10.41 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:

10.10.42 Project Proponent did not install coal gasification plant which was granted in the earlier EC. Now, also it is proposed to drop coal gasification plant.

Recommendations of the Committee:

10.10.43 After detailed deliberations the committee recommended the project for Environmental Clearance with following specific and sector specific general conditionsas per the Ministry's OM No.22-34/2018 IA-III dated 09.08.2018 as applicable.

Specific Conditions:

i. No coal gasification plant shall be installed.

ii. No ground water shall be abstracted.

iii. Emission of particulate matter shall be less than 10mg/Nm^3.

iv. Covered trucks shall be used for transportation of raw materials and products

v. Provide employment to the locals in accordance to provisions laid by State Government of Andhra Pradesh.

vi. Additional greenbelt in an area of 10.0 acres shall be developed outside the plant premises.

vii. Rainwater harvesting shall be more than consumption of water.

viii. CER activities shall be implemented within 2 years with the allocated expenditure Rs 40 lakhs, as per this Ministry's OM dated 22-65/2017 –IAIII dated 1st May 2018.

10.11 Greenfield Copper Refinery Plant (1.0 MTPA) project of **M/s. Adani Enterprises Ltd** located at Adani Ports and Special Economic Zone land in village(s) Siracha and Navinal, Taluka Mundra, District Kutch, **Gujarat** [Proposal No. IA/GJ/IND/86812/2016, MoEF&CC File No. J-11011/113/2016-IA.II(I)] – Reconsideration based on **ADS reply for EC**regarding**.**

10.11.1 M/s. Adani Enterprises Ltd. has made an online application vide proposal No. IA/GJ/IND/86812/2016dated 6th December, 2016 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.

10.11.2 The Greenfield Copper Refinery of 1 (One) Million Tons Per Annum (MTPA) project by M/s Adani Enterprises Limited, proposed at Adani Ports and Special Economic Zone land in village(s) Siracha and Navinal, Taluka Mundra, District Kutch, State Gujarat was initially received in the Ministry on 21stApril 2016 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 6th meeting held on 4thMay 2016and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest & Climate Change had prescribed ToRs to the project on 21stJune 2016 vide Letter. No. J-11011/113/2016 IA.II (I)

10.11.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 6thDecember 2018 vide Online Application No: SW/83372/2018, Proposal Number: IA/GJ/IND/86812/2016, F. No. J-11011/113/2016 IA.II (I).

10.11.4 The project of M/s. Adani Enterprises Limited located in Villages of Siracha and Navinal, Taluka Mundra, District Kutch, State of Gujarat is for setting up of a new Copper Refinery for production of 1.0 (MTPA) of Copper Cathode. The detail of overall plant configuration as below:

Sr. No.	Plant	Units	Phase-I	Phase-II	Overall Plant Configuration
1	Copper Smelter Plant	TPA	4,50,000	4,50,000	**9,00,000**
2	Copper Refinery Plant	TPA	5,00,000	5,00,000	**10,00,000**
3	Continuous Cast Copper Rod Plant	TPA	2,50,000	2,50,000	**5,00,000**
4	Copper Scrap & E-Scrap Melting Facility	TPA	50,000	50,000	**1,00,000**
5	Sulphuric Acid Plant	TPA	15,00,000	15,00,000	**30,00,000**
6	Phosphoric Acid Plant (100% P_2O_5)	TPA	2,50,000	2,50,000	**5,00,000**

Sr. No.	Plant	Units	Phase-I	Phase-II	Overall Plant Configuration
7	Aluminum Fluoride Plant	TPA	15,000	15,000	**30,000**
8	Oxygen (Industrial) Plant	TPM	48,000	48,000	**96,000**
9	Precious Metal Recovery Plant				
a	Gold	TPA	25	25	**50**
b	Silver	TPA	250	250	**500**
c	Selenium	TPA	144	144	**288**
10	Waste Heat recovery boiler based power plant	MW	20	20	**40**

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

Sr. No.	Products	Units	Phase-I	Phase-II	Overall Plant Capacity
I	Main Products				
1	Copper Cathode	TPA	5,00,000	5,00,000	10,00,000
2	Sulphuric Acid (> 98%)	TPA	15,00,000	15,00,000	30,00,000
3	Continuous Cast Copper Wire Rod	TPA	2,50,000	2,50,000	5,00,000
4	Gold	TPA	25	25	50
5	Silver	TPA	250	250	500
6	Phosphoric Acid (as 100% P2O5)	TPA	2,50,000	2,50,000	5,00,000
7	Aluminum Fluoride	TPA	15,000	15,000	30,000
II	By-Products				
8	Anode Slime	TPM	250	250	500
9	Selenium	TPM	12	12	24
10	PGM Concentrate	TPM	3	3	6
11	Ferro Sand/ Iron Silicate - Copper Slag (Granulated)	TPM	92,500	92,500	1,85,000
12	Phosphogypsum	TPM	1,04,167	1,04,167	2,08,334
13	Hydro Fluro Silicic Acid (~20% as H2SiF6)	TPM	1,250	1,250	2,500
14	Copper Telluride	TPM	21	21	42
15	Tellurium	TPM	4	4	8
16	Nickel	TPM	8	8	16
17	Bismuth Bisulphate	TPM	60	60	120
18	Calomel (Mercury Chloride)	TPM	9	9	18
19	Mercury	TPM	8	8	16
20	CCR Mill Scale	TPM	25	25	50

10.11.6 The total land required for the project is 256.58 ha, out of which there is no agricultural land and grazing land. 102.39 ha forest land applied for diversion by APSEZ and 154.19 ha is non-forest land already notified as SEZ. The non-forest land

has been acquired by APSEZ and in-principle approval for diversion of forest land has been obtained by APSEZ and committed to provide this land for the project. The Dhaneswari (Dhenderi) River passes through the project area which will be suitably trained and maintained.

10.11.7 The topography of the area is flat and slightly undulating and ranges between 22°48'13.26"N to 22°50'01.88"N Latitude and 69°33'34.74"E to 69°35'08.42"E Longitude in Survey of India topo sheet No. F42J9 & 10, at an elevation of 7-10 m AMSL. The ground water table ranges between 2-10 m below the land surface during the post-monsoon season and 2-20 m below the land surface during the pre-monsoon season. The stage of groundwater development in Mundra Taluka is reported to be63.28% and designated as safeareas as per Technical Report Series, Ground Water Brochure of Kutch District by CGWB – 2013. No groundwater is proposed for either construction or operation phase of the project.

10.11.8 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone within the 10 km radius of the project. The area also does not report to form corridor for Schedule-I fauna. Floral species are mainly dominated by *Prosopis juliflora* and Acacia Senegal. The faunal species were categorized as per conservation status of Wildlife Protection Act, 1972 and reveals that peacock is the only Schedule-I species in the study area and the conservation plan with Rs. 40 lakhs tentative budget is proposed in Section 3.9 of EIA Report.

10.11.9 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process details are given below:

a. Copper Concentrate : Production of Copper, Sulphuric Acid, Gold, Silver and other by products such as Ferro sand (Iron Silicate/ Copper Slag), Selenium, Copper Telluride, Nickel / Nickel Sludge(Nickel Sulphate/ Nickel Carbonate), production of electricity from waste heat recovery system, etc.
b. Rock Phosphate: Production of Phosphoric Acid and by product Hydro Fluro Silicic Acid and Phospho Gypsum.
c. Aluminum Hydrate: Production of Aluminum Flouride
d. Quick Lime: For Effluent Treatment Plant

Following fuel will be used as per process Requirement:

a. LPG/ PNG
b. Furnace Oil
c. High Speed Diesel
d. Met Coke
e. Coal/ Pet Coke

During the manufacturing Process, following waste will be generated, which will be recycled in the process or will be sent to authorised recyclers:

a. Nickel Sulphate Sludge
b. Arsenic Bearing Sludge – As-Cu Precipitate

c. Used Oil
d. Oil Sludge

During the manufacturing Process, following Hazardous waste will be generated and will be stored in Secured Landfill (SLF) designed in accordance with CPCB Guidelines:

a. ETP Waste sludge and Scrubber Waste
b. Spent Catalyst
c. Spent resins from DM, RO & Refinery Plant
d. Salts from Multi Effect Evaporator

10.11.10 The proposed project to adopt pyrosmelting technology and electro refining process to produce copper cathode. The sulphur dioxide generated during the smelting of copper concentrate is converted into sulphuric acid by Double Conversion Double Absorption (DCDA) process. Part of the sulphuric acid is utilized for production of phosphoric acid within the plant.

10.11.11 Plant is designed on Zero Liquid Discharge concept design and hence no process or treated water will be discharged outside the plant. The treated water will be recycled within the process and to address treated water balance a Reverse Osmosis plant with Multi Effect Evaporator will be installed.

10.11.12 Copper Concentrate will be largely imported from various countries across the globe such as Chile, Peru, Brazil, Australia, Africa, Indonesia, etc. and Rock Phosphate is imported from countries like Jordan, Morocco, Australia, etc. Copper Concentrate & Rock Phosphate will be unloaded from the ship and transported to the closed warehouse either by pipe conveyor or through covered trucks.

10.11.13 The principal raw material for the production of copper metal is copper concentrate blend containing about 25-35% copper, 25-34% sulphur, iron 25-35% and 7-10% moisture. Approximately, 3 LTPA copper scrap and electronic scrap is also used as input to proposed copper smelting plant and copper scrap melting facility.

10.11.14 The major steps in copper extraction are as follows:

- Blending of different grades of concentrates;
- Smelting of concentrate in smelting furnace to produce an intermediate copper rich product known as" matte" containing 58 - 63% copper;
- Converting of liquid matte to blister copper (98 - 99% Cu) in Pierce-Smith converter;
- Fire refining of blister copper to produce anode copper (99.5% Cu) in anode furnace and casting of the anodes; and
- Electrolytic refining of anodes to produce copper cathodes (99.99% Cu).

10.11.15 In the process of extraction of copper metal, sulphuric acid is recovered as a byproduct from the off-gases generated from the smelting and converting furnaces. A part of sulphuric acid produced is utilized for phosphoric acid production and rest will be sold in the market based on market requirement. Phosphoric Acid (PA) Plant uses sulphuric acid produced within the plant and imported rock phosphate to produce Phosphoric Acid. Phosphoric Acid is largely used in fertilizer industries to make phosphatic fertilizers. During the process fluorine gases are recovered as hydrofluro silicic acid

(HFSA) through scrubbing system. HFSA is one of the major raw materials for production of Flouride based chemicals. Hydro fluro silicic acid generated from phosphoric acid plant will be partly sold to fluoride based industries and rest will be converted in value added aluminum fluoride. Aluminum Fluoride plant will be using HFSA produced in PA Plant and Aluminum Hydrate to produce Aluminum Fluoride. Aluminum Fluoride is an important material in production of Aluminum Metal. Aluminum fluoride produced will be sold to aluminum manufacturing companies. The precious metal in the form of anode slime is collected during electrolytic refining of copper will be processed to produce gold, silver and Platinum Group of Metals (PGM) concentrate as well as recovery of minor metals such as Tellurium, Bismuth, Nickel, etc). The copper cathode produced from copper refinery will be melted and drawn in the form of copper wire rod on continuous basis from a continuous casting and rolling machine. Copper rod will be of various sizes as per market requirement such as 8 to 32 mm.

10.11.16 The wastewater generated from copper smelter, sulphuric acid plant, copper refinery, Phosphoric Acid Plant and Aluminum Fluoride plant will be treated in state of art effluent treatment facility. Treated effluent will be consumed within the plant operations to maximum extent. A Reverse Osmosis plant with Multi effect evaporator will be installed at the outlet of treated effluent to reuse water internally and reduce water consumption. This will ensure the plant as a Zero Liquid Discharge facility.

10.11.17 The major technological units envisaged for the copper refinery project are as given below:

- Raw material handling system;
- Smelting furnace;
- Pierce smith converter;
- Ferro Sand Cleaning Furnace (FSCF);
- Copper scrap & E-scrap melting system;
- Anode furnace & anode casting wheel;
- Off gas handling;
- Sulphuric acid plant;
- Oxygen plant;
- Copper Refinery Plant;
- Precious metal recovery plant;
- Continuous cast copper wire rod plant;
- Phosphoric acid plant;
- Aluminum fluoride plant; and
- Effluent Treatment Plant (ETP),
- Utilities like Power, Water, Air and Fuel

10.11.18 The targeted production capacity of the proposed project is 1.0 million TPA. The raw material for the plantwould be procured from open market. The raw material transportation will be by pipe conveyor or covered trucks from port to plant.

10.11.19 The water requirement of the project is estimated as approx. 32800 m^3/day of freshwater requirement will be obtained from the desalination plant of Adani Port

Special Economic Zone (APSEZ). 5,418 m^3 /day treated water from ETP & STP will be utilized for plant operation.

10.11.20 The power requirement of the project is estimated as 300 MW, out of which 260 MW will be obtained from the APSEZ through MUPL and 40 MW would be generated from waste heat recovery system.

10.11.21 Baseline Environmental Studies were conducted during post-monsoon and partly winter season i.e. from 1stOctober to 31stDecember, 2016 Ambient air quality monitoring has been carried out at 8 locations during 1st October to 31st December, 2016 and the data submitted indicated: PM_{10} (35.2 to 84.2 µg/m^3), $PM_{2.5}$ (19.2 to 43.9 µg/m^3), SO_2 (14.8 to 42.6 µg/m^3) and NOx (13.1 to 32.8 µg/m^3). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.52 µg/m^3 with respect to the $PM_{2.5}$, 1.27 µg/m^3 with respect to the PM_{10}, 10.37 µg/m^3 with respect to the SO_2 and 0.23 µg/m^3 with respect to the NOx.

10.11.22 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 7.3 to 7.8, Total Hardness: 125 to 392 mg/l, Chlorides: 282.6 to 978.4 mg/l, Fluoride: 0.9 to 1.5 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 4 locations. pH: 7.2 to 8.0; DO: 5.6 to 5.9 mg/l and BOD: <3 mg/l. COD from 60 to 80 mg/l.

10.11.23 Noise levels are in the range of 48.5 to56.6 dBA for daytime and 42.3 to 48.8 dBA for nighttime.

10.11.24 It has been reported that there are no people in the core zone of the project. No R&R is involved. It has been envisaged that no families to be rehabilitated,

10.11.25 It has been reported that a total of 225694 tons per annum of waste will be generated due to the project, out of which 9274tonnes per annum will be recycled through authorised recyclers and within the process. Rest will be stored in the secured landfill (SLF). It has been envisaged that an area of 85.79ha 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.

10.11.26 ConsenttoEstablish/ConsenttoOperatefromthe Gujarat State Pollution Control Board /Pollution Control Committee will be obtained as per applicable requirements after obtaining the Environmental Clearance.

10.11.27 The Public hearing of the project was held on 29 April 2017atCommunity Premises Centre Samajvadi Opposite Tunda Primary School under the chairmanship of Shri D R Patel (GAS)(Additional District Magistrate and Resident Additional Collector) for production of 1.0 million TPA of setting up of Copper Refinery plant, under the chairmanship of Additional District Magistrate and Resident Additional Collector. The issues raised during public hearing were mainly about Employment, Environmental Protection and Rural infrastructure.

10.11.28 In line with Office Memorandum dated 1stMay 2018 of MoEFCC regarding Corporate Environment Responsibility, an amount of Rs. 5,800/-Lakhs has been earmarked for Corporate Environment Responsibility (CER) and allocated for relevant programmes to address water, environment, education, community health and rural infrastructure issues in the area based on public hearing issues.

10.11.29 The capital cost of the project is Rs.10,000 Crores and the capital cost for environmental protection measures is proposed as Rs. 104400 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 500 Lakhs.The detailed CSR plan has been provided in the EMP in its page No. C6-8. The employment generation from the proposed project / expansion is direct employment and about 5000 indirect employment during operation phase.

10.11.30 Greenbelt will be developed in 85.79Ha which is about 33.43% of the total acquired area. Peripheral greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 225000saplings will be planted and nurtured in 85.79hectares.

10.11.31 The proponent has mentioned that there is no court case or violation under EIANotification to the project or related activity.

Observations of the Committee:

10.11.32 The committee observed that in spite of detailed deliberations during EAC (Industry-1) meetingheld during 9th -11th January 2019 and subsequent information sought, same has not been adequately addressed by the project proponent.

10.11.33 The committee desired that all the information asked for should be carefully prepared and submitted by the Project Proponent. In the meantime, a sub-committee of the committee should carry out the site visit as already recommended earlier.

10.12 Expansion of Steel Ingots and Billets (36,000 TPA to 96,000 TPA) and manufacture of Re-rolled products (60,000 TPA) by **M/s. Maruti Ferrous Pvt. Limited** located at Village Sondra, Tehsil Raipur, District Raipur**, Chhattisgarh** [Online Proposal No. IA/CG/IND/105366/2018, File No. J-11011/592/2007-IA.II(I)]-**Reconsideration based on ADS reply for EC regarding.**

10.12.1 M/s. Maruti Ferrous Pvt. Ltdhas made an online application vide proposal no. IA/CG/IND/105366/2019 dated 21/05/2019 along with Form – 2 seeking environmental clearance for change in product mix with modernization and optimization of production capacity under para 7(ii) of EIA Notification, 2006 in the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

10.12.2 The aforesaid proposal was considered in the 8th meeting of the Reconstituted Expert Appraisal Committee meeting held during 26th June, 2019 and the relevant portion of the minutes of the meeting is given as below:

> MoEF&CC vide letter no. J-11011/592/2007-IA (I) dated 10/01/2007 accorded environmental clearance to M/s. Maruti Ferrous Pvt Ltd for expansion of Steel Ingots and Billets (36,000 TPA to 96,000 TPA) and manufacture of Re-rolled products (60,000 TPA) at Village Sondra, Tehsil Raipur, District Raipur, Chhattisgarh under the provisions of EIA Notification, 2006.

M/s. Maruti Ferrous Pvt Ltd vide online proposal No. IA/CG/IND/105366/2019 dated 21/05/2019 requested the Ministry to accord environmental clearance for the following change in product mix with modernization and optimization of production capacity under para 7(ii) of EIA Notification, 2006.

Existing Scenario		**Proposed product mix change scenario**		**Remark**
Facility and product	**Production capacity in TPA**	**Facility and product**	**Production capacity in TPA**	
Induction Furnace to produce MS Billet	**96000 TPA**	Induction Furnace to produce MS Billet **And/or Rerolled steel products through Hot Charging Rolling Mill**	**96000 TPA**	No change in existing production capacity of Billets in Induction Furnace. Only Hot Billets will be fed to existing Rerolling Mill to produce Rerolled Steel Product by running the mill in 3 shifts.
Billet Reheating Furnace based Steel Rerolling mill to produce rerolled steel product	**60000 TPA**	Billet Reheating Furnace based Steel Rerolling mill to produce rerolled steel products.	**60000 TPA**	No change in existing production capacity of Rerolled Structural steel

The certified compliance report for the existing EC conditions was issued by the Regional Office of the MoEF&CC at Nagpur on 31/07/2018 wherein following non-compliances have been reported:

i. Specific condition no (ii) General condition no.(iv) - Measures for control of secondary fugitive emissions from internal roads and open areas needs to be further upgraded or strengthened by the PP. Housekeeping practices needs to be improved to keep the open areas of the premises tidy and to keep the secondary emissions under control. Similarly, water sprinkling system at the transfer points, along the roads needs to be further strengthened as premises of the PP has been observed with substantial secondary fugitive emissions.

ii. Specific conditions no.(vi) - Though the PP has provided closed circuit cooling system to optimize the water requirement and a settling tank to

neutralize the water and to re-use it for industrial and for sprinkling and green belt development, yet the water stored in the settling tank was observed with oil based impurities which results from the wear and tear, repairing of the machineries. No provisions were observed to be adopted by the PP to separate oil from the water. Further, treatment of domestic waste water regimes also needs to be upgraded by the PP. Provisions of setting up an oil separator or ETP needs to be explored by the PP to avoid flowing of oil based impurities/effluents into the natural water drainage.

iii. Conditions no. (vii) - The PP has informed that noise levels are being kept within prescribed limit through taking adequate measures. However, supporting details on the monitoring of noise levels, in various working zones, was not made available by the PP.

After detailed deliberations, the Committee noted that closure report to the aforesaid non-compliances are yet to be obtained by the project proponent from the Regional Office.

The existing and proposed scenario in the induction furnace and rolling mill after the change in product mix is given as below:

Induction furnace

Existing Scenario:

- At present **96000 TPA Cold MS Billet** Production Capacity is in operation based on Induction Furnaces with CCM through 10 heat per day X 300 days/annum basis.

Proposed Scenario:

- There is no change in capacity, the capacity will remain same as **96000 TPA**. The product mix will be changed from **"MS Billet"** to "**MS Billet and/or Rerolled Steel product through Hot charging**".

Rolling Mill

Existing Scenario:

- At present rerolling mills is being operated with Billet reheating furnace on single shift basis for 300 days to produce 60000 TPA Rerolled Steel products.
- Fuel requirement is about 50 liter furnace oil per ton.
- Thus about 3000 KL/annum Furnace Oil is required.

Proposed Scenario:

- Rerolling mill will be run in 3 shifts in place of one shift; hot billets from CCM will be fed to the mill for Rolling.
- No change in heating capacity of Reheating furnace it will remain 60000 TPA.
- It is proposed to improve fuel efficiency to reduce furnace oil consumption to 45 litre per ton from existing 50 liter per ton.
- No additional Reheating furnace is required.
- No additional rolling mill will be required.

In addition to the, following process improvements in the existing induction furnace, rolling mill and reheating furnace will be carried out:

- It is proposed to utilize high grade Sponge Iron with High Metallization and Heavy Melting Scrap and Pig Iron in Induction Furnaces to reduce the Power Consumption; reduce melting time; reduce power consumption; reduce slag losses and save water and improve the productivity.
- In Rolling Mill increase the working hour to three shift and optimize the speed of existing Rolling mill drives.
- The roll pass design will be improved.
- High thermal efficiency waste heat recuperator will be installed for recuperating thermal energy from flue gases.
- Yearly Furnace Oil requirement will be reduced to 2700 KL/Annum. Thus 300 KL/Annum furnace oil will be saved.
- The reheating furnace temperature profile will be monitored and improved to restrict excess heating of Billets.
- Flue gas analyzer for control of excess Oxygen in re heating furnace will be installed.

The raw material requirement for the existing and proposed change in product mix scenario is given as below:

ITEM	Existing Scenario (TPA)	Proposed Scenario (TPA)	Change In quantity
[A] Induction Furnace			
Sponge Iron	93768	91535	-2233
CI/ Pig Iron/ Heavy Scrap	20784	20589	-195
Ferro Alloys	1040	1015	-25
Ramming Mass/ Refractory Lining etc.	404	394	-10
Sub-Total [A]	**115996**	**113233**	**-2763**
[B] Reheating Furnace			
Billet	66000	62400	- 3600
Furnace Oil (in TP based on .97 Density)	2910 (3000 KLA X .97)	2619 (2700 KLA * .97)	-291
Sub-Total [B]	**68910**	**65019**	**-3891**
Grand Total [A] + [B]	**184906**	**178252**	**- 6654**

The air pollution load for the existing and proposed change in product mix scenario is given as below:

ITEM	Existing Scenario	Proposed Scenario	Further improved Scenario
PM Emission Level	50 Mg/Nm^3	50 Mg/Nm^3	35 Mg/Nm^3 5in Induction Furnace and 45 Mg/Nm^3 in BRF
Particulate emission thru operation of Induction Furnace	**4.32 TPA**	**3.48 TPA**	**2.436 TPA**
Particulate emission thru operation of Billet Reheating Furnace	3.30 TPA	2.97 TPA	2.67 TPA
Total Particulate Emission	**7.62 TPA**	**6.45 TPA**	**5.11 TPA**
SOx emission (@ 300 mg/Nm^{3}according to GSR 263 (E) dated 22.03.2018)	19.8 TPA	17.82 TPA	17.82 TPA
NOx emission (@ 1000 mg/Nm^3 according to GSR 263 (E) dated 22.03.2018	66 TPA	59.4 TPA	59.4 TPA

The waste generation for the existing and proposed change in product mix scenario is given as below:

Waste for disposal sent outside:	Qty. MT/Year			Utilization /disposal method
	Existing Scenario	Proposed Scenario	Change in Qty.	
[A] INDUCTION FURNACE with CCM				
Mill Scale	2400	2400	0	Partially reused in own Induction Furnaces and remaining will be sold to Ferro Alloys Plants
End cutting during Billet Production	2400	2000	-400	Reused in own Induction Furnaces.
Miss Cast/ Defective Billets	4800	2880	-1920	Reused in own Induction Furnaces
Refractory Wastes	192	192	0	Given to other industries for beneficial usage.
Slag	9600	9600	0	Given to metal recovery units for beneficial use.
Total Waste Generation due to operation of Induction	**19392**	**17072**	**- 2320**	

Waste for disposal sent outside:	Qty. MT/Year			Utilization /disposal method
	Existing Scenario	Proposed Scenario	Change in Qty.	
Furnace				

Waste for disposal sent outside:	Qty. MT/Year			Utilization /disposal method
	Existing Scenario	Proposed Scenario	Change in Qty.	
[B] ROLLING MILL				
Mill Scale (Now as Bye Product)	3000	1200	-1800	Partially reused in own Induction Furnaces and sold to Ferro Alloys plants and Pelletization units.
End Cutting/ Miss Roll etc. (Bye Product)	3000	1200	-1800	100% Used in house for melting in Induction Furnaces
Total Waste Generation due to operation of Rerolling Mil	6000	2400.	-3600	100% Used for beneficial purpose. No waste requires disposal.
[C] Used Oil and Grease	3	4	+1	Sold to registered recyclers
Gross Waste Generation in entire scenario [A]+[B]+[C]	25395	19476	- 5919	The waste generation will be less due to better use of raw material and lower burning losses.

The overall impact scenario of the existing and proposed change in product-mix is furnished as below:

Particulars	Impact	Quantum of change
Air Regime	Reduction in Air Pollution Load.	PM emission 7.62 TPA to 5.11 TPA SOx – 19.58 TPA to 17.82 TPA Nox 66 TPA to 59.4 TPA
Water Regime	Reduction in Water consumption	Existing water requirement of 350 KLD will not increase rather there

Particulars	Impact	Quantum of change
		will be saving due to hot charging.
Noise	No significant impact	-
Transportation	Daily transport density will be reduced.	30 Trips/Day to 14 Trips/day for raw material and 25 trip/Day to 25Trip/day for finished product.
Land	No change	-
Waste Generation	Reduction in total waste generation quantity	25395 TPA to 19476 TPA
Socio-Economy	Positive impact	60 Additional employment and additional revenue to Government. Plus addition CER funds to be spent.

After detailed deliberations, the Committee deferred the consideration of the proposal cited above and sought following additional information for further consideration of the proposal:

i. Permission from the Competent Authority for existing and additional withdrawal of water.

ii. Closure report from Regional Office on the observed non-compliances have not been furnished inter-alia including green belt development in 33% of the area and rainwater harvesting.

10.12.3 The project proponent has submitted the aforesaid additional information to the Ministry on 8/08/2019.

10.12.4 The ADS reply submitted by the project proponent placed before the EAC. The project proponent made a presentation before the Committee on the ADS points. Point wise submission made by the PP against the additional information is furnished as below:

S.No.	Information sought	Response submitted
i.	Permission from the Competent Authority for existing and additional withdrawal of water.	PP has made MoU with Chhattisgarh Ispat Bhumi Limited for supply of 450 KLD of water.
ii.	Closure report from Regional Office on the observed non-compliances have not been furnished inter-alia including green belt development in 33% of the area and rainwater harvesting.	Closure report on the non-compliances reported at para no. 10.12.4has been submitted by the Regional Office, Nagpur vide letter no. 5-24/2008(ENV)/5555 dated 25/07/2019. As per the report, corrective action has been taken by

S.No.	Information sought	Response submitted
		the PP and the compliance status is reported as Complied. Further, PP has developed green belt in an area of 1.03 ha by planting 3000 saplings.

Observations of the Committee:

10.12.5 The committee observed that the additional information furnished by the project proponent is adequate.

Recommendations of the Committee

10.12.6 After detailed deliberations, the committee recommended the project for grant of Environmental Clearance under para 7(ii) of EIA Notification, 2006 for change in product mix as mentioned above.

10.13 Proposed Installation of two Induction Furnaces having capacity of 12 MT each to produce 86,400 TPA billets and ingots by**M/s. Aditya Industries**located at Village Rampur Jattan, Nahan Road, Tehsil Kala Amban, District Sirmaur, **Himachal Pradesh**[Online Proposal No. IA/HP/IND/109835/2019, File No. J-11011/201/2016-IA.II(I)] **–** Validity extension of **Terms of Reference** regarding.

10.13.1 **M/s. Aditya Industries** has made an online application vide proposal No. IA/HP/IND/109835/2019dated 2nd July 2019 along with copies of EIA/EMP report and Form – 5 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.

10.13.2 The proposed proposal was considered during its 6thExpert Appraisal committee (Industry-1) meeting on 30thMay to 1st June, 2016 for prescribing ToR for undertaking detailed EIA/EMP and Standard ToR Letter for the above mentioned project was granted by MoEF&CC vide it's File No. J-11011/201/2016IA.II (I) dated 11thAugust 2016.

10.13.3 Final EIA/EMP report to the MOEF & CC was prepared and ready for submission to MOEF&CC. But the validity of the current TOR is only upto10.08.2019. As a precautionary measure against any unforeseen circumstances that may lead to any delay whatsoever, this Amendment is sought for extension of validity of TOR from 10.08.2019 to 10.08.2020.

10.13.4 Consultant: Shivalik Solid Waste Management Limited, Certificate No. NABET/EIA/1922/RA 0182, valid till 16.02.2022, Sr. No. 134, Rev. 79,14 August 2019.

Observations and recommendations of the Committee:

10.13.5 After detailed deliberations, the committee recommended for extension of validity of ToR for a period of one year, i.e., upto 10th August 2020.

10.14 Expansion of Steel Melting Shop (IF with LF & CCM: from 135000 TPA to 375000; Rolling Mill: from 90000 TPA to 297000; Cold Drawing Workshop: 33000TPA by **M/s. Maithan Steel & Power Limited** located at Nakrajoria, PS-Salanpur, District-Paschim Bardhaman, **West Bengal** [Online Proposal No. IA/WB/IND/113464/2019, File No. J-11011/679/2008-IA II(I)] **– Amendment in Environmental Clearance regarding change in configuration of Induction Furnace & Ladle Refining Furnace from 8X15 T IF + 2 CCM + LRF to 4 X 15 T IF + 3 X 20 T IF + 2 CCM +LRF– regarding**

10.14.1 M/s. Maithan Steel & Power Limited has made online application vide proposal no. IA/WB/IND/113464/2019 dated 6/08/2019 along with Form 4 sought for amendment in the Environmental Clearance accorded by the Ministry vide letter no. F.No. J-11011/679/2008-IA-II(I)dated 16/04/2019 regarding change in configuration of Induction Furnace & Ladle Refining Furnace from 8X15 T IF + 2 CCM + LRF to 4 X 15 T IF + 3 X 20 T IF + 2 CCM +LRF.

Details submitted by the project proponent

10.14.2 M/s Maithan Steel & Power Ltd, at- Nakrajoria, P S- Salanpur, Dist:-Burdwan(W), has been granted EC vide letter No: J-11011/679/2008-IA-II(I), dated 16th April, 2019 for expansion of its steel production capacity from 1,35,000 TPA to 3,75,000 TPA with following project configuration and capacities.

Units	Existing Facilities as per EC-J-11011/679/2008-IA II(I)	Existing capacity in TPA	Proposed facilities	Proposed Capacity In TPA	Final Configuration	Final Capacity In TPA	End use
IF with LF & CCM	3x15 T IF + 1 CCM	1,35,000 billets	5x15T IF +1 CCM +LRF	2,40,000 billet	8x15 T IF + 2 CCM + LRF	3,75,000 billet	Rolling Mill & Sale
Rolling mill	1x300 TPD	90,000 Hot rolled products	600 TPD (Existing 300 TPD RM to be expanded to 600 TPD and a new 1x300 TPD RM to be installed)	2,07,000 Long & flat product	1x600 TPD 1x300 TPD	2,97,000 Long & flat product like TMT, Ms Round, wire rod and structural steel & Flat product like strips	Sale

Units	Existing Facilities as per EC-J-11011/679/2008-IA II(I)	Existing capacity in TPA	Proposed facilities	Proposed Capacity In TPA	Final Configuration	Final Capacity In TPA	End use
Cold drawing workshop	Nil	Nil	1x100 TPD	33,000 1x100 TPD		33,000 Cold drawn Torkari, Black wire. Nails, corrugated sheets, Wire Mesh, MS Pipes & Structural Tubes etc.	Sale

10.14.3 The amendment required is only to change configuration of approved 8x15T IFs to 4x15 T IF & 3x20T IFs, the total production capacity will remain same 3,75,000 TPA as approved in EC and there will be no change in emission load. All other facilities and configurations as approved in EC will remain unchanged.

10.14.4 The reasons for proposing 3x20T IF against approved 4x15T IF are

- Cost reduction
- Less requirement of space,
- Less energy consumption per ton of product.
- No change in pollution load: as Production is by melting of metal by electric current only and no other fuel will be used.
- Raw materials are a) sponge iron, b) pig iron and c) scrap, which will not change and no coal or any other fuel will be used in IF.

10.14.5 The Final configuration & capacity after amendment will be as follows

Units	Existing Facilities as per EC-J-11011/679/2008-IA II(I)	Existing capacity in TPA	Amendment facilities	Amendment Capacity In TPA	Final Configuration after amendment	Final Capacity In TPA	End use
IF with LF & CCM	3x15 T IF + 1 CCM	1,35,000 billets	1x15T IF, 3x20T IF +1 CCM +LRF	2,40,000 billet	4x15 T IF, 3x20T IF+ 2 CCM + LRF	3,75,000 billet	Rolling Mill & Sale
			600 TPD	2,07,000 Long & flat product	1x600 TPD	2,97,000 Long & flat	Sale

Units	**Existing Facilities as per EC-J-11011/679/2008-IA II(I)**	**Existing capacity in TPA**	**Amendment facilities**	**Amendment Capacity In TPA**	**Final Configuration after amendment**	**Final Capacity In TPA**	**End use**
Rolling mill	1x300 TPD	90,000 Hot rolled products	(Existing 300 TPD RM to be expanded to 600 TPD and a new 1x300 TPD RM to be installed)		1x300 TPD	product like TMT, Ms Round, wire rod and structural steel & Flat product like strips	
Cold drawing workshop	Nil	Nil	1x100 TPD	33,000	1x100 TPD	33,000 Cold drawn Torkari, Black wire. Nails, corrugated sheets, Wire Mesh, MS Pipes & Structural Tubes etc.	Sale

Observations and recommendation of the Committee:

10.14.6 After detailed deliberations, the committee recommended for the change in configuration of the induction furnace from 8X15 T IF + 2 CCM + LRF to 4 X 15 T IF + 3 X 20 T IF + 2 CCM +LRF.

10.15 Expansion of Bokaro Steel Plant from 4 MTPA to 4.606 MTPA Crude steel by **M/s. Steel Authority of India Limited** located at **Bokaro, Jharkhand** [Online Proposal No. IA/JH/IND/113706/2019, File No. J-11011/99/2007-IA.II(I)] **– Amendment in Environmental Clearance regarding specific condition no. xi pertaining to fly ash disposal – regarding**

10.15.1 M/s. Steel Authority of India Limited has made an online application vide proposal no. IA/JH/IND/113706/2019dated 07/08/2019 along with Form 4 sought for amendment in the Environmental Clearance accorded by the Ministry vide letter no. J-J-

11011/99/2007-IA-II(I) dated 16/10/2008 regarding specific condition no. xi pertaining to fly ash disposal.

Details submitted by the project proponent

10.15.2 Expansion of Bokaro Steel Plant from 4 MTPA to 4.606 MTPA crude steel by M/s. Bokaro Steel Plant, Steel Authority of India Limited (SAIL) located at Bokaro, Jharkhand. EC was accorded by MoEF&CC vide letter no. J-11011/99/2007-IA-II(I) dated 16/10/2008 and subsequently amended on 28/11/2014.

10.15.3 As per Specific Condition (xi) of EC issued to Bokaro Steel Plant by MOEF&CC, states the following:
"(xi) Proper utilization of Fly ash shall be ensured as per Fly ash notification, 1999 and subsequent amendment in 2003 ".

10.15.4 Bokaro Steel Plant (BSL) is not generating power and hence no fly ash is being generated by BSL. Power generation is done by M/s BPSCL (Bokaro Power Supply Company Limited), a separate entity which has got separate CTO from JSPCB and separate EC from MoEFCC. Responsibility of compliance to EC conditions related to fly ash generation and its management lies with M/s BPSCL.

10.15.5 In view of the above, exemption from specific condition no. (xi) related to Fly ash management is requested by Bokaro Steel Plant, through amendment in Environmental Clearance.

Observations of the Committee:

10.15.6 The committee noted the following:

a) The Bokaro Steel Ltd (BSL) transferred the management of the captive power plant to the joint venture company, Bokaro Power Supply Company Ltd [JV of Steel Authority of India Ltd (SAIL) and Damodar Valley Corporation (DVC)] in the year 2001.

b) The BSL has submitted a proposal for amending the EC conditions no. xi issued vide MoEF&CC letter dated 16.10.2008. The condition reads as follows.
'Proper utilization of fly ash shall be ensured as per fly ash notification, 1999 and subsequent amendment in 2003'.

c) The BSL stated that since it is not involved in power generation activities, no fly ash is generated out of its own processes and hence the above mentioned condition should be dropped from the EC issued to BSL. They further, stated that all fly ash generation and its management is to be done by M/s BPSL.

d) The BSL further stated that the condition no. (viii) in the EC issued to M/s BPSL on 3rdApril 2012 that utilization of 100% fly ash generated shall be made from 4thyear of operation as per Fly Ash Notification 1999 and tis subsequent amendments.

e) The Committee also noted that old fly ash stock is lying unutilized as reported by RO, MoEF&CC in its inspection report.

f) The committee felt that an important job of 100 % fly ash utilization is kept pending because two companies appear to be disowning the work. Due to this, the environment is getting adversely affected.

Recommendation of the Committee

10.15.7 After detailed deliberations, the committee recommended the following.

- M/s BSP and M/s BPSL should jointly prepare a time bound joint action plan for 100% disposal of fly ash-old as well as newly generated stocks.
- The above joint action plan should be approved by the board of both the companies and submitted to the Ministry by BSL within 30 days.
- After receipt of the above, the modification pertaining the EC conditions shall be considered.

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

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
iii. Co-ordinates (lat-long) of all four corners of the site.
iv. Google map-Earth downloaded of the project site.
v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
vii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
ix. Geological features and Geo-hydrological status of the study area shall be included.
x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
xii. R&R details in respect of land in line with state Government policy

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

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

6. **Environmental Status**

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM_{10}, $PM_{2.5}$, SO_2, 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).

<u>The following general points shall be noted:</u>

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 (QCl)/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 SPCBshall 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.

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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 (PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.
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(PM_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

i. A note on pulp washing system capable of handling wood pulp shall be included.
ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.
iv. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.
v. A commitment that no extra chlorine 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 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 is acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest, eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)

viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population

ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.

x. Likely impact of the project on air, water, land, flora-fauna and nearby population

xi. Emergency preparedness plan in case of natural or in plant emergencies

xii. Issues raised during public hearing (if applicable) and response given

xiii. CSR plan with proposed expenditure.

xiv. Occupational Health Measures

xv. Post project monitoring plan

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LIST OF PARTICIPANTS IN 10th MEETING OF EAC (INDUSTRY-I) HELD ON 22 - 23 AUGUST, 2019

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE	
			22nd Aug, 2019	23rd Aug, 2019
1	Dr. Chhavi Nath Pandey, IFS(Retired) Email: pandeychhavinath55@gmail.com	**Chairman**		
Members				
2.	DR. A. K. DIXIT, Representative of Central Pulp and Paper Research Institute, Saharanpur.	**Member**		Absent
3.	, Representative of Indian Meteorological Department, New Delhi.	**Member**	Absent	Absent
4.	Dr. G. Bhaskar Raju Email: gbraju55@gmail.com	**Member**	Absent	Absent
5.	Dr. Jagdish Kishwan, IFS (Retd.) Email: jkishwan@gmail.com	**Member**	22 Aug 2019	23 Aug 2019
6.	Dr. G.V. Subramanyam Email: sv.godavarthi@gmail.com	**Member**	22/8/19	23/8/19
7.	Shri. Ashok Upadhyaya Email: ahupadhy@rediffmail.com	**Member**	22/8/19	23/8/19
8.	Shri. R.P. Sharma Email: rpsh3@hotmail.com	**Member**		
9.	Shri. Sanjay Deshmukh Email: docsvd@yahoo.com	**Member**	Absent	

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE	
			22nd Aug, 2019	23rd Aug, 2019
10.	Prof. S.K. Singh Email: sksinghdee@gmail.com **singhsk@email.com**	**Member**	Absent	Absent
11.	Dr. R. Gopichandran Email: r.gopichandran@vigyanprasar.gov.in	**Member**	Absent	Absent
12.	Shri. Jagannath Rao Avasarala Email: avasaralajagan@gmil.com	**Member**	Absent	Absent
13	Shri. J.S. Kamyotra Email: kamyotra@yahoo.co.in	**Member**	JSKamyotra 22/8/19	JSKamyotra 23/8/19
14.	Shri. Aravind Kumar Agrawal Director, MoEF&CC Email: dirind-moef@gov.in	**Member Secretary**		

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