

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

SUMMARY RECORD OF THE NINETEENTH (19th) MEETING OF EXPERT APPRAISAL COMMITTEE HELD ON 8TH – 9TH JUNE 2017 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The nineteenth meeting of the Expert Appraisal Committee (EAC) for Industry-I Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held on 8th – 9th June 2017 in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

19.1 After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim.

19.2 Confirmation of the minutes of the 18th Meeting

The minutes of the 18th meeting, as circulated were confirmed subject to following modifications:

Item 18.14: Expansion Proposal for Upgradation & Modernization in Agro Pulp capacity 165 Ton Bleached Pulp paper per day and Expansion in Hard wood pulping Capacity (from 60 Ton to 200 Ton Bleached pulp per day) conventional Chemical Recovery Plant (from 230 Ton to 580 Ton Black Liqior solids per day) & Co-Generation Plant (from 17.5 MW to 28 MW) at village saila khurd, tehsil Garhshanker, District Hoshiarpur, Punjab by M/s Kuantum Papers Limited. [Proposal No. IA/PB/IND/24304/2014, File No. J-11011/344/2008-IA.II(I)] - (Environmental Clearance for Expansion)

For	Read
23.0 After detailed presentation by PP along with their EIA consultant J. M. Enviro Net Pvt. Ltd the committee noted that the production capacity of the plant remains same but the hardwood pulp is proposed to increase in place of Agro pulp ; the proponent has laid 13 km pipeline for supply of treated effluent for irrigation of about 2080 Ha; the specific water consumption is proposed to reduce from 60 m ³ /t to 50 m ³ /T; proposed to use pet coke in the CPP; possibility of accumulation of halo organs in the irrigation area by the treated effluent; New CRP for recovery of caustic to handle black liquor from wood pulping street etc.	23.0 After detailed presentation by PP along with their EIA consultant J. M. Enviro Net Pvt. Ltd the committee noted that the production capacity of the plant remains same but the hardwood pulp is proposed to increase in place of imported pulp ; the proponent has laid 13 km pipeline for supply of treated effluent for irrigation of about 2080 Ha; the specific water consumption is proposed to reduce from 60 m ³ /t to 50 m ³ /T; proposed to use pet coke in the CPP; possibility of accumulation chloro organics in the irrigation area by the treated effluent should be constantly monitored and measures to minimize the same should be adopted; New CRP for recovery of caustic to handle black liquor from wood pulping etc.

Item 18.14: Establishment of silver refining plant for production of refined silver production -500 TPA at plot No.2, sector -14, Integrated Industrial Estate (IIE), Pantnagar, Uttarakhand by M/s Hindusthan Zinc Ltd., [Proposal No. IA/UK/IND/63964/2010, F.No. IA-J-11011/170/2017-IA-II-(I)] – (Expansion under section 7(ii) of EIA Notification 2006)

For	Read
<p>4.0 Now, M/s HZL proposes to enhance the production capacity of the existing plant from 500 TPA to 600 TPA (20% increase) owing to the increased percentage of silver content in raw material. The manufacturing process consists of pyro-metallurgical refining of anode slime in furnaces and hydro-metallurgical refining in electrolysis section. This plant shall treat the “anode slime” & high-grade metal (HGM) produced as a by-product in the HZL lead smelters in Rajasthan to recover the silver. The existing plant is having all the necessary utilities and auxiliary support system like power distribution, fuel oil storage & distribution, compressed air, water treatment system etc.</p>	<p>4.0 Now, M/s HZL proposes to enhance the production capacity of the existing plant from 500 TPA to 600 TPA (20% increase) owing to the increased percentage of silver content in raw material. The manufacturing process consists of pyro-metallurgical refining of anode slime in furnaces and hydro-metallurgical refining in electrolysis section. This plant shall treat the “anode slime” & high-grade metal (HGM) produced as a by-product in the HZL lead smelters in Rajasthan to recover the silver. This plant shall produce 25 TPA of Silver Nitrate as a by-product. The existing plant is having all the necessary utilities and auxiliary support system like power distribution, fuel oil storage & distribution, compressed air, water treatment system etc</p>

DATE: 8th June 2017

19.3 Proposed expansion in production of Ferro Alloys Unit (adding 2×9 MVA submerged electrical arc furnace) at plot 368, APIIC Growth Centre, Bobbili Vizianagaram District, Andhra Pradesh of M/s Berry Alloys Ltd. [Proposal No. IA/AP/IND/60143/2016, File No. J-11011/1129/2007-IA-II(I)]- Environmental Clearance

1.0 The proponent has made online application vide proposal no. **IA/AP/IND/60143/2016**, dated 17.05.2017 along with copies of EIA/EMP report 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) under Category "A" EIA Notification 2006.

2.0 The expansion of M/s Berry Alloys Limited (BAL) located in Village Bobbili, Vizianagaram District; Andhra Pradesh was initially received in the Ministry on 4th Nov 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 12th meeting held on 23-24 Nov 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 9th February, 2017 vide F. No. J-11011/1129/2007-IA.11 (I).

3.0 The project of M/s Berry Alloys Limited (BAL) located in Bobbili Village, Vizianagaram District, Andhra Pradesh State is for setting up of a new 2x9 MVA Submerged Electric Arc Furnace for production of additional 43200 TPA Ferro Manganese or 36000 TPA Silico Manganese after expansion the total capacity of plant will be 4 x9 MVA with a production of 86400 TPA Ferro Manganese or 72000 TPA Silico Manganese. The existing project was accorded environmental clearance vide F. No. J-11011/1129/2007-IA.II(I) on dated 19.06.2008. The Status of compliance of earlier EC was obtained from Regional Office, Chennai vide Lr. No EP/12.1/697/AP/0074 dated 12.01.17. There are no non-compliances reported by Regional officer. The following increase in capacity of different products was proposed.

Product details	Existing Production	Proposed Production	Total Production after Expansion
Ferro Manganese	43200 TPA	43200 TPA	86400 TPA
OR	OR	OR	OR
Silico Manganese	36000 TPA	36000 TPA	72000 TPA
OR	OR		OR
Ferro Silica	25200 TPA		25200 TPA
OR	OR		OR
Ferro Chrome	36000 TPA		36000 TPA

4.0 The topography of the area is slightly undulating (flat/undulated) and reported to fall between 18°32'15" North Latitude and 83°20'63" East Longitude in Survey of India Topo Sheet No. 65 N/6, at an elevation of 135 m AMSL. The ground water table reported to ranges between 1.5 m to 3.5 m below the land surface during the post-monsoon season and 3.5 to 6.5 m below the land surface during the pre-monsoon season.

5.0 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through the study area reporting presence of no /schedule-I fauna in the study area (Annexure of EIA).

6.0 Ferro-alloys are produced by reducing metals from their oxides contained in ores by using a suitable reduction under conditions created to ensure a high recovery of the valuable elements from the starting materials. Such reduction reactions are characterized by stability of an oxide at high temperatures. The stability of all oxides will become more stable with increasing temperature. An element which forms a stronger oxide can under appropriate conditions be used as reductant for a less strong oxide. The reaction will proceed successfully if the difference of oxygen involved with a small difference, favourable conditions should be formed to make the reaction proceed. The presence of iron or iron oxides can facilitate some reduction processes. Iron dissolves the reduced element, forms a compound with it, and thus lowers the melting point of an iron element alloy is lower than that of the pure element, e.g. in Ferro-manganese production, and therefore the reaction of reduction of the element can proceed at a lower temperature.

7.0 The targeted production capacity of the 4x9 MVA Submerged Electric Arc Furnace is 86400 TPA Ferro Manganese or 72000 TPA Silico Manganese. The raw Material transportation will be done through road.

8.0 The water requirement of the project is estimated as 60 KLD, out of which 10 KLD of Domestic Water and all the water required will be obtained from the APIIC Growth Centre.

9.0 The power requirement of the project is estimated to be 30000 KVA, which will be obtained from the Eastern Power Distribution Company of Andhra Pradesh Limited.

10.0 Baseline Environmental Studies were conducted during Winter season i.e. from December 2016 to February 2017. Ambient air quality monitoring has been carried out at 8 locations during December to February and the data submitted indicated: Particulate matter (PM₁₀) ranges from 37.2 to 67.3 µg/m³; Particulate matter (PM_{2.5}) ranges from 14.2 to 28.2 µg/m³; Sulphur dioxide (SO₂) is 9.3 to 12.3 µg/m³; Oxides of Nitrogen (NO_x) are 12.1 to 15.0 µg/m³. The results of the modelling study indicate that the maximum increase of Ground level Concentration for the proposed project is 3.04 µg/m³ with respect to the PM10 and 6.17 µg/m³ with respect to the NO_x.

11.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.25 to 7.88., Total Hardness: 313.1 to 858.5 mg/l, Chlorides: 33.5 to 694.78 mg/L, Fluoride: 0.41 to 0.92 mg/L. Heavy metals are within the limits. Surface water samples were analysed from 04 locations. pH: 7.77 to 8.11; DO: 5.2 to 5.4 mg/l and BOD: 2.59 to 3.5mg/L. COD from 10 to 14 mg/L.

12.0 Noise levels are in the range of 45.9 to 68.4 dB(A) for daytime and 40.9 to 63.0 dB(A) for night time.

13.0 It has been reported that there are 170203 people 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.

14.0 The estimated main solid waste generated from this proposed plant is Slag and Dust from bag filters. About 180 TPD of slag from process and 1.5 TPD of dust will be collected in the proposed Bag Filters and this dust will be disposed to brick manufacturing units, where this dust will be used as 10% substitute for cement.

15.0 It has been reported that the Consent to Operate from the Andhra Pradesh State Pollution Control Board / Pollution Control Committee obtained vide Lr. No APPCB/VSP/VZM/160/HO/CFO/2015-3602 -3602 dated 05.08.2015 and consent is valid up to 31st August 2018.

16.0 The Public hearing of the project was held on 29/04/2017 at M/s. Berry Alloys Limited, APIIC, Plot No.368, Growth Centre (Industrial Estate), Bobbili (V) & (M), Vizianagaram District, Andhra Pradesh State under the chairmanship of Joint Collector (designation) for production of 86400 TPA Ferro Manganese or 72000 TPA Silico Manganese setting up of 4 x9 MVA plant. The issues raised during public hearing are Local Person Employment and Water Facility. An amount of 50 Lakhs (2.5% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

17.0 The capital cost of the project is Rs 20 Crores and the capital cost for environmental protection measures is proposed as Rs 50 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 50 Lakhs. The detailed CSR plan has been provided in the EMP in its page No. CH10 -11. The employment generation from the proposed expansion is 50 nos.

18.0 Greenbelt will be developed in 4.44 acres 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. Total no. of 4500 saplings will be planted.

19.0 There is no court case or violation under EIA Notification to the project or related activity.

20.0 After detailed deliberations, the committee recommended the proposal for grant of Environmental Clearance subject to following specific conditions along with other environmental conditions while considering for accord of environmental clearance by the ministry

- i. The mandated 33% of total area (4.44 acers) covered under green belt shall be carried in the first year of implementation of expansion project with local and broad-leaved species as per the guidelines of CPCB. The additional plantation shall be carried all along the boundary wherever possible with minimum of two rows. In addition, 2,500 trees will be planted in a block in the vacant area available in North-East direction of the plant site
- ii. The budget allocated (Rs.50 Lakhs) for Enterprise Social Responsibility (ESR) to address the issues raised during the public hearing shall be completed within 7 months of commencement of expansion project as per the action plan submitted by PP. The ESR fund shall be allocated as a CAPEX in project mode and monitored periodically once in 3 years.
- iii. The bag filter shall have capacity of not less than 1.5 times the requirement of the existing plus proposed expansion project.
- iv. The slag generated during the process shall be used for brick manufacturing or supply to the end users.
- v. The dust collected in the bag house(s) shall be re-used in the sintered plant.
- vi. Leachate analysis of slag by TCLP test shall be carried once in 6 months and shall be reported to Regional Office of the Ministry along with half yearly monitoring report.
- vii. Occupational Health monitoring of all workmen engaged at shop-floor, loading and unloading material/products shall be carried through IME and PME once in 5 years.
- viii. The project shall adhere to Zero Liquid Discharge (ZLD)

19.4 Expansion of capacity of existing steel manufacturing unit from 200 TPD to 540 TPD steel ingots / concast billets /steel structures by replacing existing furnaces at village Salani Amlah, Mandi Gobindgarh, Dist. Fatehgarh Sahib, Punjab of M/s RP Multimetals Pvt Ltd. [Proposal No. IA/PB/IND/64399/2017; MoEF&CC File No. IA-J-11011/261/2017-IA-II(I)] – Prescribing Terms of Reference

1.0 The proponent has made online application vide proposal no. **IA/PB/IND/64399/2017** dated 4th May 2017 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 EIA Notification, 2006 as the proposal attracts the general condition of the and appraised at the Central Level.

2.0 M/s RP Multimetals (P) Limited is already manufacturing Steel Ingots, Billets, HR coils, MS Bars, flats, ERW/MS pipes etc., at Village Salani, Amlah road, Mandi Gobindgarh, District Fatehgarh Sahib Punjab. The existing plant was established in the year 2000 with an investment of Rs. 6.0 Crores. Consent to Operate was accorded by State Pollution Control Board vide Ir.no. R15FGSCTOW2497470 which is valid up to 31/03/2019.

3.0 Now, M/s. R.P. Multimetals Private Limited proposed to replace 2 Induction Furnaces having capacity 4TPH & 5TPH with three no. of Induction furnaces having capacity 15 TPH each and 1 no. rolling mill of capacity 340 TPD. It is proposed to increase the capacity of Steel Ingots & Billets from 200 TPD to 540 TPD. The existing plot area is 9.4 acres. The proposed expansion will be taken up in the premises of existing plant and no additional land is required.

4.0 The topography of the area is flat and reported to Latitude 30°38'01.53" North and Longitude 76°15'42.26" East with an elevation of 261 m AMSL.

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

6.0 Total project cost is Rs. 34 Crore and Rs. 85 Lakhs have been provided for pollution control measures. Rs. 10 Lakhs will be spent on annual maintenance of such measures. There are about 225 persons working in the unit. After expansion about 325 persons will be working in the unit.

7.0 The existing capacity of the unit is 200 TPD of Steel Ingots, Concast Billets and HR coils, MS Bar, flat, ERW/MS pipes etc. The capacity of the unit after expansion will be 540 TPD of Billets, Steel Ingots, HR coils, MS Bars, flats, ERW/MS pipes.

8.0 The existing power of the unit is 12.78 MW. The proposed power requirement of the unit will be 10.00 MW. After expansion power demand will be 22.78 MW. This demand will be met by sourcing the power from PSPCL.

9.0 Proposed raw material and fuel requirement for project are MS/CI Scrap, Sponge/Pig Iron, Ferro Alloys which will be sourced from Domestic as well as International markets and Steel Ingots and Billets will be sourced from own unit.

10.0 Water Consumption for the proposed project will be 38 KLD which will be met through an existing tube well. Waste water generation is 11.2 m³ which will be treated through STP.

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

12.0 The PP has made detailed presentation on the proposal. It is noted that the existing project is operating with CtE and CtO from the State Pollution Control Board; located in Critically Polluted Area (Mandi Gobindgarh) as notified by the Central Pollution Control Board; The moratorium in this area has been lifted in 2016; plantation in the existing plant is very less; the old plant was constructed without proper planning to accommodate green belt all around; the proposal is for replacement of 2 Induction Furnaces having capacity 4 TPH & 5 TPH with three no. of Induction furnaces having capacity 15 TPH each and 1 no. rolling mill of capacity 340 TPD; etc.

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

- i. Proof of investment of existing plant shall be submitted along with EIA/EMP.
- ii. Management and disposal of hazardous waste as per the Hazardous and Other Waste Management Rules, 2016 shall be addressed in the EIA/EMP
- iii. Feed for the plant will be only processed scrap and no unprocessed scrap will be used as raw material
- iv. The revised plant layout accommodating 33% of total area (i.e. 3.1 Acs) for green belt with native and broad-leaved species shall be submitted in the EIA/EMP. The total number of trees to be planted in the green belt should not be less than 3,400.
- v. Certificate of compliance of CtO of existing plant from the Regional Officer of State Pollution Control Board shall be submitted in the EIA/EMP report.
- vi. The project proponent shall plan for solar light system for all common areas, street lights, parking around project area.
- vii. The project proponent shall plan and construct a road inside the plant premises running inside all along the boundary to make all areas accessible to emergency services in case of a mishap.
- viii. Public Hearing to be conducted by the concerned State Pollution Control Board.

- ix. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- x. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

19.5 Proposed Expansion Project for production of Ferro Alloys from 16,100 TPA to 37,800 TPA at village Bhutberia, P.O. Mihijam, District Jamtara, Jharkhand by M/s Anjaney Ferro Alloys Ltd. [Proposal No. IA/JH/IND/63576/2017, F.No. IA-J-11011/128/2017-IA-II(I) - Terms of Reference

1.0 The proponent has made online application vide proposal no. IA/JH/IND/63576/2017 dated 26th April 2017 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 and SO 804 (E) dated 14th March 2017 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 EIA Notification, 2006 and it is a violation case and application is being submitted under Notification No. S.O.804(E) dated 14.03.2017, appraised at the Central Level.

2.0 M/s Anjaney Ferro Alloys Limited is operating plant for production of Ferro Alloys, Production Capacity: 16,100 TPA at Bhutberia, District – Jamtara, Jharkhand since pre-1994 with investment less than 100 Crs. Therefore, did not attract the provisions of EIA Notification, 1994 and did not obtain EC. Further in the year 2007 M/s Anjaney Ferro Alloys Limited installed another 2X8.5 MVA SAFs and expanded the production from 16100 TPA to 37800 TPA without obtaining prior environmental clearance under EIA Notification 2006. Consent to Establish was granted by Jharkhand State Pollution Control Board (JSPCB) on 3.10.2007 for installation additional units and Consent to Operate was also granted by JSPCB for production of 108 TPD Ferro alloys, till December 2012. JSPCB, while granting renewal to Consent to Operate in 2013, directed the occupier to stop the production from the expansion units of 62 TPD (2x31 TPD, SAF #3 & 4) installed during 2007 and directed to obtain Environmental Clearance.

3.0 The project proponent submitted application for environmental clearance to the MoEF&CC and the proposal was considered in 12th meeting of Expert Appraisal Committee [EAC (Industry-I)] and deferred due to involvement of violation of EIA Notification, 2006. The proponent has made an application again under the provisions of S.O. 804 dated 14.03.2017 vide proposal no. IA/JH/IND/63576/2017 dated 26th April 2017.

4.0 After deliberation, the committee referred the proposal to separate Expert Appraisal Committee notified vide S.O.1805 (E) dated 06.06.2017 to appraise the projects, which have started the work without taking prior environmental clearance and such cases have been termed as cases of violation.

19.6 Expansion of Mini Steel Plant (1.5 LTPA), Sponge Iron Plant (from 1.2 to 1.65 LTPA), Iron Ore Palletisation Plant (6.0 LTPA) and Captive Power Plant (25 MW) at village Yerrabanahalli, Taluk Sandur, District Bellary, Karnataka by M/s Minera Steel & Power Pvt. Ltd [erstwhile M/s KMMI Steel Pvt. Ltd. (KSPL)] - [Proposal No. IA/KA/IND/20790/1910, F. No. J-11011/1166/2007-IA.II]- Further consideration for Environmental Clearance under clause 7(ii) – based on ADS submitted.

1.0 The proponent has made online application vide proposal no. **IA/KA/IND/20790/1910**, dated 12th April 2016 under amendment seeking environmental clearance for the proposed increase in production of Sponge Iron from 1.20 LTPA to 1.65 LTPA under 7(ii) 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 & non-ferrous), under category ‘A’ of the Schedule of EIA Notification, 2006.

2.0 KMMI Steel Private Limited (KSPL) was incorporated on 5th February 2006 with the Registrar of Companies, Karnataka. Environment Clearance for Establishment of Mini Steel Plant (1.5 LTPA); Sponge Iron Plant (1.20 LTPA); Palletisation Plant (6.0 LTPA); and Captive Power Plant of 25 MW (8 MW –WHRB & 17 MW -FBC) at village Yerabanahalli, Taluk Sandur, District Bellary, Karnataka was obtained vide F. No. J-11011/1166/2007-IA.II (I) dated 22.09.2008.

3.0 Subsequently the name of the Company has been changed to KMMI Steel Private Limited to Minera Steel & Power Private Limited vide Registrar of Companies, Karnataka Lr. No. SRNB04931218 dated 11.02.2011. Subsequently MoEF&CC transferred the Environmental Clearance letter dated 22.09.2008 from KMMI Steel Private Limited to Minera Steel & Power Ltd., vide letter even no. dated 22.07.2015. Consent to Establishment was obtained from Karnataka State Pollution Control Board vide order dated 05.03.2009. Consent to Operation was obtained before operation of the units and current CtO is valid up to 30.06.2016. Certificate of compliance of earlier EC conditions from the Regional office, Chennai was obtained vide Lr. No. EP/12.1/551/KAR/5136, dated 09.04.2014. Subsequently the plant was inspected by Regional office, Bengaluru on 19th July 2016 and 2nd May 2017 and submitted site inspection report vide EP/12.1/551/KAR dated 8th May 2017.

4.0 Now, Minera Steel & Power Private Limited proposed to increase the production capacity of Sponge Iron Plant from 1,20,000 TPA to 1,65,000 TPA without any modification in the plant and machinery, but only by changing the raw material mix. Instead of using the conventional iron ore, the company now proposed to feed iron ore pellets. With Iron ore as raw material, Sponge Iron units work for periods of 270-300 days in a year and by using pellets the same units will can work up to 330 days in a year.

5.0 It was informed that the agglomeration technologies (viz. palletisation) is an added advantage to Sponge Iron plant so that concentrates can be used as feed material. Recycling of cheaper raw material (fines) by beneficiation and pelletisation process as feed material result in better return on investment as compared to using iron ore as feed material. With superior reducibility behaviour of pellets compared to lump ore, the efficiency of Sponge Iron production can be improved. Sponge Iron Kiln can produce more than 35-40% than its rated capacity with the use of pellet as raw material without any change in the design.

6.0 It was also informed that the consumption of raw material will reduce by 0.53% even after increasing in the production from 1.20 LTPA to 1.65 LTPA due to use of pellet in place of iron ore.

7.0 The Sponge Iron Plant along with the steel manufacturing facilities of the company are located within the total area of 137.65 Acres of existing land in the plant premises of Minera Steel & Power Private Limited. Since the company proposes to increase the production capacity of its Sponge Iron Plant without any modification in the plant and machinery, no additional land is required.

8.0 The proposal was considered in the 6th meeting of Expert Appraisal Committee [EAC (Industry-I)] held during 3rd – 4th May 2016 and the project proponent and their EIA-EMP consultant (M/s Environment & Power Technologies Pvt. Ltd.) gave a detailed presentation on the salient features of the project. The committee desired that the project proponent should submit the latest compliance report for the existing Environment Clearance from the Regional Office, and a comparative statement depicting the environmental status for the older and the new capacity should be presented further consideration of the proposal.

9.0 The PP submitted the desired information along with certified compliance status of earlier EC conditions vide Minera/MOEF/EC/SID2016-17, dated 12.08.2016. The proposal was considered in the 12th meeting of Expert Appraisal Committee [EAC (Industry-I)] held during 27th – 28th October 2016 and Committee was noted during the discussion that the PP has sourced groundwater with the permission of the State Government; however, specific condition mentioned the source as Krishna River. The specific condition given in the EC is reproduced below:

“Total water requirement from Daroji kere shall not exceed 55 m³/hr as per the agreement’ signed with the Water Resource Department, Government of Karnataka for the supply of 1 MGD water from Daroji Kere. Prior permission for the drawl of water from Krishna River, if any shall be obtained from the concerned department.....”

10.0 However, the water requirement was met from the ground water with the permission of State government. As such, the matter was referred to the Ministry for taking decision in the matter regarding usage of ground water (with the permission of State Govt.) instead of Krishna River water as specified in the earlier EC.

11.0 Subsequently, the PP informed that the Government of Karnataka has permitted the industry to draw water from TB dam High Level canal instead of Daroji Tank. The facilities to draw water are under execution stage. Meanwhile the present requirement of water 2055 m³/day is being met from ground water with the approval of State Government and informed that all the conditions stipulated in ground water clearance was implemented.

12.0 The proposal was again considered in the 16th meeting of Expert Appraisal Committee [EAC (Industry-I)] held during 6th – 7th March 2017 and Committee noted that the PP should have taken clearance from the MoEF&CC for the use of ground water in the form of amendment to the EC. However, the Committee noted that the PP had been permitted by the State authorities to use ground water. The PP also informed that the State Authorities had also imposed certain conditions which means that the State authorities had granted permission to use ground water

after due consideration of ground water situation. Since the permission letter by the State authorities was in local language (Kannada), the PP was asked to submit authenticated English or Hindi translated version of the approval letter of withdrawal of groundwater from the State Authority. After deliberation, the committee asked the PP to submit i) Authenticated translated copy (in English or Hindi) of the approval of withdrawal of groundwater from State Authority; and ii) Certificate from RO, MoEF&CC on compliance of conditions stipulated in the above-mentioned ground water permission issued by the State Authorities for further consideration.

13.0 The PP submitted the authenticated translated copy (in English or Hindi) of the approval of withdrawal of groundwater from State Authority; and certificate from RO, MoEF&CC on compliance of conditions stipulated in the above-mentioned ground water permission issued by the State Authorities based on the site visit made by RO, Bengaluru on 2nd May 2017.

14.0 After detailed deliberations, the committee was satisfied with the site inspection report and opined that the expansion of sponge iron can be made from 1.20 LTPA to 1.50 LTPA instead of 1.65 LTPA by optimizing the operations and changing the raw material mix (i.e. use of iron ore pellets instead of conventional iron ore). The committee recommended for expansion of the proposal with following specific conditions along with the any other conditions prescribed by the ministry:

- i. The increase in production of sponge iron shall be allowed from 1.20 to 1.5 LTPA
- ii. An additional plantation shall be carried with 7500 plants including 5000 plants inside the premises and 2500 plant outside the premises (public places) in the first year of the expansion of the project.

19.7 Greenfield Beneficiation plant-II(10MTPA), slime disposal pipeline-1 & 2, Tailing dam-1 & 2 for Donimalai and Kumaraswamy Iron Ore Mines by M/s. NMDC Ltd, located at Donimalai Iron Ore Complex, Village Narsingpura, Taluk Sandur, District Bellary, Karnataka [Proposal No. IA/KA/IND/61156/2014, F. No. J-11015/125/2014-IA.II(M)]- Further Consideration for Environmental Clearance.

1.0 The proponent has made online application vide proposal no. IA/KA/IND/61156/2014, dated 21st December 2016 along with copies of EIA/EMP report 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. 2(b) Mineral Beneficiation under Category "A" EIA Notification 2006.

2.0 The Proposed 10 MTPA Capacity Screening & Beneficiation Plant-II, Slime Disposal Pipelines and Tailing Dams for Donimalai & Kumaraswamy Iron Ore Mines of M/s NMDC Limited is located near Village Narsingapur, Tehsil Sandur, District Bellary, Karnataka. The proposal was initially received in the Ministry on 06.09.2014 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Non-Coal Mining Projects) during its meeting held on 26.09.2014 and prescribed ToRs to the project for undertaking detailed EIA/EMP study for obtaining Environmental Clearance. Accordingly, ToRs to the project *vide* letter No: J-11015/125/2014-IA.II(M) dated 30.10.2014 were prescribed for the project area of 39.320 Ha.

3.0 Subsequently, M/s. NMDC Limited requested MoEF&CC for amendment of ToRs *vide* letter No. NMDC/ENV/SBP-II/EC/2015/2544 dated 18.8.2015 due to increase of area from 39.320 ha to 75.920 ha. The amendment proposal was considered by the Reconstituted EAC (Non-Coal Mining Projects) during its 37th meeting held on 27.08.2015 and recommended the amendment for the increase in project area to 75.920 ha. MoEFCC *vide* letter dated 28.09.2015 issued amendment for preparation of EIA and EMP report as per the amended ToRs.

4.0 The project of M/s. NMDC Limited is located near Village Narsingapur, Tehsil Sandur, District Bellary, Karnataka for setting up of a new greenfield Iron Ore Screening cum Beneficiation Plant-II for production of 10 MTPA. The plant is for processing of iron ore received from nearby operating Donimalai and Kumaraswamy Iron Ore Mines of M/s NMDC.

5.0 The total land required for the project is 75.92 Ha and the entire land is forestland and falls within Donimalai Reserve Forest. Out of 75.92 Ha of land, the land required for screening cum beneficiation plant-II is 12.96 Ha, tailing dam-1 is 40.25 Ha, tailing dam-2 is 22.25 Ha and pipeline is 0.46 Ha. No river passes through the project area. It has been reported that the project site is located on slope of hill, seasonal drainage channels passes through the site. Therefore, it is proposed to construct diversion channels along rims of tailing ponds to divert water away from tailings maintaining the overall drainage pattern. The seasonal drainage channels will be integrated into plants' storm water drainage system.

6.0 It was informed that M/s NMDC Limited has submitted online application *vide* proposal no. FP/KA/OTHERS/14576/2015 for obtaining Forest Clearance on 11.08.2015 for the forestland involved in the proposal. The application was accepted by Nodal Officer, Forest Department, Bangalore on 06.06.2016.

7.0 The topography of the area being on slope of a hill/escarpment that lies between 15⁰03'55" N to 15⁰03'35" N Latitude and 76⁰30'10" E to 76⁰36'29" E Longitude in Survey of India Topo Sheet No. D/43 and E/12, at an elevation of 684 m to 726 m above MSL. It has been reported that there is no human settlement present in the core zone of the project. Hence no Resettlement & Rehabilitation is involved in the project.

8.0 No National park/ Wildlife sanctuary/ Biosphere reserve/ Tiger reserve/ Elephant reserve etc. are reported in the core and buffer zone of the project. The authenticated list of flora and fauna provided through the Forest Department reporting presence Schedule-I fauna in the study area.

9.0 The iron ore of size less than 100 mm will be screened in primary and secondary screens and ore of size (-) 30 mm and (+) 6 mm size will be obtained as CLO ore and (-) 6 mm size as Fine ore during dry process. Both products will be sent to loading yard through respective conveying system. During wet circuit, water will be added at primary screen level. The wash water contains micro fines which will be recovered in beneficiation circuit consisting of classifier, hydro-cyclones, dewatering screens, hi-rated thickeners, horizontal belt filters, etc. The tailings generated in the process will be sent to proposed tailing ponds.

10.0 The targeted production capacity of the plant would be 10 MTPA (7 MTPA in 1st phase and 10 MTPA in 2nd phase). The proposed plant will process 10 MTPA of ore to yield 4.55 MTPA of calibrated lump ore and 5.213 MTPA of fine ore. About 0.237 MTPA of iron ore tailings will be

generated as waste. The ore for the proposed plant would be received from existing iron ore mines of M/s NMDC Limited at Kumaraswamy & Donimalai through covered conveyors only. The products CLO and Fine ore will be sent to loading yard through covered conveyors only.

11.0 The water requirement of the project is estimated as 60,984 m³/day, out of which 8,787 m³/day of fresh water requirement will be obtained from the Taranagar Dam from the existing allotment of Donimalai Mines. The remaining requirement of 52,197 m³/day will be met from recycling effluents.

12.0 The power requirement of the project is estimated as 1.5 MW, which will be obtained from the grid.

13.0 Baseline environmental studies were conducted during winter season of 2014-15 i.e. from 5-12-2014 to 27-02-15. Ambient Air Quality (AAQ) monitoring has been carried out at 10 locations and the data submitted indicated that PM₁₀ ranges from 97 to 43 µg/m³, SO₂ ranges from 5.8 to 3.6 µg/m³ and NO_x ranges from 24.5 µg/m³ to 10 µg/m³. The source monitoring studies for respirable dust carried out at 6 locations and personal sampling studies for respirable dust carried at 11 locations at existing Donimalai Iron Ore Mine during November 2015. The time weighted average of dust concentration is found to be varying from 0.37 to 1.69 mg/m³ which is below the threshold limit of 3 mg/m³. The fugitive dust monitoring carried out at Donimalai Iron Ore Mine during summer season 2016 found that the level of particulate matter is varying from 288 to 352 µg/m³ which is well below the permissible limit of 1200 µg/m³. Similarly, the regular AAQ monitoring studies at Donimalai mine indicated that the levels of PM₁₀ & PM_{2.5} are well within the NAAQ standards. No case of occupational diseases like Silicosis has been reported at existing Donimalai and Kumaraswamy mines of NMDC.

14.0 The air quality modelling has indicated that there will be very marginal increase in dust levels due to additional vehicular traffic as raw and finished ore will be despatched by covered conveyors. The crushed ore from Donimalai and Kumaraswamy iron ore mines will be stored in covered silos at proposed screening Plant-II. Dry fog dust suppression system will be provided in the proposed plant at Transfer house-3, 4, 5 & 6, Silo building, primary, secondary & tertiary screen building and tertiary crusher building. The water requirement for DFDS will be 24 LPM and compressed air will be 480 CFM.

15.0 Ground water quality has been monitored in 4 locations in the study area and analysed. pH: 7.6 to 8.0, Total hardness: 660 to 980 mg/L, Chlorides: 146 to 327 mg/L, Fluoride: 0.8 to 0.9 mg/L, Heavy metal are within limits except total hardness. Surface water samples were analysed from 3 locations in the study area during winter season 2016. pH 7.52 to 8.42, D.O: 5.82 to 6.8 mg/l, BOD: <1 mg/l are within limits.

16.0 M/s NMDC has been carrying out regular monitoring of phreatic surface and water quality at Donimalai and Kumaraswamy iron ore mines at 22 locations once in a season. Adequate number of check dams, check bunds has been constructed on various nalla at Donimalai to control flow of suspended solids during rainy season. The garland drains will be constructed along the rims of the proposed tailing ponds to divert storm water away from the tailings. No ground water withdrawal is envisaged in the proposal.

17.0 Ambient Noise levels are in the range of 46.7 to 56.3 dB(A) for daytime and 40.5 to 52.7 dB(A) for night time.

18.0 It has been reported that there are no villages in the core zone of the project. No R&R is involved.

19.0 The iron ore tailings will be generated from beneficiation process. The equipments such as classifiers, de-sliming cyclones, densifying cyclones, horizontal belt filters and thickeners have been considered in the beneficiation circuit. As per process, for feed rate of 1800 TPH, only, 2.38% of slimes will be generated which contains 43.01% Fe. The quantity of tailings expected to be generated is 0.1666 MTPA (69,417 m³) during Phase I and 0.238 MTPA (99,167 m³) in Phase-II. The tailings will be discharged into proposed 2 no. s of tailing ponds located nearby Screening plant-II. The tailings will be pumped to tailing ponds through two pipelines, one of 200 m length and, the other 1110m long. The life of tailing dams 1 & 2 is 24 years and 13 years respectively and the tailing dam-2 will be commissioned initially and after filing of this dam, tailing dam-1 will be commissioned. It has been mentioned that the pumping arrangements will be made at Tailing pond in such a way that the slime will be discharged at one end and clear water available at other end will be pumped back to the re-circulation water tank for re-use. The tailing dams completely filled with tailings will be taken up for reclamation in a scientific manner and suitable biological measures will be adopted to convert it into forest. The tailings in tailing dam will be always in moist to avoid generation of dust.

20.0 The Public hearing for the proposed project was held on 10.03.2016 under the chairmanship of Additional Deputy Commissioner, Bellary District. The issues raised during public hearing *inter alia* include pollution & consequences of pollution; depletion of water resources; employment; extension of NMDC's medical facilities to local villagers; etc. The project proponent along with time bound action plan including financial allocation to implement the same with an amount of Rs1,000 lakhs (2.5% of project cost) has been earmarked under Enterprise Social Commitment based on public hearing issues.

21.0 The capital cost of the project is Rs.399.75 Crores and Rs.51.96 crores as capital cost for environmental protection measures is proposed. The annual recurring cost towards environmental protection measures is Rs.83.0 Lakhs. The detailed CSR plan has been provided in the EMP in its page number 112 to 119. The employment generation from the proposed project is 81.

22.0 Green belt will be developed in 11.457 Ha of proposed screening cum beneficiation plant area of 12.991 Ha, which is about 88 % of the total beneficiation plant area. A 100-m wide green belt, consisting of at least 3 tiers around the plant boundary will be developed as green belt and green cover as per CPCB guidelines. 23,200 saplings will be planted in 46.457 Ha in 1st year. Once tailing ponds are filled up, 1600 trees/Ha will be planted in Tailing pond area. 11,200 saplings will be planted in 7.00 Ha in 15th year at Tailing Pond-II. 22,800 saplings will be planted in 14.290 Ha in 39th year at Tailing Pond-I.

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

24.0 The proposal was considered by EAC (Non-Coal Mining) during its 11th meeting held on 24.10.2016 and decided to transfer the proposal to Industry Sector, as it is a standalone beneficiation plant outside the lease area and the project proposal falls in schedule 2(b), as per provisions of EIA notification, 2006.

25.0 The proposal was therefore, considered by the EAC (Industry-1) in its 13th meeting held on 24/11/2016 and the project proponent and their accredited EIA consultant M/s Mecon Limited made a detailed presentation on the salient features of the project.

26.0 Based on the presentation made and discussions held, the Committee noted that the proponent has not complied with the ToR No. 21, 26 and 30. In addition, information on the following would also be required for further consideration of the project proposal:

- (i) Management and disposal of tailings and closure plan of the tailing pond, if any, after the project is over.
- (ii) Biological as well as health impact of fines and other dust generated in the plant should be studied with reference to National and International Standards (WHO and ILO standards including CPCB norms). The proposed mitigation measures with EMP should also be provided.
- (iii) The project proponent shall address the discrepancies pointed out by the committee in the public hearing statement, and submit a revised statement after correcting the discrepancies.
- (iv) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan including financial allocation to implement the same should be submitted.

27.0 In view of the location of the project in forestland, the Committee desired that a sub-committee shall visit the site at the earliest and submit their recommendation for further consideration of the project. Accordingly vide Ministry's reference O.M No: F. No-IA-L-11015/125/2014-IA-II(M) dated 3/4/2017, the sub-committee visited the proposed project site between 15th to 17th May, 2017. The sub-committee visited existing mining operations carried out by NMDC at Donimalai and crushing plant, 1.2 MTPA Pellet plant and Loading plant and proposed site of Screening cum beneficiation plant-II and Tailing pond locations.

28.0 The project proponent vide letter dated 23/5/2017 also submitted details for the Additional Information Sought ADS. The sub-committee submitted its report to MoEF&CC. The sub-committee of EAC has expressed their satisfaction on the compliance of environmental measures in the existing project and proposed project location.

29.0 The PP has made detailed presentation along with EIA consultant. The committee noted that NMDC operating beneficiation plant nearby using tailing already accumulated in the area and the accumulated tailing will exhaust in 10 years.

30.0 After detailed deliberations, the committee recommended for grant of environmental clearance after receipt of stage-I clearance of Forestland involved in the project subject to

following specific conditions along with other conditions by the ministry while granting the clearance.

- i. The PP shall prepare map showing the plantation area along with density. The PP shall carryout the gap plantation to increase the density and shall submit the report to Regional office of the Ministry.
- ii. The tailings generated by the present plant shall be used by existing beneficiation plant established nearby not later than 10 years of commencement of proposed plant.

19.8 Expansion of pig iron production from 0.144 MTPA to 0.216 MTPA by installing a new sinter plant of 33 m² capacity at Parmenahally village, Hiriyur Taluk, Chitradurga District, Karnataka by M/s VSL Steel Ltd., [Proposal No. IA/KA/IND/64843/2010, F.No. J-11011/901/2008- IA.II (I)] - Extension of validity of Environmental Clearance.

1.0 The proponent has made online application vide proposal no. IA/KA/IND/64843/2010 dated 22nd May 2017 seeking extension in validity of Environment Clearance under the provisions of EIA Notification, 2006 for the project mentioned above.

2.0 VSL Steels Limited is operating with 0.144 million tonnes per annum (MTPA) Pig Iron Plant (Mini Blast Furnace) at Paramenahally Village, Hiriyur Taluk Chitradurga District, Karnataka. VSLS was proposed to increase pig iron production capacity from 0.144 to 0.216 MTPA by installing a new sinter plant of 33 m² capacity and Environmental Clearance for the proposed expansion was obtained vide letter no. J-11011/901/2008-IA.II (I) dated 5th October 2010.

3.0 The proposed Sinter Plant construction is completed by 70%. The raw material for the project is sourced from own Captive Iron ore mine i.e. VS Lad Mines near Sandur, Bellary District, Karnataka. As the mines in Bellary sector including the VS Lad mine were closed in 2011, therefore blast furnace operation was stopped in April 2012 which has resulted in paucity of funds for continuing the sintered plant and the project completion could not be done. The mines are expected to be opened shortly and VSL would like to complete the project erection and commission the same.

4.0 Plant is presently located in an area of 27.05 acres and additional land area of 50 acres of government land under survey no. 36 and 37 of Doddaghatta village was acquired for expansion. Presently 282 persons working in the plant and an additional manpower of 150 required in the expansion.

5.0 After detailed presentation by PP, the committee asked to submit component wise progress of the plant and schedule of the completion. The PP submitted the component wise progress of the plant and schedule of the completion vide his letter dated 8.6.2017. ***After detailed deliberation, the committee recommended for extension of validity of EC for further period of 3 years i.e. up to 4th October 2020.***

19.9 Proposed expansion of Integrated Steel Plant from 5.6 MTPA to 12.8 MTPA crude steel of M/s Bhushan Steel Ltd., located at village Meramandali, Dhekanal, Odisha. [Proposal No. IA/OR/IND/64716/2016, F. No. J-11011/829/2008- IA-II(I)]- Modification of ToR

1.0 The proponent has made online application vide proposal no. IA/OR/IND/64716/2016 dated 16th May 2017 seeking modification in the F No. J -11011/829/2008-IA II (I) dated 21st June 2016 for the proposed expansion of Integrated Steel Plant from 5.6 MTPA to 12.8 MTPA of M/s Bhushan Steel Limited located at Village Meramandali, District Dhenkanal, Odisha.

2.0 Expert Appraisal Committee [EAC (Industry-I)] in its 6th meeting held on 3rd - 4th May 2016 considered the proposal and recommended for prescribing the Terms of Reference for carrying detailed EIA/EMP for the proposed expansion of Integrated Steel Plant from 5.6 MTPA to 12.8 MTPA crude steel including Plate Mill with production capacity of 1.2 MTPA.

3.0 Now, M/s **Bhushan Steel Ltd** proposed to replace Plate Mill with annual capacity of 1.2 MTPA with Hot Rolling Mill (HRM) with annual capacity of 1.5 MTPA as the demand scenario of plate mill products are now going through an unstable phase due to weak market condition.

4.0 The details of modification sought are given below:

Sl. No.	Facilities	Existing facilities at 5.6 MTPA	Capacity of facilities proposed under Expansion (ToR granted)	Amendment	Final Plant Configuration at 12.8 MTPA
1	Coke Oven with By-product recovery	2 x 64 ovens (4.3 m) with CDQ - SC, 1 x 74 ovens (7.6 m) with CDQ - TC	1 x 74 ovens (7.6 m) with CDQ - TC, 2 x 64 ovens (6.5 m) with CDQ- SC	-	2 X 64 Oven (4.3 m) with CDQ - SC 2 X 64 Oven (6.5 m) with CDQ - SC 2 X 74 Oven (7.6 m) with CDQ - TC
2	Sinter Plant	1 x 177 m ² 2 x 204 m ²	1 x 224 m ² 2 x 480 m ²	-	1 x 177 m ² 2 x 204 m ² 1 x 224 m ² 2 x 480 m ²
3	Pellet Plant	-	1 X 768 m ²	-	1 X 768 m ² (EC obtained)
4	Blast Furnace	1 x 1681 cum 1 x 3814 cum	1 x 3400 cum to 3400 m ³ (RB of BF - 1), 1 x 4500 cum to 4500 m ³ (RB of BF - 2) 1 x 5800 m ³ - New	-	1 x 3400 cum - RB 1 x 4500 cum- RB 1 x 5800 cum- New
5	DR plant	10 x 500 TPD Rotary Kilns (Coal based)	COG based MIDREX plant (1 x 1.6 MTPA)	-	10 x 500 TPD Rot. Kilns 1 x 1.6 MTPA) MIDREX plant
6	Pig Casting Machine Pig Granulation M/C	1 x 2000 TPD	1 x 2000 TPD 2 x 2000 TPD	-	2 x 2000 TPD 2 x 2000 TPD
7	BOF	2 x 200 T	2 x 250 T, 2 x 200 T	-	4 x 200 T 2 x 250 T,

8	EAF	1 x 60 T, 1 x 180 T	2 x 100 T	-	1 x 60 T, 1 x 180 T, 2 x 100 T
9	IF	6 x 15 T	-	-	6 x 15 T
10	Bar & Rod Mill	-	0.4 MTPA	-	0.4 MTPA
11	Medium & Heavy section Mill	-	0.8 MTPA	-	0.8 MTPA
12	Rebar Mill	-	1.2 MTPA	-	1.2 MTPA
13	Wire Rod Mill	-	0.6 MTPA	-	0.6 MTPA
14	Lime & Dolo Calcining Plant	4 X 300 TPD 1 x 600 TPD	5 X 600 TPD	-	4 X 300 TPD 6 X 600 TPD
15	Hot Rolling Mill	5.1 MTPA HSM	3.5 MTPA CSP 1.2 MTPA Plate Mill	3.5 MTPA HRM 1.5 MTPA Hot Rolling Mill (HRM)	5.1 MTPA HSM 3.5 MTPA HRM 1.5 MTPA HRM
16	Cold Rolling Mill	-	Expansion of existing CRM 1(0.6 to 1.2 MTPA) CRM 2 -2.0 MTPA CRM 3- 0.8 MTPA 0.5 MTPA Stainless Steel Complex	-	4.5 MTPA
17	Captive Power Plant (CPP)	1 x 33 MW + 1 x 77 MW + 12 MW + 20 MW 1 x 165 MW 1 x 12 MW (TRT) 1 x 20 MW (TRT)	2 x 165 MW 2 x 40 MW (TRT)	-	638 MW

5.0 It was informed that the type of output from newly proposed Hot Rolling Mill (HRM) and earlier proposed Plate Mill are flat. Hence, there is no change in type of product in proposed Hot Rolling Mill instead of Plate Mill. The environmental load of newly proposed Hot Rolling Mill (HRM) similar to Plate Mill and well within the prescribed limit.

6.0 After detailed deliberations, the committee recommended for modification in ToR for change in technological facility for **Hot Rolling Mill (HRM) of 1.5 MTPA in place of Plate Mill of 1.2 MTPA as mentioned in the above table.**

19.10 Mini Integrated Steel Plant along with Captive Power Plant (8MW) at Khatian No.90, Village Marhand, P.O.Lila Nagar, District Hazaribagh, Jharkhand by M/s Jharkhand Sales Agencies Pvt. Ltd., [Proposal No. IA/JH/IND/64650/2010, F.No. J-11011/843/2008- IA-II(I)]- Extension of validity of Environmental Clearance.

1.0 The proponent has made online application vide proposal no. **IA/JH/IND/64650/2010** dated 12th May 2017 seeking extension in validity of Environment Clearance under the provisions of EIA Notification, 2006 for the project mentioned above.

2.0 Environmental Clearance for the proposed Mini Integrated Steel Plant along with Captive Power Plant (8 MW) at Khata No. 90, Plot No. 436 village Marhand, P.O Lila Nagar, District Hazaribagh, Jharkhand by M/s. Jharkhand Sales Agencies Private Limited was accorded on 18th June, 2010 vide letter F No. J-11011/843/2008-IA II(I). Consent to Establish from Jharkhand State Pollution Control Board obtained on 21st April 2009.

3.0 The details of the progress of the project are as given below:

Description and Capacity of the project for which EC was granted			Installed within EC Validity	Units pending	Proposed Completion Schedule
Unit	Size	Capacity (TPA)			
DRI Kiln (Sponge Iron)	2x100 TPD	60,000 TPA	1x100 TPD = 30,000 TPA	1x100 TPD = 30,000 TPA	April,2019
Induction Furnace	1 x 12 T = 113 TPD	33,900 TPA	Pending	1 x 12 T = 33,900 TPA	June,2019
Captive PP	WHRB & AFBC	8 MW	Pending	WHRB - 4MW AFBC - 4 MW = 8 MW	December,2019
Other administrative clearances and financial approvals (6 months)					June 2020

4.0 It was informed that the project could not complete because of accidental demise of the one of the directors of the company. The latest compliance for the period up to March 31st, 2017 was submitted to Regional Office, MoEF&CC, Ranchi on 31-05-2017.

5.0 As the completion of installation and commissioning of the remaining Units will spill beyond 17th June, 2017, M/s JSAPL, applied online on 12.05.2017 for extension of the validity of the EC for a period of further three years.

6.0 After detailed deliberations, the committee recommended the project for extension of validity of environmental clearance for further period of three years i.e. up to 11th June 2020.

19.11 Proposed project of 3x7 MT Induction Furnace with Billet Caster, 1x 4 MVA Ferro Alloy and Re-Rolling Mill of M/s Steelax Electrocast Pvt. Ltd., at Plasto Steel Park, Barjora, Dist. Bankura,, West Bengal, - [Proposal No. IA/WB/IND/64891/2014, F.No. J-11011/375/2014-IA II(I)] – Validity extension of ToR.

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

Date: 9^h June, 2017

19.12 Proposed Expansion from 0.6 MTPA Non-Recovery Coke Oven and 40 MW Power Plant to 1.0 MTPA Integrated Steel Plant, 1.2 MTPA Non-recovery Coke Oven and 205 MW Power Plant by M/s Bengal Energy Ltd., at Dauka P.O., Tentulmuri PS, Narayangarh, Dist Paschim Medinipur, West Bengal. [Proposal No. IA/WB/IND/64703/2007, F. No. J-11011/28/2008- IA-II(I)]- Prescribing Terms of Reference

1.0 The proponent has made online application vide proposal no. IA/WB/IND/64703/2007 dated 15th May 2017 along with the application in prescribed format (Form-I), copy of prefeasibility 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 EIA Notification, 2006 and appraised at the Central level.

2.0 M/s. Bengal Energy Limited proposed expansion from 0.6 MTPA Non-Recovery Coke Oven and 40 MW Power Plant to 1.0 MTPA Integrated Steel Plant, 1.2 MTPA Non recovery Coke Oven and 205 MW Power Plant by installing 4x500 TPD & 4X350 TPD DRI kilns, 2 x 320 m³ MBF, 1 x 60 m² Sinter Plant, 2 x 80T EAF, 3 x 20 T IF, 120 TPD ASU, 165 MW Power plant and 1x 0.6 MTPA Non-recovery Coke Oven Plant at Dauka, P.O-Tentulmuri, PS-Naraingarh District: Paschim Medinipur, State: West Bengal.

3.0 The existing project was accorded environmental clearance vide Lr. no. J-11011/28/2008-IA II(I), dated 2nd January 2009. Consent to Operate was accorded by West Bengal State Pollution Control Board vide Lr. no. CO 88332 and validity is up to 30.03.2017 and renewal up to 30.03.2022 is under process.

4.0 The land area acquired for the proposed plant is 161.87 ha. No forestland involved. The entire land has been acquired for the project. The land acquired is industrial land. Of the total area 53.41 ha (33%) land will be used for green belt development. The project is located at Latitude 22^o 14’ 45.48’’ N and Longitude 87^o 23’ 23.08’’ E; covered in Survey of India Topo Sheet No. 73N/8 (F45 J8) and an elevation of the area is 32 m above MSL. Balasore-Kharagpur railway line is passing at a distance of 0.3 km away from the site. Kansabati River is flowing about 15 km North of project site. The detailed breakup of the land is given in the table below:

Sl. No.	Different Units	Area in ha.
1	Existing Facilities	14.97
2	Proposed Facilities	24.28

3	Raw Material Storage	13.00
4	Water Facility	5.20
5	Rain water harvesting	5.20
6	Solid Waste disposal	12.21
7	Internal roads & others	2.83
8	Green belt	53.41
9	Vacant Space	30.77
Total		161.87

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

6.0 Total project cost is approx Rs. 4943 Crore rupees. Proposed employment generation from proposed project will be 1355 direct employments and about 2000 indirect employments.

7.0 The targeted production capacity of the Integrated Steel Plant is 1.0 million TPA. The ore for the plant would be procured from (linkages, Iron Ore Barbil, Non coking coal Talcher. Coal-Import, Dolomite & Limestone -Biramitrapur, locally Raniganj & Jharia and Imported). The ore transportation will be done through Rail & Road. The proposed capacity for different products for new site area as below:

Facilities	Existing configuration	Existing Capacity in TPA	Proposed configuration	Proposed capacity in TPA	Final configuration	Final capacity in TPA	Product	End use
Non-Recovery Coke-Oven plant	1x0.6 MTPA	6,00,000	1x0.6 MTPA	6,00,000	2x0.6 MTPA	12,00,000	Lam Coke	MBF
Power Plant (Coke-Oven gas)	1x40 MW	40 MW	1x40 MW	40 MW	2x40 MW	80 MW	Elec. Power	Internal use/ Sale
DRI Kiln	-	Nil	4 x500 TPD	6,40,000	4 x500 TPD	10,88,000	Sponge iron	EAF & IF
			4x 350TPD	4,48,000	4x 350TPD			
Power Plant WHRB (3400 TPD DRI)	-	Nil	68 MW	-		68 MW	Elec. Power	Internal use/ Sale
MBF	-	Nil	2x320m ³ 2.7t/Cum day	5,96,000	2x320m ³ 2.7t/Cum day	5,96,000	Hot metal	EAF & IF
Sinter Plant	-	Nil	1 x 60 m ²	9,77,616	1 x 60 m ²	9,77,616	Sinter	MBF
EAF with LF	-	Nil	2x80T, 16H, 325 days	8,32,000	2x80T, 16H, 325 days	8,32,000	Liquid Steel	CCM

IF With LF	-	Nil	3x20T, 15H, 325 days	2,92.000	3x20T, 15H, 325 days	2,92.000	Liquid Steel	CCM
Power Plant BF gas fired Boiler	-	Nil	1x22 MW		1x22 MW	22 MW	Elec. Power	Internal use/Sale
AFBC	-	Nil	1x35 MW		1x35 MW	35 MW	Elec. Power	Internal use/Sale
ASU	-	Nil	120 TPD	1,200 cum/hr	120 TPD	1,200 cum/hr	Oxygen gas	MBF & EAF

8.0 The electricity load of 153 MW will be met from CPP generation & company has also proposed to install 2 X 1000 KVA DG Set.

9.0 Proposed raw material and fuel requirement for project are **2.85 MTPA & 4.30 MTPA** respectively. Requirement would be fulfilled by Iron Ore, Dolomite, Pig Iron as well as Coal. Fuel consumption will be mainly **Coal**. The details of raw material requirement and mode of transport as follows:

Materials	Gross quantity inTPA	Source	Mode of Transport
Coking Coal	36,00,000	Imported	Ship/Rail / Road
Non Coking Coal	6,91,260	Talcher	Rail
Iron Ore	12,78,000	Barbil & Banspani	Rail
Dolomite	1,60,000	Biramitrapur	Rail / Road
Limestone	80,000	Biramitrapur	Rail / Road
Burnt Lime	52,000	Merchants of Central India	Road
Lime	17,000	Local Purchase	Road
Iron Ore Fines	6,40,000	Barbil & Banspani	Rail

10.0 Water Consumption for the proposed project will be 548.5 m³/hr (13,165 m³/day) and waste water generation will be 927 m³/day (200 m³ Domestic waste water will be treated in STP and industrial waste water generated will be treated ETP and reused in Industrial process watering green belt and dust suppression. The plant will adhere to ZLD.

11.0 The proposed modification units will consist of different units like RMHP, Induction furnace, DRI kiln which results in the generation of Fugitive dust, PM₁₀/PM_{2.5}, SO_x, CO which shall be controlled by dust suppression system using Water Sprinklers for RMHP; adequate capacity Bag houses, ESPs, ID fans and 30 m stacks for IFs and EAFs; ESP for DRI kilns; ESP for Power Plant; 2 X 1000 KVA DG set having 4.5m stacks above DG room; Separate haulage road with water sprinkling for transportation vehicles; and Greenbelt development

12.0 M/s Bengal Energy Ltd will spend 2.5% of its project cost under Enterprise Social Activities for the development of locality and local people.

13.0 There is no litigation pending against the project and/or land in which the project is proposed to be set up.

14.0 It was noted that it is planned for dry quenching; drawl of water from surface water; adhere to ZLD; the validity of CtO of the existing plant is valid up to 2022.

15.0 After detailed deliberations, the Committee recommended the project for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure I read with additional ToRs at Annexure-2 and 3.

- i. Public Hearing shall be conducted by the State Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. Detailed specification of Air Pollution Control equipment shall be provided in the EIA/EMP. Post project monitoring shall be clearly specified along with number of stations, location, frequency of monitoring, parameters to be monitored, fund provision, etc.
- v. Permission for drawl of surface water as proposed shall be provided along with EIA/EMP
- vi. Green belt in 33% of total project area shall be planned with local and broad-leaved species and details of species, number, period, location, fund provision etc. shall be provided in the EIA/EMP.
- vii. The project proponent shall identify railway siding points to be used most frequently by it for transportation of materials and goods.
- viii. The plant shall be planned to Zero Liquid Discharge (ZLD)
- ix. The plan for concreted floor with covered storage (Sheds) of raw material and coal shall be provided in the EIA/EMP.
- x. The project proponent shall plan for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xi. The project proponent plan for LED lights in their offices and residential areas.
- xii. The proponent shall submit plan for solid waste management as per the provisions of SWM Rules, 2016 for their residential colony as a part of the EIA EMP report.

19.13 Proposed expansion of cement plant capacity (4.0 MTPA to 8.6 MTPA) and clinker plant capacity (3.5 MTPA to 7.5 MTPA) at Sanghipuram, village Motiber, Taluka Abdasa, Dist Kutch, Gujarat by M/s Sanghi Industries Ltd., [Proposal No. IA/GJ/IND/64880/2007, F.No. J-11011/337/2006- IA-II(I)]- Prescribing Terms of Reference (ToR).

1.0 M/s. Sanghi Industries Limited (SIL) has made online application vide proposal no. IA/GJ/IND/64880/2007 dated 23rd May 2017 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement plants, under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central Level.

2.0 M/s. Sanghi Industries Limited (SIL) proposed for an expansion of existing manufacturing unit for Cement Plant-Line-II (4.0 MTPA to 8.6 MTPA) & Clinker (3.5 MTPA to 7.5 MTPA). It is proposed to set up the plant for Cement / Clinker based on State of Art Technology from FL Smidth at Sanghipuram, village Motiber, Taluka Abdasa, Dist Kutch, Gujarat. The plant is located at Survey Nos 96, 97, 99, 100, 123 and 124 of Motiber Village and Survey Nos 64 and 65 of Hothiyay Village.

3.0 M/s Sanghi Industries Limited has obtained environmental clearance for expansion of cement plant from 2.6 MTPA to 8.6 MTPA (Phase-II) at Sanghipuram, Dist. Kutch, Gujarat vide F. No. J-11011/337/2006-IA-II(I) dated 5th April 2007 and extension of validity of EC was granted up to 4th April 2017. The company has completed the expansion of the plant capacity up to 4.00 MTPA only. Consent to Operate was accorded by Gujarat State Pollution Control Board vide Ir. No. PC/CCA-KUTCH-132(3) GPCB ID 18025 and CTO-AWH-85056 dated 27.03.2017 valid up to 23.03.2019.

4.0 It was informed that the company has completed establishment of 4.0 MTPA completely and common infrastructure required for the total capacity. About 60% of the project activities required for 2.6 MTPA to 8.6 MTPA was completed.

5.0 The land area required for the proposed plant is 30.56 Ha and is part of the existing land of the existing cement project and is classified for Industrial use. No Forest Land is involved. There is no requirement of any additional land. Of the total area Ha (40%) land will be used for green belt development.

6.0 In was informed that, the project is located at 3 Km from the Wildlife Sanctuary. However, the project area falls outside the notified ECO-Sensitive Area of Narayan Sarovar Wildlife Sanctuary vide notification dated 12th May 2012. The area also does not report to form corridor for Schedule-I fauna.

7.0 Plant area falls under Seismic Zone-V; the area of Bhuj-Kutch in Gujarat and its neighbourhood. The proposed expansion project site lies in Seismic Zone Vulnerable Atlas of India by Materials & Tech Council (BMTPC) Earthquake. The area of Bhuj in Gujarat and its neighbourhood has been affected by earthquake of moderate to high intensity in the past. The area is also prone to cyclone as it is close to the Arabian Sea will be designed to withstand the recorded severity of earthquake

8.0 Total project cost is approx 1050 Crore rupees. Capital Cost of Rs. 50 Crore and Recurring cost of Rs 10 Crore/annum allocated for environmental management. Proposed employment generation from proposed project will be 350 persons directly in addition to the existing manpower of 384 and 1000 indirect employments.

9.0 The targeted production capacity after expansion will be 8.6 million TPA. The required Limestone and other raw materials like addition material for the Cement Plant shall be met from the existing captive mines. The Limestone transportation will be done through belt conveyor. The proposed capacity for different products for new site area as below:

Sl. No	Details of Unit	Capacity of each Unit	Production Capacity
1	Line-I	4.00 MTPA	4.00 MTPA
2	Line-II	4.6 MTPA (Cement 4.0 to 8.6 & Clinker 3.5 to 7.5 MTPA)	4.6 MTPA (Cement 4.0 to 8.6 & Clinker 3.5 to 7.5 MTPA)

10.0 The electricity load of 56 MW will be sourced from Captive Thermal Power Plant and 15MW WHRS Plant.

11.0 Proposed raw material and fuel requirement for project are Limestone, Laterite, Pozzolana Clay, Gypsum, Fly Ash, Coal / Lignite/Petcock requirement would be fulfilled by Captive as well as Local purchase & imported. Fuel consumption will be mainly Coal/Lignite.

12.0 Water requirement for the existing requirement is 1500 m³ /day and an additional water of 1500 m³/day and sourced from the existing desalination plant, mines and Rain water storage at mined out pits with in captive limestone mines. Waste water discharge will be zero. Domestic waste water will be treated RZT/STPs and industrial waste water generated will be treated and reused in Greenbelt development & dust suppression.

13.0 All major sources of air pollution are being/will be provided with Pulse Jet BH/ Bag filters/ESP/water spraying to keep emissions below permissible limits for the PM emissions. Clinker will be stored in clinker silos. Fly ash will be stored in covered yard/silos & handled pneumatically in cement mills.

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

15.0 The project proponent requested for exemption of public hearing since the PP has obtained Environmental Clearance for expansion of plant form 2.6 MTPA to 8.6 MTPA after completion of public hearing but able to implement expansion up to 4.0 MTPA but all the required common infrastructure facilities are in place for 8.6 MTPA.

16.0 The PP informed that Base Line Data (BLD) has been carried from March to May 2017 as per the standard protocol for the proposed expansion in order to save the time and requested for consideration for use in EIA/EMP.

17.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to

the generic ToR enclosed at **Annexure I read with additional ToRs at Annexure-2 and 3**. The committee also agreed to use the BLD collected during March- May, 2017 for preparation of EIA/EMP.

- i. Public Hearing to be conducted by the concerned State Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. The map showing project area w.r.t. ECO-Sensitive Area of Narayan Sarovar Wildlife Sanctuary vide notification dated 12th May 2012 shall be provided in the EIA/EMP.

19.14 Expansion of Asbestos Cement Sheet manufacturing unit (72,000 TPA to 1,75,000 TPA) of M/s HIL Limited., located in Industrial Area, Jasdih, District Deogarh, Jharkhand. [Proposal No. IA/JH/IND/42684/2016, File No. J-11011/01/2016-IA-II(I)]- Environmental Clearance

1.0 The proponent has made online application vide proposal no. IA/JH/IND/42684/2016, dated 30th April 2017 along with copies of EIA/EMP report 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. 4(c) Asbestos milling and asbestos based products under Category "A" EIA Notification 2006.

2.0 The Fibre Cement & Roofing Sheets (Asbestos) Project of M/s Hyderabad Industries Limited located in Industrial Area, Jasidih, Tehsil Deoghar, District Deoghar, State Jharkhand, was initially received in the Ministry on 1st February 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 5th meeting held on 31th March 2016 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 20th May, 2016 vide Lr. No. J-11011/01/2016-IA-II(I).

3.0 The project of M/s HIL Ltd., located in Industrial Area, Jasidih, Tehsil Deoghar, District Deoghar, State Jharkhand is for enhancement of production of Fibre Cement & Roofing Sheets from 72000 tonnes per annum (TPA) to 175000 tonnes per annum (TPA). The existing project was established in the year 1980 and is being in operation with 72000 TPA. Till date no expansion or modernization of the plant has been done. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
HIL (formerly Hyderabad Industries Limited)	1	72000 TPA (Existing)	72000 TPA (Existing)
		175000 TPA (Proposed)	175000 TPA (Proposed)

4.0 The total land required for the project is 21.53 Acres, which is in Notified Industrial Area under the authority of Santhal Pargana Industrial Area Development Authority, Govt. of Jharkhand. No /forestland involved. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is undulated and reported to lies between 24⁰31'4.3968" N to 24⁰30'59.9544" N Latitude and 86⁰38'19.2948" E" to 86⁰38'25.2312" E Longitude in Survey of India topo sheet No. 72 L/10, 72 L/11, 72 L/14, 72 L/15, at an elevation of 264 m AMSL. The ground water table reported to ranges between 2.6 – 12 m. below the land surface during the post-monsoon season and 5.6 – 12 m. below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 500 m. Further, the stage of groundwater development is reported to be 35% in core and buffer zone and thereby these are designated as safe areas.

6.0 No national park / wildlife sanctuary / biosphere reserve / tiger reserve /elephant reserve etc. are reported in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through the EIA reporting presence of no / schedule-I fauna in the study area (Chapter -3 of EIA).

7.0 Asbestos roofing sheets manufacturing in the proposed project uses the renowned Hatschek process. In this process the raw material of port land cement, fly ash, Chrysotile fibre and cotton / paper pulp are treated and mixed to predetermined proportion with water to form a slurry. Raw Chrysotile fibre packed in impermeable bags is placed in a pneumatic lift which automatically lifts & pushes the bags inside bag opening device (BOD), which is fully enclosed and connected to a pulsejet bag filter thus creating a vacuum (negative pressure) inside the BOD so that none of the fibre escapes into the atmosphere. There is a constant flow of air from the ambient inside the BOD chamber. The main sheeting machine comprises of rotating sieve cylinders which rotate in the vats immersed in cement fibre slurry. These sieve cylinders are in contact at the top with an endless felt pressed down by rubber couch rollers. The endless felt successively runs over 6 such vats. The front end of the felt is tightened against drive roller over which a forming drum of cast iron is pressed down on the felt. The drive roller is driven by a variable speed motor which drives the endless felt conveyors and the sieves and the forming drum. With each rotation of the sieve a thin film of Fibre-Cement (FC) material is deposited on the underside of the felt which immerge at the top and passes through vacuum suction trays for removal of the excess water. The dry films are now transferred to the forming drum at the end and are approximately 1.5 mm thick. Forming drum is allowed to rotate 4 rounds (in 6 vats machine) when the film is accumulated to a thickness of 6mm at which stage it is cut off from the forming drum and transferred to a belt conveyor. The resultant product is a wet FC blanket of 6mm thick and 1400 mm width and 6 m length. This wet sheet is now conveyed through belt conveyor for trimming of the edges and sides and taken to a profiling machine know n as corrugators.

8.0 The targeted production capacity of the project is 175000 TPA. The raw materials for the plant would be procured from suppliers in India & Russia. The transportation of raw materials will be done through Road and Rail (cement only).

9.0 The water requirement of the project is estimated as 189 m³/day, out of which 153 m³/day of fresh water requirement will be obtained from the bore wells inside premises and the remaining requirement of 36 m³/day will be met from the recycling of water. Applied for permission for drawl of groundwater from CGWB vide Application No. 21-4/217/JH/IND/2017 dated 03.03.2017.

10.0 The power requirement of the project is estimated as 1070MW, which will be obtained from the JSEB Grid.

11.0 Baseline Environmental Studies were conducted during pre-monsoon season i.e. from March to May'2016. Ambient air quality monitoring has been carried out at 8 locations during March to May'2016 and the data submitted indicated: PM₁₀ (48.8 µg / m³ to 107.5 µg / m³), PM_{2.5} (27.3 to 62.4 µg / m³), SO₂ (12.7 to 35.2 µg/m³) and NO_x (15.8 to 39.1 µg/m³). The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 3.66 µg/m³ with respect to the PM₁₀.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.0 to 7.50, Total Hardness: 308.6 to 340.2 mg/ l, Chlorides: 15.1 to 34.3 mg/ l, Fluoride: 0.08 to 0.26 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 2 locations. pH: 7.26 to 7.32; DO: 4.3 to 4.8 mg/ l and BOD: 2.1 to 2.7 mg/ l. COD from 8.0 to 14.0 mg/l.

13.0 Noise levels are in the range of 30.8 to 80.7 dB(A) for daytime and 25.4 to 45.8 dB(A) for night time.

14.0 It has been reported that there are 225 people in the core zone of the project. No/ R&R is involved. It has been envisaged that no families to be rehabilitated as the project site is located within Industrial Area and industry is already existing.

15.0 It has been reported that a total of 1767.5 tons of waste will be generated due to the project, which will be recycle and reused back in process for production of Fibre Cement Roofing Sheets. It has been envisaged that an area of 2.89 ha (7.15 Acres) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

16.0 It has been reported that the Consent to Operate from the Jharkhand State Pollution Control Board/Pollution Control Committee obtained vide Lr. No. JSPCB/HO/RNC/CTO-667870/2016/771 dated 13.10.2016 and consent is valid up to 30.06.2017.

17.0 The Public hearing of the project was held on 7th January, 2017 at Narendra Bhawan, Chakai More, Jasidih, Dist. Deoghar, State Jharkhand under the chairmanship of Sri Radheshyam Prasad, Land Acquisition Officer, District: Deoghar (Jharkhand) for production of 175000 TPA Fibre Cement Roofing Sheets. The issues raised during public hearing are attached as Chapter 7 in EIA/EMP Report. An amount of 85 Lakhs (5 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

18.0 The capital cost of the project is Rs 17 Crores and the capital cost for environmental protection measures is proposed as Rs. 55 Lakhs. The annual recurring cost towards the

environmental protection measures is proposed as Rs. 17 Lakhs. The detailed CSR plan has been provided in the EMP in its page No. 113 to 114. The employment generation from the proposed expansion project is 50 nos. (indirect manpower).

19.0 Greenbelt will be developed in 2.89 ha (7.15 Acres) 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. Total no. of 1200 saplings will be planted and nurtured within premises in 5 years.

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

21.0 After detailed presentation by PP along with EIA Consultants, the committee noted that the PP explored use of synthetic fiber in lieu of asbestos fibers; use of imported asbestos fiber; all the operations are covered, automated and spill proof; adhered to ZLD, details provided for the ToR Points namely, Specific ToR (ii), 3(v), 7(iv), 7(vi), 7(ix), 9(iii), 11(i), 14 (v) are not found relevant.

22.0 After detailed deliberations, the committee desired the following information for further consideration of the proposal:

- i. Issues raised in Public Hearing shall be clearly addressed along with time bound action plan and fund provision for the same as part of Enterprise Social Commitment part of CAPEX in project mode.
- ii. Ground water withdrawal permission letter from the competent authority shall be provided.
- iii. Hydro geological report including ground water development, category of development of ground water, recharge measures shall be submitted.
- iv. Water flow diagram clearly indicating the quantity of consumption for different purpose including recycling, disposal shall be submitted.
- v. Corporate Environmental Policy along with board resolution, hierarchy and mechanism of reporting non-compliances to the board of directors as per the OM dated ---- shall be provided
- vi. Details for the ToR Points namely, Specific ToR (ii), 3(v), 7(iv), 7(vi), 7(ix), 9(iii), 11(i), 14 (v) shall be revised and submitted as per the deliberations.
- vii. Provision for vacuum cleaning to check fugitive dust in the plant premises.
- viii. Provision for planting of 4,000 trees of local broad-leaved species in addition to about 1,000 presently existing in the plant area

19.15 Expansion of Integrated Steel Plant of M/s Nalwa Steel & Power Ltd., at village Taraimal, Tehsil Gharghoda, Dist.Raigarh, Chattisgarh. [Proposal No. IA/CG/IND/23753/2007, F.No. J11011/1108/2007-IA-II(I)]- Reconsideration for Environment Clearance.

1.0 The Integrated Steel Plant of M/s Nalwa Steel & Power Ltd. is located in Village Taraimal, Tehsil Tamnar, District Raigarh, Chhattisgarh was initially received in the Ministry on 16th November 2010 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006 for expansion. The earlier environmental clearance was accorded vide letter no. J-11011/398/2006-IA.II (I) dated 24th January 2007 and amended vide letter dated 30th September 2010 and 17th December 2012. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 22nd -23rd February 2011 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment and Forests had prescribed ToRs to the project on 13th April 2011 with subsequent amendments on 9th June 2011 and 18th November 2011. Validity of ToR was extended vide letter dated 12th November 2013. Based on the ToRs prescribed to the project, the project proponent applied for environmental clearance to the Ministry on 3rd June 2014.

2.0 The proposal was considered in 29th reconstituted Expert Appraisal Committee (Industry) held during 11th and 12th December 2014 and the Committee observed that the baseline data was collected in 2011; Plant was established in 2003; ToR for the proposed expansion was granted in 2011; ToR validity was extended by a year in November 2013; Public hearing was held in April 2014; EC proposal submitted to MOEF&CC in May 2014. The Committee further observed that a village is existing adjacent to the Plant. The habitation is sandwiched between the existing and proposed projects. The EAC observed that AAQ values appeared very low as compared to CPCB data for Raipur located about 10 km away and also keeping in view that the TPP of M/s Jindal Power Ltd is located upwind of the project site. Fresh one-month AAQ data to be generated. Transportation involves 800 trucks (to-and fro). The Committee desired that a Plan for minimising truck movement and feasibility of using railway line and siding of project of their sister concern – M/s Jindal Power Ltd. located adjacent to this project should be explored. The EAC observed that number of complaints have been received during Public Hearing regarding poor air quality. The Committee after deliberations decided to send a team (sub-committee) of the EAC for a site visit to ascertain issues concerning the proposed expansion project. Further, the Committee also noted that there are several inconsistencies and shortcomings in the report and sought the following clarification:

- i. Baseline air data should be monitored for 1 month since the data presented is of 2011.
- ii. Coal washery details including capacity and status of EC. A component of coal washery has been included in the existing and the proposed expansion project. A clarification may be provided whether coal washery is included as a part of expansion project.
- iii. Water reservoir capacity
- iv. village population- whether 1800 or 597 persons residing in the villages adjoining the plant.

- v. Layout of the existing and proposed plant on a map as well as on a table along with land use breakup – existing and proposed in terms of agricultural land, forest land, habitation (settlements), water bodies, etc. Details of habitation of 597 persons in between existing and proposed expansion project areas.
- vi. Clarification on water consumption of the Plant per tonne of Steel Produced vis-à-vis CREP standards and the best available technologies in the world.
- vii. Requirement of cleaning system for the effluents + Scrubber for the PGP.
- viii. A specific plan for utilisation of solid waste management along with MOU from units for utilisation of the solid wastes. Plan for disposal of SMS slag.
- ix. Disaster Management Plan in line with the district DMP and should be submitted including the population close to the industrial premises.
- x. Existing OHS details should be submitted
- xi. Decongestion plan for the existing roads should be submitted for the proposed 600-800 trucks per day and a Plan for utilising the existing railway line of M/s Jindal Power Ltd. adjoining the existing Steel Plant should be examined.

3.0 Accordingly, the PP submitted the details to the ministry. Therefore, the proposal was considered in the 17th EAC meeting held during 6th -7th April 2017. After detailed presentation by PP along with their consultant M/s Min Mec Consultancy Private Ltd., the committee noted that i) No site visit was made by the sub-committee of EAC as desired in the 29th EAC; ii) No fresh status of compliance is presented; iii) Baseline ambient air quality monitoring data was collected during December 2015 and earlier during March-June 2011 not comparable as collected in two different periods. The earlier data is of 6 years old and additional data is also more than 1 year old; iv) The proposal for establishment of coal washery for 1.32 MTPA was made during the ToR. However, the PP dropped the proposed coal washery during the public hearing without prior approval from the ministry; v) Proposal was made for further changes in the configuration of the plant from 3X30 T to 2X30 T + 2X24 T in the present presentation; and vi) The habitation existing adjacent to the plant is sandwiched between the operating and proposed projects. In view of these facts and after detailed deliberations, the committee recommended that the PP should make fresh application for seeking ToRs.

4.0 However, during the process of the proposal, the ministry advised to re-consider the proposal. The committee agreed to re-consider the proposal and decided to carry site visit by sub-committee of the EAC as decided in the earlier EAC in its 29th meeting. The proposal will be deliberated after site visit.

19.16 Expansion of Integrated Steel Plant (from 10 MTPA to 16 MTPA) along with Captive Power Plant (600 MW) of M/s JSW Steel Ltd., located near village Tornagallu, District Bellary in Karnataka. [File No. J-11011/489/2009-IA.II(I)]- Proposal No. IA/KA/IND/31502/2010 for Amendment in Environment Clearance regarding optimization of existing facilities in product mix in rolling mill area and other minor changes in the operating units; Partial transfer of some of the units.

1.0 M/s JSW Steel Ltd. has made online application vide proposal no. IA/KA/IND/31502/2010, dated 8th May 2017 seeking amendment in Environment Clearance regarding optimization of existing facilities in product mix in rolling mill area and other minor changes in the operating units.

2.0 Earlier, the proponent has also made an application for partial transfer of 0.3 MTPA Tar Distillation Plant to ECPL vide letter dated 16th August 2016 which was examined in the ministry and it was directed to deliberate in the EAC meeting. Further, during the presentation before EAC in the 19th meeting of EAC held on 9th June 2017, the PP also made a request to transfer 4 MTPA Slag grinding unit to JSW cement; and 1.2 MTPA DRI Plant to JSW Projects.

3.0 The Environmental Clearance for the project was granted by the Ministry vide letter No. J-11011/489/2009-IA.II(I) dated 1st October, 2015 for expansion from 10 MTPA to 16 MTPA (with a configuration of 10+3+3 MTPA) and amendment in the EC was accorded by the Ministry vide letter of even no. dated 9th June, 2016 for change in the configuration as 10+2+4 MTPA Capacity.

4.0 It was informed that, M/s JSW Steel Ltd as commissioned 12 MTPA units on 31st December 2016 and achieved 11.05 MT of production during 2016-17. Detailed engineering and ordering is in progress for implementation of remaining expansion of 4 MTPA unit.

5.0 Details of production capacities of various units of Steel Plant as per Environmental Clearance for 16 MTPA is as follows:

Sl No.	Unit Name	At 4 MTPA	4 to 10 MTPA	10 to 16 MTPA	Total Capacity in MTPA
1	Beneficiation Plant	4.5	15	-	19.5
2	Pellet Plant	5	5	-	10
3	Sinter Plant	2.3	8.05	9.8	20.15
4	Coke Oven Non-Recovery	1.28	-	Dismantling of existing NR Coke ovens	0
5	Coke Oven Recovery	0	3.5	4.5	8
6	Hot Metal COREX	1.2	0	0	1.2
7	Hot Metal BF	3.07	6	6	15.07
8	Pig Caster(TPD)	1200	7200	3600	12000
9	SMS (EAF+BOF)	3.8	6	6	15.8
10	Lime Kiln(TPD)	1200	3600	2400	7200
11	Slab Caster	0	6.4	8.4	14.8

12	Billet Caster	-	1.5	1.2	2.7
13	HSM	2	6.2	3.6	11.8
14	WRM	0	0.6	1.2	1.8
15	Rebar Mill	0	1	0	1
16	BRM	0	0	1.2	1.2
17	CRM	0	3	0	3
18	Pipe Mill	0	0.4	-	0.4
19	Galvanizing Line	0	1	-	1
20	Colour coating	0	0.5	-	0.5
21	Captive power plant (MW)	230	600	660	1390
22	Incinerator (Kg/hr)	0	750	250	1000
23	Slag grinding	1.6	2.6	2	6.2
24	Oxygen Plant(TPD)	500	4500	3600	10600
25	Township(Nos)	2	2	1	5

6.0 In the meanwhile, there has been a consistent downturn in the domestic steel market due to large scale cheaper imports and increased input costs. It is now being proposed to marginally change the approved configuration in the production facilities. The rationale for the proposed change are given below:

Sl No	Unit Name	Existing configuration			Total (MTPA)	Changes proposed	New Total (MTPA)	Increase (MTPA)
		0-4 MTPA	4-10 MTPA	10-16 MTPA				
1	Sinter Plant	SP1-2.3 MTPA	SP2-2.3 MTPA SP3-5.75 MTPA Total-8.05MTPA	SP4 – 2.3 MTPA SP5- 7.5 MTPA Total-9.8 MTPA	20.15	SP4-2.3 MTPA SP5-5.75 MTPA SP6-1.75 MTPA Total-9.8 MTPA	20.15	0
2	Hot Metal BF	BF1-0.9 MTPA BF2-2.17 MTPA Total-3.07 MTPA	BF3- 3 MTPA BF4- 3 MTPA Total- 6.0 MTPA	BF1- 2.5 MTPA BF5- 4.4 MTPA Total-6.9 MTPA	15.07	BF1- 2.5 MTPA BF3- 4.4 MTPA BF5- 3.0 MTPA Total- 6.9 MTPA	15.07	0
3	BOF	SMS1 – 3.8 MTPA	SMS2- 6 MTPA	SMS2-6.4 MTPA SMS3-5.6 MTPA (3X 200 T BOF +1.2 MTPA EAF) Total – 6 MTPA	15.8	SMS2-6.4 MTPA SMS3- 5.6 MTPA (2X 200 T BOF + 2X1.2 MTPA EAF) Total – 6 MTPA	15.8	0
4	HSM	HSM1- MTPA 2	HSM1-3.2MTPA HSM2 –5 MTPA Total-8.2 MTPA	HSM3-3.6MTPA	11.8	HSM1 - 4 MTPA HSM2-5.2 MTPA HSM-3:3.6MTPA Total-12.8 MTPA	12.8	1.0
5	CRM	0	CRM1 – 1 MTPA CRM2 – 2 MTPA Total- 3 MTPA	0	3	CRM1-1.8 MTPA CRM2-2.3MTPA Total – 4.1 MTPA	4.1	1.1
6	Galvanizing	0	4 X 0.25 MTPA	0	1.0	4 X 0.25 to 2 X 0.45	1.9	0.9
7	CPP(MW)	100 MW + 130 MW	2 X 300 MW (100% imported coal)	660 MW	1490	Amendment in fuel type in 2 x 300MW	1490	0

						(50% imported coal + 50% Indian coal)		
8	Township				5 Nos	1 with 500 dwellings	6 Nos	1 with 500 dwellings

7.0 It was informed that no change in the plant capacity; Coal requirement will increase from existing 1.8 MTPA to 2.5 MTPA; no additional land is required; no additional water is required; and ash generation will increase from existing 0.26 MTPA to 0.625 MTPA.

8.0 It was also informed that about 5.2% of reduction in PM; 11.9% reduction in SO₂ and 5.1% reduction in NO_x

9.0 It was also informed that Regional Officer of MoEF&CC visited the project on 17.11.2016 regarding compliance of conditions stipulated in Environmental Clearances granted for various phases of expansion of the Integrated Steel plant of JSW and the report from RO is expected shortly.

10.0 The PP has made detailed presentation on the proposed change in the configuration of some of the units and mentioned that the overall capacity of the plant remains same as approved earlier i.e. 16 MTPA.

11.0 After detailed deliberation the committee recommended for proposed changes in the configuration/product mix subject to cap of 16 MTPA of the crude steel production as approved in the earlier EC.

12.0 Regarding partial transfer of units, the committee asked the PP to submit a matrix indicating all the conditions of existing environmental clearance and, and as against each condition, the mutually agreed proposal as to which unit would be responsible for compliance of which condition after the proposed disintegration is permitted (DRI plant; Cement plant and Coke oven plant). This proposed devolution of responsibilities regarding compliance of EC conditions would be deliberated upon by the Committee which would make suitable recommendations.

13.0 Undertaking of the three companies for which transfer of EC is proposed and parent company shall submit undertaking for abiding the implementation of the Environmental Clearance conditions; no change in the pollution load; and no conflict in sharing in common facilities in day to day operations.

14.0 Implementation of the Enterprises Social Responsibility (ESR) and CSR shall be responsibility of the parent company i.e. JSW Steel Limited.

15.0 Therefore, the committee deferred the proposal till the submission of the information by PP.

19.17 Expansion of integrated Steel Plant from 5 MTPA to 10 MTPA and Power Plant from 300 MW to 600 MW (Gas Based) of M/s JSW Steel Limited at Geethapuram, Village Dolvi, Tehsil Pen, District Raigarh in Maharashtra. [F. No. J-11011/76/2013-IA.II(I)]. [Proposal No. IA/MH/IND/18771/2012 for Partial transfer of clinker grinding unit to M/s JSW Cement Ltd.; Proposal No. IA/MH/IND/41055/2015 for Partial transfer of Coke Plant M/s Dolvi Coke Projects Ltd and amendment in EC regarding Greenbelt Development and Cost of CSR Plan].

1.0 M/s JSW Steel Ltd. has made online application vide proposal no. IA/MH/IND/41055/2015 dated 15th January, 2016 for partial transfer of 1.0 MTPA Coke-Oven Plant and 2.5 MTPA 'Coke-Oven including by-product plant' from M/s JSW Steel Ltd to M/s Dolvi Coke Projects Ltd and amendment in EC regarding Greenbelt Development and Cost of CSR Plan.

2.0 M/s JSW Steel Ltd. has also made online application vide proposal no. IA/MH/IND/18771/2012, dated 10th August 2016 seeking partial transfer of 10 MTPA Slag & Clinker Grinding unit' from M/s JSW Steel Ltd to M/s JSW Cement Ltd.

3.0 The proponent has also made application for use of pet coke as a raw material in the coke making for use in blast furnaces vide Lr. No. EMD/GOV/F016/2959 dated 23rd May 2017.

4.0 The Environmental Clearance to the project of 3.0 MTPA to 5.0 MTPA Integrated Steel plant at Village Dolvi, Taluka Pen, District Raigad in Maharashtra was accorded *vide* letter J-11011/166/2011-IA-II (I) dated 21st November 2012 to M/s JSW Steel Ltd and further expansion of its project up to 10 MTPA was accorded environmental clearance *vide* letter J-11011/76/2013-IA II (I) dated 25th August 2015.

5.0 It has been explained by the project proponent that the expansion projects up to 5 MTPA have been established. The existing steel plant is based on the Direct Reduced Iron (DRI) - Blast Furnace-CONARC - Continuous Casting – Rolling Mill (CSP) route. The expansion is based on proven BF - EAF route.

6.0 The project proponent mentioned that the environment clearance for steel plant up to 5 MTPA includes 1.0 MTPA recovery type Coke Oven. Further, the environment clearance up to 10 MTPA plant includes 2.5 MTPA recovery type coke oven plant. It is proposed to combine the Coke Ovens of 1.0 MTPA and 2.5 MTPA, which are part of the earlier ECs as mentioned above into a single 3.5 MTPA Coke Oven plant in same location under 5 MTPA to 10 MTPA expansion project. By combining both the Coke Ovens into one the pollution load and other resource requirement like water will not increase; however, the land requirement and Capital Cost will be optimized for setting up a single Coke oven in-place of setting up two small and separate coke ovens. Also, this will have varied and distinct advantages in terms of lower land foot print with compact design for better operational and maintenance practices and logistics for handling coal and coke.

7.0 Total project cost of the coke oven plant of 3.5 MTPA will be Rs 2520 Crores. In order to optimize the capital expenditure, it is proposed to outsource the establishment and operations of the Coke Oven facility. The 3.5 MTPA Coke Oven will be established and operated by an

Associate Company, called Dolvi Coke Projects Limited and JSW Steel will be the largest shareholder of the SPV. JSW Steel Ltd. will sign the take or pay agreement from the associate company. This arrangement will help JSW to optimize the requirement of capital expenditure for setting up 10 MTPA capacity at Dolvi Works.

8.0 The project proponent further mentioned that while granting the environmental clearance for the expansion project, Ministry *vide* its specific condition No (iii) stipulated that *'The commitment made by the PP for plantation of the green belt to the tune of 655 acres should be expedited. Three rows of green belt, 12-15 meters wide, all along the periphery of the plant should be planted'*. The project proponent mentioned that they are in the process of developing green belt with three tier plantations along the periphery and avenue plantation along the internal roads inside the premises. JSW Steel Ltd. is fully committed to comply with the 33% green belt requirement. However, it is becoming difficult to get continuous land at Dolvi, Taluka Pen, District Raigad to comply with 33% green belt cover along the periphery premises. Therefore, the project proponent requested to grant permission for plantation in nearby areas in degraded private/ Government land outside the plant premises in coordination with District Revenue/ Forest Department, Raigad, Maharashtra or plantation in line with the condition stipulated by the Maharashtra Pollution Control Board in its Consent to Operate, which states "The applicant shall bring minimum 33% of the available open land under green coverage / plantation".

9.0 Regarding CSR related activity the project proponent mentioned that EAC on 26th March 2015, directed to allocate 2.5% of the total project cost to be spent on CSR activities, which includes 2% of the annual profit as provided in clause No 135 of the Companies Act 2013. Accordingly, the CSR plan of 10 years was submitted to MoEFCC and was accepted. However, while granting the environmental clearance, an amount equivalent to 5% of the total cost of the project to be earmarked towards the Enterprise Social Commitment (ESC) based on local needs, has been mentioned as per the specific conditions, point no (v), of the EC dated 25.08.2015. The project proponent requested to consider the CSR plan of 2.5% of the project cost as submitted.

10.0 The proposal was considered in 4th meeting of Expert Appraisal Committee [EAC (Industry-I) held during 25th -26th February 2016. Based on the presentation made and discussions held in detail, the Committee opined as under:

- (i) Regarding combining of the two Coke Oven plants of 1.0 MTPA and 2.5 MTPA, which were part of earlier ECs, into a single 3.5 MTPA Coke Oven plant in the same location under 5 MTPA to 10 MTPA expansion project to be operated by their Associate Company, called Dolvi Coke Projects Limited is an administrative decision to be taken by the Ministry. However, as there is no provision in the notification for partial transfer of the environment clearance, the Committee has; therefore, deferred decision in the matter and referred matter to Ministry.
- (ii) Regarding plantation, the Committee agreed to the submission of the project proponent and recommended the proposal of plantation in nearby areas in degraded private/ Government land outside the plant premises in consultation and coordination with District Revenue/ Forest Department, Raigad, Maharashtra.
- (iii) With regard to reconsideration of CSR budget, the Committee recommended to revise the condition for 2.5% of the total cost of the project for CSR instead of 5%.

11.0 In view of the Committee's decision, the proposal for partial transfer of coke oven plant, Clinker and grinding units were processed in the Ministry for consideration. Ministry decided to refer to the EAC again for detailed deliberation on the environmental implications of the partial transfer of units and clear recommendation on the percentage of the proposal of plantation in nearby areas in degraded private/ Government land outside the plant premises.

12.0 After detailed deliberation the committee recommended CSR cost as decided in the earlier EAC

13.0 Regarding proposal of plantation in nearby areas in degraded private/ Government land outside the plant premises, the committee recommended for 50% of the mandated plantation (33% of the total project area) shall be carried within the premises and for remaining 50% of the plantation, the committee asked the PP to explore the double the area around the project within 10 Km from the project. It was decided that the extent of plantation outside the project will be deliberated in the EAC meeting along partial transfer of units.

14.0 Regarding partial transfer of units, the committee asked the PP to submit a matrix indicating all the conditions of existing environmental clearance and, and as against each condition, the mutually agreed proposal as to which unit would be responsible for compliance of which condition after the proposed disintegration is permitted (Slag and Clinker grinding unit; Cement plant and Coke oven plant). This proposed devolution of responsibilities regarding compliance of EC conditions would be deliberated upon by the Committee which would make suitable recommendations.

15.0 Undertaking of the three companies for which transfer of EC is proposed and parent company shall submit undertaking for abiding the implementation of the Environmental Clearance conditions; no change in the pollution load; and no conflict in sharing in common facilities in day to day operations.

16.0 Implementation of the Enterprises Social Responsibility (ESR) and CSR shall be responsibility of the parent company i.e. JSW Steel Limited.

17.0 Therefore, the committee deferred the proposal till the submission of the information by PP.

19.18 Proposed 1 MTPA integrated Steel Plant with 225 MW at Village Gokulpur, P.O.- Shyamraipur, P.S.-Kharagpur (L), Dist. Paschim Midnapur, West Bengal of M/s Orissa Metaliks Private Ltd. [Proposal No. IA/WB/IND/62536/2017 dated 15.02.2017. F. No. IA-J-11011/56/2017-IA-II(I)]- Reconsideration for ToR based on submission of ADS.

1.0 The proponent has made online application vide proposal No. IA/WB/IND/62536/2017 dated 15.02.2017 along with the application in prescribed format (Form-I), copy of prefeasibility 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 & nonferrous), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2.0 M/s Orissa Metaliks Private Limited has proposed to install a new manufacturing unit for 1 MTPA Integrated Steel Plant along with 225 MW Captive Power Plant at Mouza-Amba (J.L. No. 115), Mathurakismat (J.L. No. 114), Radhanagar (J.L. No-98) & Srirampurjia (J.L. No- 97) at Village: Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), District: Paschim Mednipur, West Bengal State.

3.0 The land area acquired for the proposed plant is 121.5 Ha out of which 0 ha is an agricultural land, 121.5 ha is grazing land and 0 ha is others (0 Government Land). No /forestland involved. Out of these 28.7 ha of land is in possession/tie up is made with M/s Orissa Metaliks Private Limited and for 43.7 ha consent is being granted by the land owner. Of the total area 40.1 Ha (33 %) land will be used for green belt development.

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

5.0 Total project cost is approx 1500 Crores rupees. Proposed employment generation from proposed project will be 2500 direct employment and 5000 indirect employment.

6.0 The targeted production capacity of the proposed proposal is 1 Million TPA Integrated Steel Plant & 225 MW CPP. The Iron ore for the plant would be procured from Barbil-Joda, Orissa (from our current mines owner like, Rungata Mines, Sirajuddin Mines & TP Sahoo Mines), and Coal would be procured from E-Auction or Imported. The ore transportation will be done through Rail/ Road. The proposed capacity for different products for new site area as below:

Sl. No	Name of Units	No of Units	Production Capacity
1.	Blast Furnace	2 x 450 m ³	0.7 MTPA
2.	Sinter	1 x 105 m ²	0.6 MTPA
3.	DRI	2 X 500 TPD + 2 x 350 TPD	0.5 MTPA
4.	Steel Making Facilities	(20 T EIF X 10) + (20T EAF X 2) with LRF and oxygen optimized furnace	0.8 MTPA
5.	Ferro Alloy (FeMn, FeSi, SiMn, FeCr) Plant	10 x 9 MVA	0.12 MTPA
6.	FeCr Briquette Manufacturing plant	1 x 40 ton/hr	40 ton/hr
7.	Coke Oven Plant	2 x 0.25 MTPA	0.50 MTPA
8.	Lime Dolomite Plant	1 x 200 TPD	200 TPD
9.	Oxygen Plant	1 x 200 TPD	200 TPD
10.	Hot Rolling Mill	1 x 0.35 MTPA	0.35 MTPA
11.	Cold Rolling Plant with Pickling Line & Continuous	1 x 0.35 MTPA	0.35 MTPA

	Galvanizing		
12.	Ductile Iron Pipe Unit	1 x 0.3 MTPA	0.30 MTPA
13.	Captive Power Plant	225 MW [WHRB Based 90 MW + CFBC (Coal & Dolochar Mix based) 3 x 45 MW]	225 MW [WHRB Based 90 MW + CFBC (Coal & Dolochar Mix based) 3 x 45 MW]
14.	Pellet Plant	4 x 0.9 MTPA	3.6 MTPA (4 x 0.9 MTPA)
15.	I/O Beneficiation Plant	2 x 1.8 MTPA	3.6 MTPA (2 x 1.8 MTPA)
16.	Producer Gas Plant	20 x 7500 N.m ³ /hr	150000 (20 x 7500 N.m ³ /hr)

7.0 The electricity load of 318.2 MW will be procured from proposed 225 MW Captive Power Plant and the remaining 93 MW will be drawn from WSEDCL. Company has also proposed to install 10 Number DG Set of 7200 KVA. At the time of Construction phase power requirement will be met from nearby existing operation Captive power plant of Orissa Metaliks Private limited.

8.0 Proposed raw material and fuel requirement for project are Iron Ore, Bentonite, Coaking Coal, Dolomite, Quartzite, Lime, Magnesium Ore, Chromium Ore, etc. Requirement would be fulfilled by:

Sr. No.	Name of the Raw Materials	Source
1	Iron ore lump	Applied for captive iron ore mines Alternate source: Purchased from Barbil-Joda,
2	Iron ore fines	Applied for captive iron ore mines Alternate source: Purchased from Barbil-Joda,
3	Non-coking coal	Through E-Auction or Imported
4	Coking coal	Purchased from BCCL, Dhanbad Alternate source: Imported
5	Dolomite	From Birmitrapur, Orissa / Bilaspur, CG
6	Limestone	From Birmitrapur, Orissa / Bilaspur, Raipur CG /
7	Manganese ore	Captive mines in Balaghat, MP
8	Quartzite	From Belpahar Orissa / / Bilaspur, Raipur CG

9.0 Water Consumption for the proposed project will be 1163 KLD and waste water generation will be 138 KLD. Application for withdrawing required water is made to SWID, West Bengal. 30 KLD Domestic waste water will be treated in Septic Tank followed by Soak Pit and 108 KLD industrial waste water generated will be treated and reused in the process and for green belt development and dust depression after treatment.

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

11.0 The proposal was considered in the 17th meeting of Expert Appraisal Committee [EAC (Industry-I)] held during 6th – 7th April, 2017. After presentation and detailed deliberations, the committee observed that only 15% of the proposed land is under possession of the proponent and no consent or agreement from the land owners for the remaining land is available. No alternative site analysis has been made by the PP. Therefore, the committee asked the PP to submit consent or agreement for the proposed land to be acquired, copy of applications submitted for permission of required water, power, etc. for further consideration of the proposal.

12.0 The PP submitted the details of ADS vide application No- OMPL/EC_1 MTPA & 225 CPP/17-18/03, dated 22.04.2017.

13.0 After detailed presentation, the Committee noted that the PP has proposed one more plant near the present proposal.

14.0 After detailed deliberation, the committee recommended the ToR for undertaking detailed EIA/EMP study and recommended the project for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure I read with additional ToRs at Annexure-2 and 3.

- i. EIA/EMP shall address the cumulative impacts of the upcoming plant of the proponent in the area.
- ii. The project proponent shall plan for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- iii. The project proponent shall plan for LED lights in their offices and residential areas.
- iv. Solid Waste Management for the proposed colony if any as per the SWM Rules, 2016 shall be included in the EIA Report
- v. Public Hearing to be conducted by the concerned State Pollution Control Board.
- vi. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- vii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

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 equipments 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 Cahnge as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB/PCC shall be attached with the EIA-EMP report.
 - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
4. Site Details

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

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

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

- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6. Environmental Status

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM₁₀, PM_{2.5}, SO₂, NO_x, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60 m 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 analyzed 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. Enterprise Social Commitment (ESC)
- i. To address the Public Hearing issues, 2.5% of the total project cost of (Rs.crores), amounting to Rs.crores, shall be earmarked by the project proponent, towards Enterprise Social Commitment (ESC). Distinct ESC 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 ESC 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 ESC budget
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

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

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

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

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ADDITIONAL ToRS FOR PELLET PLANT

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

7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

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ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

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

- v. A commitment that no extra chlorine base bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

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 sulfides, 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.

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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.

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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.

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INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE

1. Details of proposed layout clearly demarcating various units within the plant.
2. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
3. Details on design and manufacturing process for all the units.
4. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
5. Details on requirement of raw materials, its source and storage at the plant.
6. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
7. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
8. Details on toxic content (TCLP), composition and end use of chrome slag. Details on the recovery of the Ferro chrome from the slag and its proper disposal.

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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

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Executive Summary

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

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

LIST OF PARTICIPANTS OF EAC (I) IN 19th MEETING OF EAC (INDUSTRY-I)
HELD ON 8th – 9th June, 2017

S. No	Name and Address	Position	Attendance			Signature
			8 th	9 th		
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P		
Members						
2.	Dr. Rita Tanton Central Pulp and Paper Research Institute	Member	A	A		
3.	Dr. S.Panwar Central Pulp and Paper Research Institute	Member	A	A		
4.	Director, Central Leather Research Institute	Member	A	A		
5.	Dr. Siddarth Singh, Representative of Indian Meteorological Department	Member	A	A		
6.	Representative of Central Ground Water Board	Member	A	A		
7.	Dr. G. Bhaskar Raju	Member	P	P		
8.	Prof. Naresh Chandra Pant	Member	A	A		
9.	Dr. Jagdish Kishwan, IFS(Retired)	Member	P	P		
10.	Dr. G.V.Subrahmanyam	Member	P	P		
11.	Prof. Arun Pandey	Member	P	P		
12.	Shri Santosh Raghunath Gondhalekar	Member	P	P		
13.	Shri Ashok Upadhyay	Member	P	P		
14.	Shri Sharath Kumar Pallerla, Scientist 'F' / Director, MoEF&CC	Member Secretary	P	P		
15	Shri Rajasekhar Ratti, Scientist 'C', MoEF&CC	Dy. Director	P	P		
