

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

**SUMMARY RECORD OF THE SIXTEENTH (16<sup>th</sup>) MEETING OF EXPERT APPRAISAL COMMITTEE HELD ON 6<sup>th</sup> -7<sup>th</sup> March 2017 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.**

The sixteenth meeting of the Expert Appraisal Committee (EAC) for Industry-I Sector in terms of the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held on 6<sup>th</sup>-7<sup>th</sup> March 2017 in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

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

**Confirmation of the minutes of the 15<sup>th</sup> Meeting**

The minutes of the 15<sup>th</sup> meeting, as circulated were confirmed.

**Date: 6<sup>th</sup> March 2017**

**16.3 ENVIRONMENTAL CLEARANCE (EC)**

**16.3.1 Proposed 6 MTPA Integrated Steel Plant along with captive power generation of 893 MW of M/s. Uttam Galva Ferrous Limited at villages Kuduthini, Veniveerapura, Yerangaligi and Kolagallu, Taluka & District: Bellary, Karnataka. F.No. J-11011/80/2014-IA-II-(I). Proposal No. IA/KA/IND/22038/2014 dated 20.01.2017. (EC based on 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 of the reasons of absence by the applicant.

**16.3.2 Modernisation of existing 150TPD wastepaper based writing and printing paper plant to agro residue based writing and printing paper plant and installation of 12.5MW Co-gen power plant of M/s Satia Industries Ltd., at village Rupana, District Muktsar, Punjab. F.No. J-11011/196/2014-IA.II (I) Proposal No. IA/PB/IND/61921/2015 dated 21.01.2017.**

The Project Proponent (PP) informed that proposed modernisation of existing 150 TPD wastepaper based writing and printing paper plant to agro residue based writing and printing paper plant and installation of 12.5MW Co-gen power plant of **M/s Satia Industries Ltd.**, located at Village Rupana, Taluka and District Muktsar, Punjab, was initially received in the Ministry on 1<sup>st</sup> December 2015 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The proposed project falls under sl. No. 5(i) of Schedule to the EIA Notification under "A" Category. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 2<sup>nd</sup> meeting held during 28<sup>th</sup> - 30<sup>th</sup> December 2015 and prescribed ToRs to the project vide Lr. No. J-11011/196/2014-IA .II (I) dated 22<sup>nd</sup> June 2016. Based on the ToRs prescribed to the project, the project

proponent applied for environmental clearance to the Ministry online on 1<sup>st</sup> December 2015 vide Online Application No. **IA/PB/IND/61921/2015**.

The PP informed that the project of M/s Satia Industries Ltd., located at Village Rupana, Taluka and District Muktsar, Punjab State is presently operating 150 TPD agro residue based writing and printing paper plant (Unit-I), 150 TPD wastepaper based writing and printing paper plant (Unit-II), 12.5 MW Captive Co-Generation Plant, 5 MW Condenser based Power Plant including 5 MW standby. Now it is proposed to replace the existing 150 TPD wastepaper based writing and printing paper plant (Unit-II) with 150 TPD agro residue based writing and printing paper plant and replace 5 MW Condenser based Power Plant with 12.5 MW Captive Co-Generation Plant. The details of expansion as follows:

Existing	Proposed	Remarks
TPD agro residue based writing and printing paper plant (Unit-I) + 150 TPD wastepaper based writing and printing paper plant (Unit-II) + 12.5 MW Captive Co-Generation Plant + 5 MW Condenser based Power Plant + 5 MW standby	TPD agro residue based writing and printing paper plant (Unit-I) + 150 TPD agro residue based writing and printing paper plant (Unit-II) + 12.5 MW Captive Co-Generation Plant + 12.5 MW Condenser based Power Plant + 5 MW standby	<ul style="list-style-type: none"> <li>• 150 TPD wastepaper based writing and printing paper plant (Unit-II) will be replaced with new 150 TPD agro residue based writing and printing paper plant</li> <li>• 5 MW Condenser based Power Plant will be replaced with 12.5 MW Captive Co-Generation Plant</li> </ul>

The Status of compliance of earlier EC was obtained from Regional Office, Chandigarh vide Lr. No. 5-309/2011-RO(NZ)/81-83, dated 2<sup>nd</sup> March 2017.

The PP informed that the existing plant is operating in an area of 14.5763 ha and proposed expansion will be carried in same premises, thus no additional land is required to be acquired for the present expansion. No forestland involved. The entire land has been acquired for the project. The Arniwala Canal 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.

The topography of the area is flat and reported to lies in 30°25' North latitude and 74° 31' East longitude at an elevation of 198 m above MSL. The ground water table reported to ranges between 2-5 m below the land surface during the post-monsoon season and 5-7 m below the land surface during the pre-monsoon season. Industry only uses canal water for meeting the demand of fresh water and after modernization, the source of water will remain the same. Industry will not use groundwater for meeting the fresh water demand. The stage of groundwater development is not reported.

PP reported that there is no national park / wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve or any other protected area etc. located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

PP informed that the process of project showing the basic raw materials will be used are wheat straw, sarkanda, baggase, cotton sticks to produce the final output. ETP sludge, boiler ash and lime sludge are generated as waste during the process. The targeted paper production capacity of Unit No. 2 will remain the same i.e.150 TPD. Paper will be made from agro-residues which will be procured locally. The water requirement of the project is estimated as 16500 m<sup>3</sup>/day, which shall be met through Arniwala Canal which is 2.5 km from the mill and is already connected with the industry.

PP informed that the industry was sanctioned load of 15 MW (11750 KVA Contact Demand) from Punjab State Power Corporation Ltd (PSPCL). The Power requirement for the existing unit no. 2 is around 4.5 MW (Total 13 MW for both units). After modernization, power requirement of both unit no. 1 & 2 is expected to be around 18 MW. The industry has already installed captive Co-generation plant of capacity 12.5 MW, one backpressure steam turbine of capacity 5 MW and another condensing steam turbine of capacity 5 MW. The industry proposes to install additional 12.5 MW capacity turbine and the existing steam condensing Turbine of 5 MW will be kept as standby. Excess power generated from proposed turbine will be sold to the grid.

Ambient air quality monitoring has been carried out at 8 locations during 3 months i.e. March, April and May 2016 and the data submitted indicated: PM<sub>10</sub> (67.7 to 90.7 µg/m<sup>3</sup>), PM<sub>2.5</sub> (33.9 to 47.9 µg/m<sup>3</sup>), SO<sub>2</sub> (12.1 to 20.2 µg/m<sup>3</sup>) and NO<sub>x</sub> (17.5 to 25.7 µg/m<sup>3</sup>). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 95.01 µg/m<sup>3</sup> with respect to the RSPM and 29.21 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.

Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 6.84 to 7.5, Total Hardness: 140 to 700 mg/L, Chlorides: 37 to 830 mg/L, TDS: 200 to 3190 mg/L. Noise levels are in the range of 42.5 to 99.4 dB(A) at plant site and 38 to 59.7 dB(A) in buffer area.

It has been reported that there is no population in the core zone of the project and no R&R is involved. It has been reported that a total of 246.7 MT/day of waste will be generated due to the project, out of which 10 MT/day of ETP sludge waste will be used by Paperboard mill and 63.75 MT/day of boiler ash and 173 MT/day of lime sludge shall be dumped to low lying areas. It has been envisaged that an area of 74500 m<sup>2</sup> for green belt around the periphery has been developed as green belt to attenuate the noise levels and trap the dust generated due to the project development activities. It was reported that rain water will be harvested through 2500 m<sup>3</sup> reservoir.

It has been reported that the Consent to Operate has been obtained from Punjab State Pollution Control Board.

The Public hearing of the project was held on 19.10.2016 for modernization of 150 TPD writing and printing paper from waste paper to agro residue based and 12.5 MW Co-Gen power plant.

The capital cost of the project is Rs 100 Crores and the capital cost for environmental protection measures is proposed as Rs 35 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 1.5 Crore. The expansion will generate an additional employment of 150 persons directly and 800 persons indirectly. The proponent has mentioned that there is no court case/litigation pending with regard to the project or related activity.

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

- i. Contingency plan for disposal of wastewater in monsoon season.
- ii. Action plan for recycling, reuse and reduce the wastewater specified by PP.
- iii. Details of bleaching sequence.
- iv. The quantity of the primary and secondary sludge generation and the method of disposal.
- v. Quantified assessment of impacts, mitigation measures and monitoring.
- vi. The project proponent shall reassess the quantity of water required for the plant and provide a revised water balance statement.
- vii. Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan.
- viii. Socio-economic development activities including skill development programme.
- ix. Rectification of non-compliances reported by Regional officer in implementation of earlier EC conditions.

## **16.4 FURTHER CONSIDERATION**

### **16.4.1 Silica sand beneficiation plant of M/s Mangalore Minerals Pvt. Ltd., village Chattara, Allahabad, Uttar Pradesh. J-11015/188/2011-IA.II(M) Proposal No.IA/UP/IND/59480/2011 ADS reply dated 08.0.2.2017. (Further consideration for EC)**

PP explained the background of the project that the project was initially submitted to the Non-Coal Mining sector on 11.05.2011 and case was appraised during the 17<sup>th</sup> meeting of Expert Appraisal Committee (Non-Coal Mining sector) held on 20.07.2011 for grant of TOR. The consideration of the proposal was deferred and the proponent was asked to submit separate proposals for Mine and Mineral Beneficiation plant. Thereafter, the separate application for beneficiation plant was submitted on 01.08.2011 to the Non-Coal Mining sector and was prescribed Terms of Reference (ToRs) *vide* letter No. J-11015/188/2011-IA. II(M) dated 21<sup>st</sup>September, 2011.

Based on the ToRs, the baseline study was conducted (September-December 2011). Public consultation was held on 08.07.2013. The Project Proponent submitted the

EIA report to the Non-Coal Mining Sector on 26.12.2013. Based on the appraisal of the project on 21.3.2014, the proponent was directed to resubmit the EIA report along with one month revalidated baseline data. Revised EIA report was submitted to MoEFCC for appraisal on 27.6.2014. The project was re-appraised by the Expert Appraisal Committee (Non-Coal Mining) during its meeting held on 26<sup>th</sup> – 27<sup>th</sup>, August 2014. The Committee recommend the project subject to submission of Conservation Plan for Schedule-1 species(*Pavocristatus*). The duly approved conservation plan was submitted by the proponent on 21.9.2015. The proponent was advised by the Ministry vide letter No. J-11015/188/2011-IA.II (M) dated 20.11.2015 to seek the approval of Chief Wild Life Warden (CWLW). Finally, the proponent after obtaining the approval of CWLW vide letter No. 2124/26-11(Mangalore Minerals PVT) Lucknow dated 26.2.2016 submitted approved conservation plan to the Ministry on 26.2.2016 for issuance of Environmental Clearance.

The matter was examined in the Ministry and it was decided that since the proposal is for standalone beneficiation plant, the proposal should be appraised by the Expert Appraisal Committee (Industry-I). Hence, the proposal is placed in the instant meeting of the EAC for Industry-I sector.

The proposal is for setting up a new Silica Sand Beneficiation Plant with throughput capacity of 0.6 MTPA (6 Lakh TPA) mineral silica sand. The total land required for the project is 10 ha. The land is barren land and devoid of any tree or bushes. The proponent has acquired the entire land from the private land owners. It is proposed to establish the plant on 6.91 ha. area and in the balance area of 3.09 ha., is earmarked for green belt. No river or water body passes through the project area. The distance of Yamuna river from the Project site varies from 5 to 6.6 km NW. It is reported that Baghla lake is at a distance of about 9.5 km SW.

No national park / wildlife sanctuary /biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. In buffer zone, presence of *Pavocristatus* (Peafowl), schedule I species is reported. Approved Conservation plan for Schedule I species has been provided.

The targeted throughput capacity of the plant is 0.6 million TPA. The silica sand will be sourced primarily from the nearby silica sand mine of M/s. Hari Mandir Mineral Traders located at about 1km from the plant and other nearby mines. The entire RoM transportation will be done by trucks.

The topography of the area is undulating and lies between 25 ° 17' 30" N to 25 ° 17' 47" N latitude and 81°40' 14" E to 81° 40' 31" E longitude and is at an elevation of 112.8m above mean sea level. The ground water table in area varies from 5.25 m - 19.60 m (pre-monsoon) and 3.60 m - 18.30 m (post monsoon). Ground water development in the area is 54.99%, hence it has been categorized as safe category.

Total quantity of water required at any time in the system for washing the sand is estimated at 207 KLD. Besides 26 KLD of water will be needed for sprinkling and horticulture. Fresh water requirement will be 180 KLD, which will be drawn from ground water for which approval has already been obtained from CGWA. About 90 to 94% water will be re-circulated in the system during the beneficiation process. The power

requirement of the project is estimated to be 2000 KVA, which will be obtained from the Uttar Pradesh Power Corporation.

Ambient air quality monitoring (revalidated one month baseline) was carried out at 8 locations during 15<sup>th</sup> April 2014 to 15<sup>th</sup> May 2014 and the data submitted indicated that mean values of PM<sub>10</sub> ranges from 100.25 µg/m<sup>3</sup> to 147.9µg/m<sup>3</sup>, PM<sub>2.5</sub> ranges from 46.35 µg/m<sup>3</sup> to 63.05 µg/m<sup>3</sup>, SO<sub>2</sub> ranges from 8.0 to 10.15 µg/m<sup>3</sup> and NO<sub>x</sub> ranges from 11.25 to 15.4 µg/m<sup>3</sup>. The results show that the maximum level of impact on PM will be at about 400 m (30 to 50 µg/m<sup>3</sup>) and at about 400 m to 1 km (10 – 30 µg/m<sup>3</sup>). The Committee has observed that the ambient air quality is exceeding the prescribed limits. Air dispersion model was run to ascertain impact of PM on surrounding areas due to plant activities. For mitigation of impacts of air pollution from DG sets, stack height of 30 m above roof level for D.G. sets are proposed to be provided. There is no habitat in the core zone, therefore, no R&R is involved.

It is estimated that 60,000 TPA of waste in the form of clay, over size and under size will be generated at optimum capacity. Out of which 36,000 TPA will be utilized as aggregate and 24,000TPA will be dumped in the earmarked dump yard. This material after drying will be used as landfill etc. It has been envisaged that an area of 3.09 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The public hearing for the project was held on 08.07.2013. The issues raised during the public hearing *inter-alia* include employment for the locals, pollution in nearby area, employment opportunity, demarcation of plant boundary, water meter, implementation of rain water harvesting, monitoring of ground water through Piezometer etc.

The capital cost of the project is Rs 2,000 Lakhs. The capital cost on environmental protection measures is proposed as Rs. 114.5 Lakhs. The annual recurring cost towards the environmental protection measures is proposed at Rs. 39.55 Lakhs. It has been mentioned that there is no court case or litigation regarding the project.

The proposal was deliberated in 12<sup>th</sup> meeting of EAC held during 27<sup>th</sup> -28<sup>th</sup> October 2016 in which the Committee had desired following information for further consideration of the project.

- i. Revised layout plan along with the proper indexing, showing green belt, waste disposal area etc. should be submitted.
- ii. Detailed intermediate and final plan for disposal of waste generated in the form of clay should be submitted.
- iii. Revised water balance should be submitted.
- iv. In view of higher PM in the ambient air, a plan to control ambient air quality should be submitted along with suggested mitigative measures.
- v. Risk Analysis Report should be submitted.
- vi. Detailed Comprehensive Environment Management Plan along with timelines and budget should be submitted.

- vii. In respect of SPM, Particle size analysis of <75 micron particles should also be provided
- viii. Measures to control dust emissions in part of the plant which is below ground level, should be elaborated.
- ix. Flow of the nallah located near the plant shall not be obstructed.

Accordingly, the Ministry sought the information through ADS and PP submitted reply on 08.02.2017 for further consideration.

The Committee considered the specific study carried by PP on dust reduction by water sprinkling and green belt. After detailed deliberations on the Additional Information submitted by the PP and presentation made on the same.

*The Committee felt that the outcome of the study is satisfactory and recommended the proposal for the Environment Clearance with specific and general conditions along with following additional mitigation measures.*

- i. A continuous water sprinkling system with timer control shall be established along the road in addition to mobile water sprinkler during construction and operation phases. Strict measures shall be taken for control of PM<sub>2.5</sub>.
- ii. The plantation shall be carried with local species as per the CPCB guidelines.
- iii. Special techniques including use of farm yard manure shall be adopted for effective survival of plantation.
- iv. Clay and Rejected siliceous sand generated after the beneficiation process shall be utilised for embankments in mines, stemming material for the blasting, filling of low laying areas, foundations, village roads, brick making etc. The same may be made available to the end users at free of cost. Further, the project proponent is willing to sponsor a project to work out the effective utilization of the rejects from the beneficiation plant. The outcome of this research work will be implemented.
- v. The PP shall implement conservation plan for in consultation with local forest department with earmarked funds of Rs. 20.5 lakhs as approved and the status shall be reported to the Regional Office of the Ministry along with six monthly compliance reports.
- vi. Solar energy shall be utilized in the plant and mining area wherever possible.
- vii. PP shall implement skill development programmes in accordance with designed modules of Skill Council of India (brick manufacture, composting, vermi-compost, self-employment programmes, etc.) for the local villagers to improve their employability as a part of Enterprise Social Commitment.
- viii. The project proponent shall carry out proper metalling of the 1.2 Km long and 10 m wide road at the estimated cost of Rs. 70 lakh.

## **16.5 ANY OTHER ITEM**

**16.5.1 Integrated steel plant (1.9MTPA), WHRB (100MW) and AFBC (200MW) at village Jharbandh Galpada and Tarakbeda, District Dhenkanal, Odisha by M/s Rungta Mines Limited. (Extension of validity of EC).**

The Project Proponent (PP) informed that Integrated Steel Plant (1.9 MTPA), WHRB (100 MW) and AFBC (200 MW) at village Jharbandh Galpada and Tarakbeda, District Dhenkanal, Odisha of **M/s Rungta Minies Limited** has accorded environmental clearance vide Lr. No. J-11011/241/2009-IA.II (I) dated 02.08.2010 and amended on 25.01.2011. The PP applied for extension of validity on 10.02.2015 vide PP's letter No. NiRML/DSP/14-15/868. The matter was considered in the 37<sup>th</sup> EAC (Industry-I) meeting held during 30<sup>th</sup> April – 1<sup>st</sup> May, 2015 and informed that the EC will be valid for 7 years from the date of issue as per the provisions of SO 1141(E), Dated 29<sup>th</sup> April 2015.

Further, PP submitted application for further extension of validity of above said environment clearance on 23.01.2017 vide online proposal No. **IA/OR/IND/20891/2010** along with reasons for delay in installation.

The PP informed that Consent to Establishment was granted by State Pollution Control Board, Odisha on 04.01.2011 and amended on 21.01.2012, the validity of which has been extended till 03.01.2021 vide letter no. 13955/Ind-II-NOC-5224 dated 20.08.2015.

PP informed that the reasons such as fluctuation in worldwide steel market; cancellation of coal mine allotted for supplying coal to this project by the Hon'ble Supreme Court of India in 2014; uncertainty about the availability of coal required for plant operation; financial issues raised by the bankers due to non-availability of firm coal linkage; rehabilitation of villagers did not occur on time as villagers did not move from the site and same was completed in December 2016; land acquisition through IDCO for approach road is pending for approx. 0.9 km out of 3.5 km; land acquisition for 10% of the total land inside the project area is under process, likely to be completed in April 2017; etc.

PP outlaid the progress of the project as follows:

- 540.705 acres private land and 59.990 acres Government land has been acquired. This is approx. 90% of total plot area;
- Balance is Government land, which is pending with Tahsildar-cum- LAO, Hindol and Tahsildar, Odapada;
- MECON was appointed as consultant to prepare plant layout, which has been completed;
- For execution, detail engineering is being carried out by ITC, Raipur;
- Company has already compensated 54 displaced families as per R& R policy, Govt of Orissa, through IDCO & District Administration, Dhenkanal;
- Company sponsored 102 educated unemployed youth from the affected families for training in Industrial Training Centers for upgradation of their skills and employability;
- In addition, 170 candidates have successfully passed out in all Odisha Trade Test (AITT);
- Another batch of 30 candidates have also been sponsored this year for ITI training in the local Industrial Local Centre for the course period 2014-15 & 2015-16;
- The management is also establishing its own ITC in the locality for providing training on skill development and employability; and
- Till date Rs. 83.23 crores have been expended on the project.



The committee desired to know the component wise schedule of completion of the project. The PP has submitted the implementation schedule for completion of the construction activity, component wise (Bar Chart) submitted vide PP's Lr. No. RML/DSP/MoEF/16-17/477 dated 6<sup>th</sup> March 2017. It is noted that the project will be completed by July 2020. However, the committee asked the PP to expedite the completion of the project by 31<sup>st</sup> March 2020. The PP shall provide a time schedule for completion of all the activities related to the project within extended time limit.

*After detailed deliberations, the Committee recommended the extension of validity of Environmental Clearance for further period up to 31<sup>st</sup> March 2020.*

**16.5.2 Expansion of white cement production capacity from 0.56 MTPA TO 1.4 MTPA and captive power plant capacity from 7.5MW to 33.5MW of M/s Ultra Tech Cement Ltd., (unit: Birla white) located at Rajashree Nagar, village Khariakhangar, Tehsil: Bhopalgarh, District: Jodhpur, Rajasthan. File No. J-11011/170/2012-IA-II(I). Proposal No. IA/RJ/IND/3038/2012 dated 24.01.2017 (Amendment in EC).**

M/s UltraTech Cement Limited (Unit-Birla White) has obtained Environmental Clearance on 5<sup>th</sup> March 2014 vide letter no. J- 11011/170/2012-IA- II(I) for expansion of White Cement production (0.56 Million TPA to 1.4 Million TPA and captive power plant (7.5 MW to 33.5 MW) at Village- Kharia Khangar, Tehsil Bhopalgarh, District-Jodhpur, Rajasthan.

As per the earlier EC dated 5.03.2014, the total water requirement of 2650 m<sup>3</sup>/day will be sourced from ground water and surface water. And also 5-year water management plan shall be made so as to achieve reduction of ground water withdrawal. PP informed that in view of quality of water required for Cement and Captive Power Plant, sourced from Public Health Engineering Department (PHED), Rajasthan, planned to install Water Treatment Plant (1600 m<sup>3</sup>/day) in the existing cement plant premises with the cost of Rs. 13.47 Crores. It was informed that no additional land required for construction of proposed Water Treatment Plant. PP informed that Rajasthan Pollution Control Board has issued Consent for Establishment (CFE) for the Treatment Plant subject to amendment in Environment Clearance.

PP explained that a water treatment plant is proposed within the existing premises of the plant to improve the water quality, for which an amendment is required in the existing Environment Clearance. It is also mentioned that Water storage reservoir is also proposed for 30 days.

*After detailed deliberation, the committee recommended for the amendment of EC with respect to specific condition No. (viii) as below:*

Existing condition	Read as
Total fresh water requirement after the proposed expansion of cement and captive power plant shall not exceed 2650 m <sup>3</sup> /day Which will be sourced from Ground water and Surface water. A five-year	“Total fresh water requirement after the proposed expansion of cement and captive power plant shall not exceed 2650 m <sup>3</sup> /day Which will be sourced from Ground water and Surface water. The required surface

management plan shall be made so as to achieve reduction in groundwater withdrawal”.	water 1600 m <sup>3</sup> /day will be sourced from PHED, Rajasthan and treated for desired quality for the utilization of Cement and Captive power plant. Also the utilization of solid waste generated from treatment plant should be provided. A five-year management plan shall be made so as to achieve reduction in groundwater withdrawal”.
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**16.5.3 Integrated aluminium smelter complex (3.25 LTPA & Primary Aluminium) along with coal based Captive Power Plant (750 MW) at village Orgari, Bargawan, District Sidhi, Madhya Pradesh by M/s Hindalco Industries Ltd. File No. J-11011/217/2007.-IA.II(I). Proposal No. IA/MP/IND/3428/2008 dated 27.01.2017. (amendment in EC and Expansion)**

The Integrated aluminium smelter complex (3.25 LTPA & Primary Aluminium) along with coal based Captive Power Plant (750 MW) at village Orgari, Tehsil Bargawan, Dist Sidhi, Madhya Pradesh of M/s **Hindalco Industries Ltd** was granted Environment Clearance vide Letter No. J-11011/217/2007-I.A.II (I). Subsequently amendment to the EC was issue on 15<sup>th</sup> February 2012 for upgradation of Aluminium Smelter Plant from 3.25 LTPA to 3.59 LTPA and installation of Standby 1X 150 MW Captive Power Plant (with a condition of generation shall not exceed 750 MW). As per the earlier EC, 3.5 MTPA coal requirement will be met from Mahan Coal Block located at 25 Km from the project. Now, M/s **Hindalco Industries Ltd** is seeking change in fuel source and fuel mix for concurrence for 900 MW (5x150 MW in Operation and 1 x 150 MW Standby) Captive Power Plant in EC as follows:

**Summary of Project Proposal submitted by PP:**

Sl. No	Item	Existing Source as per EC	Proposal for Change in Fuel Source & Fuel Mix
	A proposal for change in fuel source and fuel mix.	Captive Mahan Coal Block allocated to HIL  Existing practice: As the allocation of Mahan Coal Block to HIL has been cancelled by Hon’ble Supreme Court, HIL is continuing to source coal from alternate sources i.e. Domestic Coal, E-auction, imported coal, Pet Coke, etc.	Captive Kathautia and Dumri Coal Block allocated to HIL  Coal from other sources, i.e., Domestic Coal (Linkage Coal, coal from Open Market, E-auction, Washery reject/ tailing), imported coal, etc.  Small quantity of Agri Residues (1-4 %) and Pet coke (1-2%)

Coal requirement of CPP is 3.5 MTPA of domestic coal from Mahan Coal Block as per EC.

Mahan Coal Block	3.5 MTPA	S - 0.5% Ash - 34% GCV - 4300 Kcal/kg
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The following is the proposed combination of fuel sources and fuel mix:

1	Linkage coal from own mines (Kathautia&Dumri mines) and coal from open market from CCL/ NCL, washery tailings/ rejects	90 – 97%	S - 0.49% Ash - 31.78% GCV - 3000 Kcal/kg
2	Pet Coke	1 – 2 %	S - 4.7% Ash - 1.23% GCV - 8104 Kcal/kg
3	Imported Coal	1 – 10%	S - 0.62% Ash - 16.61% GCV - 5850 Kcal/kg
4	Agri Residues	1 – 4%	S % - 0.22% Ash - 15.2% GCV - 3400 Kcal/kg
Average fuel quality			S % - 0.49% Max Ash - 33% Max GCV - 3974 Kcal/kg

**Capacity expansion of Aluminium Smelter:** M/s HIL has obtained capacity expansion of Aluminium smelter from 3.25 LTPA to 3.59 LTPA vide amendment to the EC dated 15<sup>th</sup> February 2012. Now it is proposed further capacity expansion of Aluminium Smelter from 359 to 371 KTPA. The proposed production increase is through Process Optimization by increase in the Current Amperage from the existing level of 360 kA to 372 kA. This will be achieved with the existing systems in the Smelter Plant without addition of Pots or any new Equipment. The key process of optimization is through thermal balance and controlling the operational parameters. The associated facilities like Cast House and Carbon Plant is adequate to receive the enhanced production. There will be no changes in the bus bar for this incremental increase of current. Enhancement of input amperage will result into marginal increase (3.6 %), to the tune of 12 KTPA, in Aluminium Production Level.

It was reported that following raw materials and other requirements have been envisaged for the proposed production enhancement:

- **Alumina** - HIL will require 23500 MT of additional alumina to meet this enhanced volume. This will be sourced from HIL's Captive Alumina Plants and import, if required based on Business decision.
- **Power** - Existing installed capacity of 900 MW (5 x 150 MW Units in Operation and 1 x 150 MW Unit as Standby) will be sufficient.
- **Water** - No additional requirement. Water consumption will be within the approved limit of 4600 m<sup>3</sup>/h.
- **Coal** - Power Generation will remain within 750 MW and the coal consumption will remain within approved limit of 3.5 MTPA.
- **Aluminium Fluoride** – Plant's Fluoride Consumption will remain within approved limit of 10 kg/MT of Aluminium (CREP Guidelines)
- **Land** - No additional requirement; No Forest Land is involved.
- **Capital Investment** - No additional Capital Investment is needed to meet this enhanced production capacity.
- **Manpower** - No additional Manpower requirement
- **Addition of New Equipment** - None
- **Change in Product Portfolio** - None. The Product will be Aluminium Ingot, SOWS, Billet and Wire Rod.

It was also reported that the following change in pollution load:

- **ETP** – Since there is no additional requirement of water for this enhanced production capacity, no change in the current ETP capacity: 300 m<sup>3</sup>/h.
- **Fluoride Level** – Since the increase in production capacity is very marginal (3.6 %), with the existing Gas Treatment Centre, HIL will be able to maintain the Fluoride Emission within approved limit of 0.67 kg/MT, mentioned in the EC.
- **PAH Level** – No change. Will remain with the approved limit within the Existing Fume Treatment Centre.
- **Spent Pot Lining** – No additional generation as there is no increase in number of Pots.

PP mentioned that to achieve desired GCV, using agro waste and pet coke are blended with higher grade coal.

**After detailed deliberations, the committee noted that the use of pet coke in CPP is not permitted and the committee asked PP to submit following information for further consideration:**

- i) Certificate of compliance of existing EC from Regional Office of MoEF&CC
- ii) Details of coal linkage and transportation of coal to power plant shall be planned as per earlier EC (i.e. mode of transportation shall be through rail).
- iii) No pet coke will be allowed in CPP in view of high sulphur content.

## **16.6 CASE FOR TERMS OF REFERENCE (TOR)**

### **16.6.1 Expansion of Total Production Capacity and augmentation of integrating melting and rolling facility of MIs Aarti Impex Ltd at Village Budhewal, Budhewal Road, Tehsil & Dist. Ludhiana, State-Punjab. Proposal No.IA/PB/IND/62247/2017 dated 03.02.2017 File No. IA-J-11011/49/2017-IA-II(I) (Terms of Reference)**

The PP reported that M/s Omax Steels Ltd., since 2004 located at Budhewal Road, Tehsil & Distt. Ludhiana (Punjab), is an existing secondary steel based industrial unit. M/s Aarti Impex took the management control of the industrial unit in July 2016. The existing industrial unit has installed production capacity of ~70 MT/day of MS rolled product (round, square, hexagonal sections, etc.) using MS ingots / billets as basic raw material. The existing unit is operating with the Consent to Operate from Punjab State Pollution Control Board. The CTO is valid up to 20.05.2017.

M/s **Aarti Impex** proposes to Expansion of existing Production Capacity & Augmentation of Integrating Melting & Rolling Facility. It is proposed to expand the production capacity from 70 MT/day to 680 MT/day (i.e. 224400 MT/Annum) of different rolled sections based on **Induction Furnace technology**. The details of expansion will be as follows:

Sl. No	Particulars	Existing	Proposed	Total
1	Unit processes machinery	Induction Furnace Reheating Furnace Rolling mill Required utilities	Induction Furnaces Vacuum degasser (VD) Ladle refining Furnace (LRF) Continuous casting machine Rolling Mill Required facilities	
2	Gross melting capacity	80 MT/day		700 MT/Day

3	Installed production capacity	70 MT/day		680 MT/day
4	Fixed capital investment	Rs. 1570 lakh	Rs. 2943 Lakhs	Rs. 4513 Lakhs
5	Power requirement	2700 KVA	15400 KVA	18000 KVA
6	Raw material requirement	90 MT/day	660 MT/day	750 MT/day
7	Ferro-alloys	750 kg/day	4550 kg/day	5200 kg/day
8	Land requirement	39310 m <sup>2</sup>	Nil	39310 m <sup>2</sup>
9	Manpower	100	150	250
10	Gross water requirement	30 m <sup>3</sup> /day	120 m <sup>3</sup> /day	150 m <sup>3</sup> /day
11	Gross waste water generation	10 m <sup>3</sup> /day	120 m <sup>3</sup> /day	130 m <sup>3</sup> /day
12	Solid waste generation • Slag • Mill scale	3 MT/day 1 MT/day	-	20 MT/day 5 MT/day
13	Hazardous waste • APDC dust • Spent lubricants	50 KG/day 200 Kg/day		300 kg/day 500 Kg/day

The proposed unit will be located in the premises of existing unit at Village Budhewal, Budhewal Road, Tehsil & Dist. Ludhiana, State-Punjab. The proposed area falls in critically polluted area.

The proposed project falls under Category “A” due to project falls under Critically Polluted Area, Ludhiana as Metallurgical Industries (secondary metallurgical process under item 3(a) of Schedule to the EIA Notification, 2006.

It was reported that the proposed expansion will take place in the existing premises of **3.931 Ha** and no additional land is required for the proposed expansion. Further reported that an area of **1.1793 Ha** of total plant area will be used for green belt development.

The electricity load of **18 MW** will be procured from **Punjab State Power Corporation Ltd. (PSPCL)**. Company has also proposed to install **1X500 KVA DG Set** during power failure which will be stand by. Proposed raw material and fuel requirement for project are 750 MT per day requirement would be fulfilled by the local industries as well as by the adjoining states. No fuel consumption is envisaged. Water consumption for the proposed project will be 150 KL/day and waste water generation will be mainly from cooling will be reused within the plant premises. Domestic waste water will be treated in septic tank followed by soak pit.

PP reported that there is no national park / wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve or any other protected area etc. located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

It was informed that there is no litigation pending against the project and/or land in which the project is proposed to be set up.

The committee noted that the plant is located in critically polluted area with respect to water quality in the region of Ludhiana as per Comprehensive Environmental Pollution Index (CEPI). However, the committee asked the PP to further reduce in pollution load (water) even after the proposed expansion the pollution load should be less than the present level.

***The Committee recommended to issue the TOR and prescribed following specific TORs, in addition to the standard TOR, for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at Annexure I read with additional TORs at Annexure-2:***

1. The Public Hearing for the project should be conducted by Punjab State Pollution Control Board
2. 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.
3. 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.
4. The PP shall implement strict measures to control pollution in the expansion proposal so that the present pollution levels shall not be increased.
5. EIA/EMP study should be in accordance with the action plan/guidelines/regulations of state on critically polluted area.
6. PP shall submit certified report on compliance of CTO as a part of EIA/EMP.

**16.6.2 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 Limited. Proposal No. dated 06.02.2017. (ToR)**

PP has withdrawn the application.

**16.6.3 Proposed 2.1 MTPA Pellet Plant by wet process and Producer Gas Plant 12,500 Nm<sup>3</sup>/hr at Mouza-Nayagarh-Jalaposhi, village Nayagarh, PO. Dubuna, P.S- Joda No.73., Tehsil Jumpura, Dist. Keonjhar, Odisha of M/s Orissa Metaliks Private Limited. Proposal No. IA/OR/IND/62389/2017 dated 09.02.2017. F.No. J-11011/51/2017-IA-II(I) – (ToR)**

M/S Orissa Metaliks Private Limited proposes to install a new manufacturing unit for Pellet Plant along with Producer Gas Plant. It is proposed to set up the plant for 2.1 MTPA Pellet Plant along with 1, 12,500 Nm<sup>3</sup>/hr Producer Gas Plant based on Wet Basis technology. The proposed unit will be located at Mouza- Nayagarh & Jalapapasi at Village: Nayagarh, P.O – Dubuna, P.S – Joda No. 73, Tehsil-Jhumpura, District: Keonjhar, Pin-758034 State: Odisha.

It was reported that the land area acquired for Pellet Plant along with Producer Gas Plant is 20.24 Ha out of which 6.9 Ha land will be used for green belt development. No forestland is involved. Total project cost is approx 200 Crores rupees. Proposed employment generation from proposed project will be 500 direct employments and 2000 indirect employment.

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

Sl.No	Particulars of Facilities	Capacity
1.	Pellet Plant	2.1 MTPA(3 x 0.7 MTPA)
2.	Producer Gas Plant	1,12,500 (15 x 7500 N.m <sup>3</sup> /hr)

The electricity load of 14.1 MW will be procured from NESCO/ Orissa State Discoms & Open Access. Company has also proposed to install 02 Number DG Set of 600 KVA.

Proposed raw material and fuel requirement for project are High Grade Iron Ore Fines, Bentonite, Coaking Coal & Lime. Requirement would be fulfilling by:

Sl.	Name of the Raw Materials	Source
1	High Grade Iron Ore Fines	From Barbil-Joda and nearby mines of Odisha
2	Bentonite	From Kutch, Gujarat
3	Non-coking coal	E-Auction or Imported
4	Limestone	From Birmitrapur, Orissa / Bilaspur, Raipur CG /

Fuel consumption will be mainly Electricity & Diesel (If required). Water Consumption for the proposed project will be 300 KLD and waste water generation will be 3 KLD. Domestic waste water will be treated in Septic Tank followed by Soak Pit and



industrial waste water generated will be treated and reused in the process for cooling after primary treatment.

PP reported that there is no national park / wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve or any other protected area etc. located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

It was informed that there is no litigation pending against the project and/or land in which the project is proposed to be set up.

***After detailed deliberations, the Committee recommended to issue TORs to the project proponent and prescribed following specific TORs, in addition to the standard TOR, for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at Annexure I read with additional TORs at Annexure-2:***

- i. The Public Hearing for the project should be conducted by Odisha 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. PP should submit authenticated list of flora and fauna existing in the study area shall be submitted along with EIA/EMP report.
- v. PP will obtain a certificate from the forest authorities about the proximity of any PA/RF/PF to the project site.

**16.6.4 Proposed expansion of existing plant of M/s Ispat Damodar Pvt. Ltd., in village- Nambagram, PO. Digha, P.S.-Neturia, Dist. Purulia, West Bengal. Proposal No. IA/WB/IND/62286/2017 dated 08.02.2017. F.No. J-11011/52/2017-IA-II(I) ---(ToR)**

The project proponent reported that Sponge Iron Plant with 2 X 100 TPD kilns, SMS Plant with induction furnace of 2 X 4 T & 1 X 8 T capacity, a Ferroalloy plant of 4 X 7.5 MVA capacity and a Waste Heat Recovery based power plant of 8 MW capacity are already in operation by **M/s. Ispat Damodar Private Limited** since 2006 in an area of 78 Acres located at Village: Nabagram, Taluka: Naturia District: Purulia, State: West Bengal. Now it is proposed to expand existing manufacturing unit by installation of new units for production of steel, ferroalloys, power and cement. The steel manufacture will follow the secondary process route i.e. sponge iron, SMS (IF, EAF). The company proposes to further acquire 25 acres of land for the expansion purpose. The land area requirement for the integrated steel plant is 103 acres, out of which 34 acres' land will be used for green belt development. The acquisition will involve mostly private land. Total

project cost is approx 190 Crore rupees. Proposed employment generation from proposed project will be 110 direct employments and 400 indirect employments.

The proposed capacity for different products for new area as well as existing area is as below:

**Magnitude of Operation of Existing & Proposed Expansion Project**

Sl. No.	Facilities	Existing Capacity	Proposed Expansion Capacity	Ultimate Capacity
1.	Ferro Alloys (Ferro Chrome/ Ferro Manganese /Silico Manganese/ Ferro Silicon) (SEAF)	4 x7.5 MVA	2x7.5 MVA	6 x 7.5 MVA
2.	Sponge Iron Plant	60000 TPA (2 x 100 TPD)	105000 TPA (1 x 350 TPD)	165000 TPA
3.	Iron Ore Beneficiation & Pelletisation Plant	-	600000 TPA	600000 TPA
4.	Captive Power Plant (WHRB + Dolochar AFBC)	8MW (4MW WHRB + 4MW AFBC)	40MW (8MW WHRB + 2 X 16MW AFBC)	48MW
5.	Steel Melting Shop & Continuous Casting Machine for Billet & Slab :			
	a) Induction Furnace	2x4T,1X8T	2x15T	2x4T, 1X8T 2x15T
	b) Electric Arc Furnace (EAF)	-	1x20T	1x20T
	c) Laddle Refining & Tilting Furnace (LRF)	-	1x20T	1x20T
	d) VOD/VID/AOD	-	1x20T	1x20T
	e) Continuous Casting Machine (CCM)	1x 6/11 mtrs.	1x 6/11 mtrs.	2x 6/11mtrs.
6.	Rolling Mill with Preheating Furnace (Coal gasifier/ Pulverized Coal / Oil fired)	-	200000 TPA	200000 TPA
7.	Cement Grinding Plant	-	1 x 1000TPD	300000 TPA

The electricity load of 77 MW will be partly met from own generation (about 48 MW) and balance will be procured from DVC grid. Company has already installed 5 DG sets i.e. 4 x 500KVA and 1 x 380KVA.

Proposed raw material and fuel requirement for project are: Iron Ore Fines, Coke Fines, Bentonite, Lime Stone, washed coal, Dolomite, Chromite, Quartzite, Coke, LAM Coke, Manganese Ore, Iron Scrap, Pig Iron, Cement Clinker and Gypsum. Most of the minerals including iron ore, chromite, limestone, etc will be sourced from neighbouring state Odisha whereas coal (both coking and non-coking) will be sourced from neighbouring coal fields of ECL and BCCL. The coal for the coke ovens plant will be imported from Australia/USA or Indonesia. Cement Clinker for cement grinding plant will be sourced from nearby Cement Factory at for which a MoU will be made in due time.

Water Consumption for the proposed project will be 3028 m<sup>3</sup>/d and waste water generation will be 365 m<sup>3</sup>/d. Domestic wastewater will be treated in STP and industrial waste water generated will be treated ETP, settling pond and reused for green belt development, dust suppression, ash conditioning and fire fighting.

PP reported that there is no national park / wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve or any other protected area etc. located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

It was informed that there is no litigation pending against the project and/or land in which the project is proposed to be set up.

***After detailed deliberations, the Committee recommended to issue TORs to the project proponent and prescribed following specific TORs, in addition to the standard TOR, for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at Annexure I read with additional TORs at Annexure-2:***

- i. The Public Hearing for the project should be conducted by West Bengal 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. Quantification of Pollution load per unit of production shall be incorporated in detail in the EIA/EMP report.
- v. Certified report of compliance of earlier EC shall be submitted as part of EIA/EMP.

**16.6.5 Proposed project for manufacturing of manganese dioxide, manganese oxide, ferro alloy casting unit and iron ore beneficiation from ROM at village Berdipar, Tehsil Aroli, District – Nagpur, Maharashtra of M/s Shree Shyamjee Metalics. Proposal No. IA/MH/IND/62495/2017 dated 13.02.2017 F.No. J-11011/53/2017-IA-II(I) ----(ToR)**

M/s. Shree Shyamjee Metalics proposed to install a new manufacturing unit for Manganese Dioxide, Manganese Oxide, Ferro Alloy Unit (by Thermite process) and Manganese Ore Beneficiation from RoM. It is proposed to setup the plant for Ferro Alloy based on Thermite Process. The proposed unit will be located at Village: Berdipar, Taluka: Aroli, District: Nagpur, State: Maharashtra.

The PP informed that the land area required for the proposed project is 2.5 Ha and entire land is already acquired. No forestland is involved; total project cost is approx Rs. 5.0 crore; proposed direct employment and indirect employment generation from proposed project will be 40-50; the power required will be supplied by State Electricity Board; the power requirement for the proposed project will be 100 KVA and the proposed capacity for different products are as below:

Sl. No.	Name	Capacity
1.	Manganese Oxide	1500 TPM
2.	Manganese Dioxide	500 TPM
3.	Manganese Ore Beneficiation from R.O.M	5000 TPM
<b>Ferro Alloy (By Thermite Process)</b>		
4.	Ferro Titanium OR	200 TPM
5.	Low Carbon Ferro Manganese OR	200 TPM
6.	Medium Carbon Ferro Manganese	200 TPM
7.	Ferro Molybdenum OR	200 TPM
8.	Ferro Vanadium OR	200 TPM
9.	Ferro Aluminium OR	200 TPM
10.	Ferro Zirconium	200 TPM

It was reported that the proposed raw material and fuel requirement for project are manganese ore, coal and other minerals. The manganese ore will be sourced from mines of MOIL and from open market.

Water Consumption for the proposed project will be 30 KLD and domestic waste water will be treated in package type STP and industrial waste water generated will be treated in settling tank and reused in the process.

*After detailed deliberations, the committee noted that the proposed location is in the midst of and surrounded by agricultural fields and near to surface water bodies. Further, the status of the proposed land was still not changed to non-agricultural. Therefore, the Committee asked PP to first get the status of the land to non-agriculture and also explore alternative locations for the proposal and resubmit the application.*

**Date: 7<sup>th</sup> March 2017**

**16.7 ENVIRONMENTAL CLEARANCE (EC)**

**16.7.1 Proposed 5.0 MTPA Integrated Cement Clinkerisation Plant, 8.0 MTPA Cement Grinding Unit, 100 MW Captive Power Plant and 7.0 MTPA Captive Limestone Mine with mining lease of 997.08 ha. at Gollapalli village, Mylavaram Mandal of Kadapa (YSR) district, Andhra Pradesh by M/s ACC Ltd. (EC based on ToR granted on 20<sup>th</sup> February, 2013 and validity extension on 20<sup>th</sup> February, 2016) - F.No. J-11011/265/2012-IA.II(I). Proposal No. IA/AP/IND/62090/2012 dated 27.01.2017.**

The proposed 5.0 MTPA Integrated Cement Clinkerisation Plant, 8.0 MTPA Cement Grinding Unit, 100 MW Captive Power Plant and 7.0 MTPA Captive Limestone Mine with mining lease of 997.08 ha. of M/s ACC Ltd. located in Village Gollapalli, Tehsil Mylavaram, District Kadapa (YSR), State Andhra Pradesh was initially received in the Ministry on 05.07.2012 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 4<sup>th</sup> meeting held during 8<sup>th</sup> – 9<sup>th</sup> January 2013 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 20.02.2013 vide Lr. No J-11011/265/2012-IA.II(I). Further an application has been submitted for validity extension of ToR stating that due to unforeseen circumstances of law and order situation owing to bifurcation of state of Andhra Pradesh, delay in collection of BLD and land acquisition, etc. The request was considered in EAC (Industry-I) held during 18<sup>th</sup> – 20<sup>th</sup> November 2015 and recommended for extension validity of ToR for another period of one year w.e.f. 20<sup>th</sup> February 2016 in accordance with OM No. J-11013/41/2006-IA(I) (Pt.) dated 8<sup>th</sup> October 2014. The extension validity of ToR was granted on 18<sup>th</sup> February 2016 read with corrigendum dated 27<sup>th</sup> April 2016.

Based on the ToRs prescribed to the project, the project proponent applied for environmental clearance to the Ministry online on 27.01.2017 vide Online Application No. **IA/AP/IND/62090/2012**.

It was noted that the EIA/EMP document submitted was excluding the mining component 7.0 MTPA Captive Limestone Mine with mining lease of 997.08 ha. The proponent explained that the proposed mining project was appraised in EAC (non-coal mining) as a separate project. However, the cumulative impacts were addressed in the present EIA/EMP.

The project of M/s ACC Ltd. in Village Gollapalli, Tehsil Mylavaram, District Kadapa (YSR), State Andhra Pradesh is for setting up of green field Cement Plant Complex having clinkering capacity of 5 MTPA (Phase-I: 2.5 MTPA, Phase-II: 2.5 MTPA), cement production of capacity 8 MTPA (Phase-I: 4.0 MTPA, Phase-II: 4.0 MTPA) and Captive Power Plant of capacity 100 MW (Phase-I: 50 MW, Phase-II: 50 MW).

PP reported that the total land required for the project is 275.028 ha, which is a barren land and partly single crop rain fed agriculture land. No forestland involved. The

entire land has been purchased for the project and under possession of M/s ACC Ltd. No river passes through the project area and no modification / diversion in the existing natural drainage pattern at any stage has not been proposed.

PP reported that the topography of the area is undulated and reported to lie between 14° 58' 06" to 14° 59' 59" N Latitude and 78° 16' 50" to 78° 18' 38" E Longitude in Survey of India topo sheet No. 57 I/4, I/8, J/1 and J/5 at an elevation of 200 m above MSL. The ground water table reported to be 16 m below the land surface during the post-monsoon season and 19 m below the land surface during the pre-monsoon season in the core zone. The ground water table reported to range between 3 to 19 m below the land surface during the post-monsoon season and 6 to 20 m below the land surface during the pre-monsoon season in the buffer zone. Further, the stage of groundwater development is reported to be 0.21% and 52% in core and buffer zone respectively and thereby these are designated as safe areas.

PP reported that 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 application has been submitted to DFO for authenticating list of flora and fauna.

The major raw material requirement for proposed plant will be limestone sourced from captive mine located adjacent to the plant and transported through covered conveyor from pit head; clay from captive mine and transported by road; coal is sourced from Singareni Collieries Company Limited and transported through rail; gypsum sourced from Mineral gypsum/PG from CFL transported by Rail/road; and fly ash sourced from the Captive Power Plant and nearby Power Plants.

The water requirement of the project is estimated as 2922 m<sup>3</sup>/day (Phase-I- 1461 m<sup>3</sup>/day & Phase-II 1461 m<sup>3</sup>/day), Initially water will be sourced from ground water and later from the captive limestone mine pit. The power requirement of the project is estimated as 100 MW for Phase-I & Phase-II which will be met from Captive Power Plant. Additional power requirement will be met through grid power.

Ambient air quality monitoring has been carried out at 12 locations during 1<sup>st</sup> March to 31<sup>st</sup> May, 2013. And the data submitted indicated: PM<sub>10</sub> (28.3 to 42.5 µg/m<sup>3</sup>), PM<sub>2.5</sub> (19.1 to 23.6 µg/m<sup>3</sup>), SO<sub>2</sub> (8.1 to 13.8 µg/m<sup>3</sup>) and NO<sub>x</sub> (10.4 to 16.7 µg/m<sup>3</sup>). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 5.825 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 14.0553 µg/m<sup>3</sup> with respect to the SO<sub>2</sub> and 2.63 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.

Ground water quality has been monitored in 9 locations in the study area and analysed. pH: 7.2 to 7.8, Total Hardness: 51 to 480 mg/L, Chlorides: 22.1 to 340 mg/L, Fluoride: 0.6 to 0.9 mg/L. Heavy metals are within the limits. Noise levels are in the range of 43.6 to 49.1 dB(A) for daytime and 40.4 to 44.3 dB(A) for night time.

M/s ACC Ltd. has done the R&R study during November and December 2014. As per the R&R study, there is no displacement of any family within the proposed project area. M/s ACC Ltd. purchased lands directly from individual land owners on mutually agreed compensation higher than the prevailing market rates and government scheduled rate at that point of time.

It has been reported that a total of 0.3104 MTPA of fly ash and bottom ash of 0.0776 MTPA from CPP will be generated due to the project and will be utilised in manufacture of PPC & utilised in raw mill. It has been envisaged that an area of 33% i.e. 90.756 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The Public hearing of the project was held on 20<sup>th</sup> October 2016 at Gollapalli Village of Mylavaram Mandal of Kadapa (YSR) District for production of 5.0 MTPA Integrated Cement Clinkerisation Plant, 8.0 MTPA Cement Grinding Unit, 100 MW Captive Power Plant. The issues raised during public hearing are mainly on compensation, employment, education, community development activities, air pollution, etc.

The capital cost of the project is Rs. 7100 Crores and the capital cost for environmental protection measures is proposed as Rs. 362 Crores for Phase-I and Rs. 336 Crores for Phase-II. The annual recurring cost towards the environmental protection measures is proposed as Rs. 3.1 Crores for Phase-I and Rs. 2.9 Crores for Phase-II. M/s ACC has earmarked Rs. 2 crore per annum for 4 years towards immediate area development plan apart from Rs. 184 crore for implementing CSR activities for Phase-I and Rs. 171 crore for Phase-II. The manpower required during construction will be 2400 and operation phase will be 499.

The proponent has mentioned that there is no court case on the project or related activity involved.

A detailed presentation was made by PP along with EIA consultant and R&R Consultant before the Expert Appraisal Committee. The committee has observed the issues regarding combined ToR for integrated project including mine, integrated EIA/EMP, Land use maps of site and study area, raw material, source of coal, process flow diagram, pollution control systems and equipment, Enterprise Social Commitment based on Public hearing issues, greenbelt, need based social assessment study, Risk Assessment and Disaster Management, water availability, permission from the competent authority for withdrawal of groundwater, authenticated list of flora and fauna, etc.

After detailed deliberations on the observations made, the committee advised to submit following aspects for further consideration of project.

- Use of pet coke in the CPP shall be withdrawn in the proposal for power generation.
- Pollution control measures at all unit operations shall be indicated as proposed in the process flow diagram.
- The site plan shall be re-drawn showing the details of mining area, raw material stacking area, crusher, cement plant, colony, parking area, greenbelt etc. The features like road, canal/water body, entry into the plant, internal roads, pathways etc. shall be indicated.
- Air Quality Impact Assessment shall be done considering of emissions from mining, cement plant, captive power plant, transportation, fugitive emissions, increase in traffic in the area and resubmitted. The emission estimations for the all

components/ activities shall be clearly outlined in the study. Worst scenarios shall be analysed for particulate and gaseous emissions on the villages/habitations in the study area.

- Environmental Monitoring Plan (post EC) including number of monitoring stations, location, schedule w.r.t. stock, ambient air, ground water, surface water, noise, soil shall be submitted.
- Designed efficiencies of the proposed pollution control equipment shall be clearly mentioned with designed flow rates. Proposed bag filters shall be with adequate air to cloth ratios to minimise the emissions well below the standards prescribed.
- The budget earmarked for Enterprise Social Commitment and point wise and time bound action plan for issues raised in public hearing along with budget provision shall be clearly mentioned within the CAPEX and not in any other head.
- Risk Assessment study shall be conducted based on the Maximum Credible Loss Scenarios and Disaster Management / Emergency Preparedness Plan shall be prepared including administrative mechanisms, infrastructure facilities including onsite and offsite.
- Provisions shall be clearly furnished for setting up of bio-gas generation plants using of Kitchen waste/canteen.
- The green plan shall be clearly indicated with proper legend, type of species, year of development, etc. Greenbelt Development Plan shall be as per the prescribed guidelines of CPCB. Timelines of plantation for the greenbelt development before construction phase shall be furnished ensuring the 80% development in the first year leaving those areas intervene with construction activity.
- Skill Development programme shall be prepared in line with the modules of the Skill Council of India for implementation of the same in due course of implementation of the project.
- Certified list of flora and fauna from DFO for the study area shall be submitted.
- Water requirement per day for construction and operation phases including dust suppression, greenbelt development shall be furnished in the report component wise.
- Permission for withdrawal of groundwater from Competent Authority shall be submitted.
- Detailed Hydrography of the site including mines shall incorporate in hydrological study. Locations of the groundwater water recharging pits and ground water monitoring locations shall be identified based on the hydrogeological and geohydrological study.

**16.7.2 Proposed expansion project for manufacturing of Manganese Oxide and Proposed Product Mix in Existing Product at Plot No. C-235, MIDC Butibori, District Nagpur, Maharashtra of M/s D S Alloys Pvt Ltd. F.No. J-11011/242/2015-IA II (I). Proposal No. IA/MH/IND/62395/2015 dated 09.02.2017. (EC based on 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 of the reasons of absence by the applicant.

## **16.8 ANY OTHER ITEM**

### **16.8.1 Expansion of palletisation plant into Integrated Steel Plant (1.1 MTPA) along with WHRB Power Plant (2×30MW) at Siltara Industrial Growth Centre, Phase-I Mandhar, Raipur, Chhatisgarh by M/s Sarada Energy & Minerals Ltd. (I). (Extension of validity of Environmental Clearance granted vide Letter No. J-11011/999/2007-IA-II).**

The Environmental Clearance for the Expansion of palletisation plant into Integrated Steel Plant (1.1 MTPA) along with WHRB Power Plant (2×30 MW) at Siltara Industrial Growth Centre, Phase-I Mandhar, Raipur, Chhatisgarh by the **M/s. Sarda Energy & Minerals Limited** was granted on 23<sup>rd</sup> December 2008. The Project Proponent has made an application for extension of validity of Environmental Clearance on 2<sup>nd</sup> February 2017 vide an online application no. **IA/CG/IND/18977/2009**. The validity of environmental clearance was 5 year and with subsequent amendment of EIA notification it is 7 years from the date of issue of EC. The PP informed that due to various reasons the proposed expansion could not take up.

After brief presentation by PP and detailed deliberations, the committee noted that the application for extension of validity of environmental clearance was made after the expiry of the date of validity. It was informed that as per the provisions of EIA Notification, 2006 and its subsequent amendment vide SO 1141 (E) dated 29<sup>th</sup> April 2015, the period of validity may be extended by the regulatory authority concerned, if an application is made to the regulatory authority by the applicant within the validity period. The PP may make an application *de-novo*.

### **16.8.2 Mini Steel Plant (1.5 LTPA), Sponge Iron Plant (1.2 LTPA), Iron Ore Pellatisation Plant (6.0 LTPA) and Captive Power Plant (25 MW) at village Yerrabanahalli, Taluk Sandur, District Bellary, Kanrnataka by M/s KMMI Steel Pvt. Ltd. (KSPL).**

**M/s KMMI Steel Pvt. Ltd. (KSPL)** has made an application for permission for change in raw material mix in Sponge Iron Plant under clause 7 (ii) of EIA Notification and to achieve increase in production capacity beyond the capacity given in the EC granted vide F. No. J-11011/1166/2007-IAII dated 22-09-2008 (i.e. increase in Sponge Iron Plant from 1.2 LTPA to 1.65 LTPA of M/s KMMI (now called as M/s Minera Steel & Power Pvt. Ltd). The proposal was considered in the 6<sup>th</sup> Meeting of EAC (Industry-1) held during 3<sup>rd</sup>-4<sup>th</sup> May, 2016 and Committee desired to have a latest status of compliance of existing EC conditions from the Regional Office, MOEF&CC, Bangalore and comparative statement depicting the environmental status for the older and new capacity for further consideration.

Accordingly, PP submitted the certified compliance status of earlier EC conditions by RO, Bangalore and comparative statement as desired and the same was presented by PP in the 12<sup>th</sup> EAC meeting held during 27<sup>th</sup> -28<sup>th</sup> October 2016. The Committee noted that

the water requirement for the project has to be met from the surface water with the prior permission. The specific condition given in the EC is reproduced below:

*“Total water requirement from Daroji kere shall not exceed 55 m<sup>3</sup>/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.....”*

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.

Now, 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 m<sup>3</sup>/day is being met from ground water with the approval of State Government and also informed that all the conditions stipulated in ground water clearance was implemented.

The 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 the following for further consideration:*

- i) Authenticated translated copy (in English or Hindi) of the approval of withdrawal of groundwater from State Authority.
- ii) Certificate from RO, MoEF&CC on compliance of conditions stipulated in the above-mentioned ground water permission issued by the State Authorities.

## **16.9 CASE FOR TERMS OF REFERENCE (TOR)**

### **16.9.1 Proposed development plan (MDP) comprising of augmentation of pulp mill and existing paper machines, installation of new tissue paper machines and installation of 35 MW steam turbines with 135 TPH boiler at M/s West Coast Paper Mills Ltd., Dandeli Village, Haiyal Taluk, Uttara Kannada District, Karnataka State. Proposal No IA/KA/IND/62475/2017 dated 13.02.2017. File No. J-11011/408/2006-IA-II(I) – (ToR)**

**M/s West Coast Paper Mills Limited (WCPM)** has its manufacturing facilities at Dandeli in Uttar Kannada District of Karnataka state. The current paper production capacity of 320000 TPA. The existing facility is in an area of 375.73 acres on the banks of River Kali. Environmental Clearance for the existing plant was accorded vide Lr. No.

J-11011/408/2006-IA.II (I) dated on 19<sup>th</sup> July, 2007 and it was reported that the Consent to Operate issued by Karnataka State Pollution Control Board from time to time.

The proposed Mill Development Plan (MDP) comprises of the following and will be developed with a capital cost of Rs. 500 Cr.:

- i. Installation of two new tissue paper machines with aggregate capacity of 72,000 TPA;
- ii. Modernisation/Augmentation of few existing paper machines to enhance the existing installed capacity from 320,000 TPA to 378,000 TPA;
- iii. Augmentation of existing pulp mill from 725 TPD to 785 TPD;
- iv. Installation of additional 135 TPH boiler; and
- v. Installation of new 35 MW steam turbine.

**Details of the Existing and Post MDP Capacities of the Facility**

Description	Unit	Existing	Post MDP	Incremental	Remarks
<b>Paper Machines</b>					
Paper/Board Production PM #1 to # 6	tpa	320,000	378,000	58,000	Modernization /Upgradation
Tissue Machines	tpa	--	72,000	72,000	New
Total Paper/board Production	tpa	320,000	450,000	130,000	
Pulp Plant	BD tpd	725	785	60	Upgradation
Recovery plant	tpd of black liquor solids	1600	1600	--	Existing adequate. No change
Lime kiln	tpd of lime	365	365	--	Existing adequate. No change
Recausticising plant	tpd of AA	350	350		Existing adequate. No change
<b>Power Boilers</b>					
- Power Boiler s	tph of steam	330 (FBC#1 standby)	405 (FBC#1 retired and FBC#2)	135	Existing FBC #1 – 60 tph will be retired and FBC#2 – 65 tph will be

Description	Unit	Existing	Post MDP	Incremental	Remarks
			standby)		kept as standby. Addition of one more 135 tph boiler.
- Turbo Generators	MW of power	74.8 (1x5+1x5.3+1x14.5+1x15.5+1x34.5)	109.8 (1x5 (Standby) +1x5.3 (Standby) 1x14.5 partial running+1 x15.5 standby+1 x34.5+1x35)	35	Addition of one 35 MW TG
ClO <sub>2</sub> plant	tph	15	15	--	Existing adequate. No change
Water Treatment Plant	m <sup>3</sup> /day	1,00,000	1,00,000	--	Existing adequate. No change
Waste Water Treatment	m <sup>3</sup> /day	85,885	85,885	--	Existing adequate. No change

PP informed that, no additional land is required to be acquired for the proposed expansion and will be taken up in the existing plant premises. No rehabilitation and resettlement Involved.

It was informed that, there will be reduction in specific water consumption by adopting various conservation measures and recycling within the process. The mill has water drawal permission of 1,00,000 m<sup>3</sup>/day. Present water consumption is fresh water consumption for the plant to a level of 73,000 m<sup>3</sup>/day. The treated waste water discharged into the Halmaddi Nallah leading to River Kali after treatment in confirmation to the norms prescribed by CPCB and KSPCB. It is proposed to install electrostatic precipitator and online emission monitoring systems on the proposed 135 TPH flue gas line to meet the emission norms. Water consumption and wastewater generation quantities will be maintained within the existing consented levels. Hence no additional water allocation is needed. Since the overall wastewater quantity will be maintained within the consented and design ETP capacity.

It was reported that the project will provide scope for indirect employment of about 500 people during construction stage and about 175 people during operation in the areas of production and maintenance and indirect employment of about 400 people in material handling, transport and auxiliary units.

It was reported that the project site is located at about 2 km from the Eco sensitive zone boundary of Dandeli-Anshi Tiger Reserve & Hornbill Conservation Reserve boundary. It was also reported that no archaeologically important places and defence installation within 7 km radius. The Kali river is located at 0.5 Km in south.

The committee noted that the project site is located at about 2 km from the Eco sensitive zone boundary of Dandeli-Anshi Tiger Reserve & Hornbill Conservation Reserve boundary, falls in Westernghat.

***After detailed deliberations, the Committee recommended for grant of ToRs with following specific ToRs in addition to the standard TOR, for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at Annexure I read with additional TORs at Annexure-2:***

- i. The Public Hearing for the project should be conducted by Karnataka 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 existing expansion is located in the vicinity of Dandeli -Anshi Tiger Reserve for which ESZ Notification is yet to be published. Therefore, 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. Wildlife Conservation Plan duly authenticated and agreed to by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any, existing in the study area should also be submitted.
- v. A copy of recommendation of the Standing Committee of NBWL, if any, for existing plant shall be submitted. The PP should make an application for seeking recommendation of Standing Committee of the National Board for Wildlife for expansion.
- vi. NoC shall be obtained from the concerned authorities if the project is located within the 10 Km of any archaeologically important places and defence installation.
- vii. The detailed study on the discharge of effluent into Kali River shall be conducted with suitable methodology considering the upstream (at 0.5 km) and downstream

(at 0.5km) from discharge point of effluent, mixing depth of the river, BOD/COD and other chemical loads etc. The dilution of the effluent shall be quantified using hydrodynamic modelling study for lean season flow of the river.

**16.9.2 Proposed 2.0 MTPA cement grinding unit located within the existing unit Udupi Power Plant Limited premises at KIADB, Yellur village, Udupi Dist., Karnataka of M/s. Adani Cementation Limited. Proposal No. IA/KA/IND/62554/2017 dated 15.02.2017. File No. IA-J-11011/55/2017-IA-II(I) (ToR)**

M/s. Adani Cementation Limited (ACL) proposes to install a new standalone Cement Grinding Unit of 2.0 MTPA capacity (in 2 phases each with 1 MTPA capacity) within the premises of Udupi Power Corporation Limited (UPCL).

It is proposed to set up the plant for Cement (PPC/OPC/PSC/Composite Cement) manufacturing based on Vertical Roller Mills (VRM)/Roller Press technology. The proposed unit will be located at Village Yellur, Taluka Udupi, District Udupi, State Karnataka within the existing premises of UPCL, which is in the Notified Industrial Area by KIADB. The proposed plant area leased by UPCL is 35 Acre out of which 12 Acre will be used for green belt development.

The project cost is approximately Rs. 556.25 crore. Employment generation from proposed project will be 65 direct Employment and more than 500 indirect Employment. Clinker along with fly ash, slag and gypsum will be ground in ball mill with VRM/Roller Press to manufacture cement. Products mix and ratio of different type of cement, manufacture in the proposed unit is given below:

Cement Type	Production (%)	Required Raw Material (%)			
		Clinker	Gypsum	Slag	Fly Ash
PPC	80	61	4	-	35
PSC	12.5	55	5	40	-
OPC	7.5	96	4	-	-

The electricity load of 15 MVA will be met by a dedicated supply line from KPTCL/MESCOM with suitable step down transformer. Proposed raw materials for project are Clinker, Gypsum, Slag and Fly ash. Source of raw material is given below:

Raw Material	Source Potential
Clinker	<ul style="list-style-type: none"> <li>• Imported from Oman, UAE, Vietnam, Thailand, Indonesia</li> <li>• Domestic from Cuddapah &amp; Gulbarga cluster</li> <li>• Captive proposed plant at Lakhpat</li> </ul>
Gypsum	<ul style="list-style-type: none"> <li>• Chemical Gypsum from UPCL</li> <li>• Mineral Gypsum from Oman</li> <li>• Chemical Gypsum from Mangalore Chemical &amp; Fertilizers Ltd.</li> </ul>
Slag	Bellary / Any other slag source in vicinity

Fly ash	From UPCL or any Thermal Power Plant in vicinity: <ul style="list-style-type: none"> <li>• Available quantity from existing plant : ~ 450TPD</li> <li>• To be available from proposed expansion : ~ 4550 TPD</li> </ul>
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Water consumption for the proposed project will be 300 m<sup>3</sup>/day sourced from UPCL. No industrial wastewater will be generated from the cement grinding unit. Domestic wastewater will be treated in sewage treatment plant.

After detailed deliberations, considering the proposed cement grinding unit within the premises of Udupi Power Corporation Limited (UPCL), it was felt, this is construed as expansion of the Thermal Power Plant by adding a separate cement grinding unit within the premises of Thermal Power Plant. As such, the committee recommended for issue of ToR with following specific ToRs in addition to the standard TOR, for undertaking detailed EIA-EMP study in addition to the generic TOR enclosed at Annexure I read with additional TORs at Annexure-2

- i. The Public Hearing for the project should be conducted by Karnataka 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. A cumulative EIA of both the existing Thermal Power Plant and the proposed grinding unit shall be undertaken and shall be included in EIA/EMP.

**16.9.3 Expansion through addition (colour coating line capacity 150,000 MT/Year) of existing secondary metallurgical unit Bara, PO-Agrico, Jamshedpur, District East Singhbhum, Jharkhand of M/s Tata Blue Scope Ltd. Proposal No. IA/JH/IND/62555/2017 dated 16.02.2017. F.No. J-11011/271/2007-IA-II(I) – (ToR)**

M/s Tata BlueScope Steel Limited Proposed expansion of Polyester Paint Coated Strip from 1,50,000MT/year to 3,00,000MT/year by adding one colour coated line. The proposed expansion will be carried out at existing location at Village: Bara, PO-Agrico, Tehsil: Jamshedpur, District: Jamshedpur –East Singhbhum, State: Jharkhand. The total land available is 24 Ha, out of which 7.2 Ha land will be used for green belt development. No additional land is required for the proposed expansion project. The estimated project cost for the proposed expansion is approx Rs. 350 Cr. 637 persons are directly employed in existing plant and additional 50 persons will be employed.

Proposed expansion of polyester paint coated strip from 1,50,000 MTPA to 3,00,000 MTPA by adding one colour coated line.

The total power requirement for the existing project is 8 MVA. Additional 2 MVA power will be required for the proposed expansion project.

The main raw material required for the proposed expansion unit will be cold rolled steel strips as feed stock which will be sourced from Tata Steel Plant. Fuel consumption will be Propane gas. It is estimated that nearly 50 TPD propane would be required.

Water Consumption for the project is 2160 KLD. The wastewater generated is from cooling tower blow down which is treated in ETP and is used for secondary use & horticulture development.

PP mentioned that capacity expansion proposed for colour coating of metal only. Polystyrene paints are used for the colour coating.

*After detailed deliberations and presentation by PP, it was noted that the details of existing plant production, various components involved and proposed expansion etc. are not clearly indicated and explained. Thus, the Committee deferred the proposal for issue of ToR and asked PP to resubmit the fresh application with matching figures of existing and proposed capacities.*

**16.9.4 Proposed 1.0 MTPA hot metal plant at Dimbuli village, Manoharpur, District West Singhbhum, Jharkhand of M/s Vedanta Limited. Proposal No. IA/JH/IND/62609/2017 dated 17.02.2017. F. No. IA-J-11011/54/2017-IA-II(I).**

Proposed 1.0 MTPA hot metal plant at Dimbuli village, Manoharpur, District West Singhbhum, Jharkhand of **M/s Vedanta Limited** is a green field 1.0 MTPA hot metal plant for production of 0.7 MTPA pig iron and 0.3 MTPA ductile iron pipe.

PP informed that the proposed green field project requires 428.01 acres for installation of Blast Furnace, Sinter Plant, non-recovery coke oven plant and Waste Heat Recovery Power Plant and Ductile Iron Plant. Out of 428.01 acres, 342.97 acres is Private land and 85.04 acres is Govt land. Project cost is about Rs. 1971.849 Crores. The employment generation will be around 300 direct and 700 indirect.

PP informed that total power requirement is about 60 MW (approx) and will be met from the captive waste Heat Recovery Power Plant. Raw materials such as Iron Ore (Lumps & Fines), Coking Coal, PCI Coal, Fluxes (Limestone, Dolomite, and Quartzite) will be used for iron making. Blast Furnace Gas will be used as fuel along with LPG/LNG, LDO/HSD as other fuels. The total requirement of water will be 8000 m<sup>3</sup> per day and sourced from nearby Koyal River/ Karo River. Wastewater generated will be treated, recycled and reused.

PP informed that three probable locations were examined for the present proposal namely Manoharpur near Dimbuli Village, circle Manoharpur, West Singhbhum District, Jharkhand; near Kharsawan Village, circle Manoharpur, West Singhbhum District, Jharkhand; Dipa, Baradungri Village, circle Manoharpur, West Singhbhum District, Jharkhand. Out of these, the PP proposed site near Dimbuli Village, circle Manoharpur, West Singhbhum District.



*After detailed deliberations and analysis of the alternative sites proposed, the committee noted that alternate site no.1 is near to Koel river and mid of agricultural lands, alternate site no.2 is near to Sona nalla, Alternate site no.3 is near to Koel River and Sapu nala. It was felt that none of the proposed site is acceptable from the environmental considerations. Therefore, the Committee asked the PP to explore other suitable location from environmental perspective and re-submit.*

**16.9.5 Proposed enhancement of production capacity of existing 6,00,000 TPA iron ore pelletization plant to 7,50,000 TPA iron ore pelletisation plant without changing existing major plant and machineries at Phase -I of Siltara Industrial Growth Centre, village Mandhar, Raipur, Chhatisgarh by M/s Sarada Energy and Minerals Ltd. (Expansion under 7(ii) of EIA Notification) - F.No. J-11011/45/2012-IA-II(I)**

M/s Sarada Energy and Minerals Ltd. has made an application for enhancement of production capacity of existing 6,00,000 TPA iron ore pelletization plant to 7,50,000 TPA iron ore pelletisation plant without changing existing major plant and machineries at Phase -I of Siltara Industrial Growth Centre, village Mandhar, Raipur, Chhatisgarh under the provisions of 7(ii) of EIA Notification, 2006 and subsequent amendments vide an online proposal No. IA/CG/IND/62246/2017. The existing project i.e. 0.6 MTPA Iron Ore pelletisation plant was accorded environmental clearance under regularisation of existing plant (operational) vide letter no. F.No. J-11011/45/2012-IA-II(I) dated 28<sup>th</sup> October 2016. The present proposal is for increasing the configuration of disc pelletizer from 2 operational + 1 standbys to 3 operational + 1 standbys to produce additional 1.5 MTPA pellets with an additional capital cost of Rs. 1.5 Crs.

*After detailed deliberations, the committee noted that the earlier EC was accorded as a process of regularisation of operational plant and the PP has obtained EC for Integrated Steel plant along with WHRB Power Plant (2x30 MW) in the same premises. The committee also noted that the PP has made bit by bit proposal instead of a comprehensive proposal. Thus, the proposal is deferred and the Committee asked the PP to submit fresh application with all the units / activities comprehensively for prescribing ToRs.*

## **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 gaseousemission, 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. Capitalcost of the project, estimated time of completion
- vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of is acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest , eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)
- viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
- ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
- x. Likely impact of the project on air, water, land, flora-fauna and nearby population
- xi. Emergency preparedness plan in case of natural or in plant emergencies
- xii. Issues raised during public hearing (if applicable) and response given
- xiii. CSR plan with proposed expenditure.
- xiv. Occupational Health Measures
- xv. Post project monitoring plan

ANNEXURE –I

**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/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30<sup>th</sup> 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 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, PM2.5, SO<sub>2</sub>, NO<sub>x</sub>, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
  - iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQPM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
  - iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
  - v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
  - vi. Ground water monitoring at minimum at 8 locations shall be included.
  - vii. Noise levels monitoring at 8 locations within the study area.
  - viii. Soil Characteristic as per CPCB guidelines.
  - ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
  - x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
  - xi. Socio-economic status of the study area.
7. Impact Assessment and Environment Management Plan

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
- v. Details of stack emission and action plan for control of emissions to meet standards.
- vi. Measures for fugitive emission control
- vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

- xii. Action plan for post-project environmental monitoring shall be submitted.
  - xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.
8. Occupational health
- i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month 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. Adequate funds (Atleast 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
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 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 vide O.M. No. J-11013/41/2006-IA.II (I) dated 4<sup>th</sup> 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.

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**ADDITIONAL TORS FOR INTEGRATED STEEL PLANT**

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
5. PM(PM<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> 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

**ADDITIONAL TORS FOR PELLETT PLANT**

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
  2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
  3. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
  4. PM(PM<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> 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.
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### **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.

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**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.

## **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.

**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.



**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.

**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 aluminum, 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



**LIST OF PARTICIPANTS OF EAC (I) IN 16<sup>th</sup> MEETING OF EAC (INDUSTRY-I) HELD ON 6<sup>th</sup> – 7<sup>th</sup> March, 2017**

S. No	Name and Address	Position	Attendance		Signature
			6 <sup>th</sup> March 2017	7 <sup>th</sup> March 2017	
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	
Members					
2.	Dr. S.Panwar, Central Pulp and Paper Research Institute	Member	P	A	
3.	Dr.B.P.Thapliyal Representative of Central Pulp and Paper Research Institute	Member	P	P	
4.	Director, Central Leather Research Institute	Member	A	A	
5.	Dr. Sunil Pashin, 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	A	
12.	Shri Santosh Raghunath Gondhalekar	Member	P	P	
13.	Shri Ashok Upadhyay	Member	P	P	
15.	Dr.Sharath Kumar Pallerla, Scientist 'F', MoEFCC	Member Secretary	P	P	
16	Shri Rajasekhar Ratti, Scientist 'C', MoEFCC	MoEFCC	P	P	

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