

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

**SUMMARY RECORD OF THE SEVENTEENTH (17<sup>th</sup>) MEETING OF EXPERT APPRAISAL COMMITTEE HELD ON 6<sup>th</sup> -7<sup>th</sup> APRIL 2017 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.**

The seventeenth meeting of the Expert Appraisal Committee (EAC) for Industry-I Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held on 6<sup>th</sup> - 7<sup>th</sup> April 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 16<sup>th</sup> Meeting**

The minutes of the 16<sup>th</sup> meeting, as circulated were confirmed.

**DATE: 6<sup>th</sup> April 2017**

**17.3 ENVIRONMENTAL CLEARANCE (EC)**

**17.3.1 Addition of a 2.0 MTPA Pellet plant and 7 m tall top charged Coke oven battery to Bokaro Steel Plant of 0.768 MTPA production capacity to existing Bokaro Steel Plant of M/s Steel Authority India Limited at Bokaro Steel City, Bokaro Dist., Jharkhand. [Proposal No. IA/JH/IND/25333/2014, F. No. J-11011/327/2014-IA-II(I)] --- EC based on ToR.**

The proposal for modernisation of existing Bokaro Steel Plant by addition of 2.0 MTPA Pellet Plant and 0.768 MTPA Coke Oven Battery was initially received in the Ministry on 27.10.2014 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC (I)] held during 13<sup>th</sup> to 14<sup>th</sup> November 2014 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. On 5<sup>th</sup> October 2015, the project proponent has requested amendment to the ToR point no.49 regarding enterprise social commitment. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project dated 31<sup>st</sup> December 2015. The proposed project activity is listed at Sl. No. 3(a) in Metallurgical Industries under Category "A" of Schedule of EIA Notification, 2006. Based on the ToRs prescribed to the project, the project proponent applied for environmental clearance to the Ministry online on 18<sup>th</sup> October 2016 along with EIA/EMP report.

2.0 The project of M/s SAIL located in Bokaro Steel City, District Bokaro, Jharkhand, is for Modernization of existing Bokaro Steel Plant by setting up of a new Pellet plant of 2.0 MTPA of pellets and Coke Oven battery for production of 0.768 million TPA of gross coke without increasing the production capacity of the existing Bokaro Steel Plant.

Sl. No.	Name of units/products	Configuration	Existing Capacity	Proposed capacity	Total
1.	Hot Metal	-	5.77 MTPA	---	5.77 MTPA
2.	Crude Steel	-	4.606 MTPA	---	4.606 MTPA
3.	Coke Oven Complex	- 8 batteries, 5.0 m Tall, 69 ovens	3.442 MTPA Gross coke	---	3.442 MTPA Gross coke
4.	Blast Furnace Complex	- 4 BF's of 2000m <sup>3</sup> - 1 BF modified to 2365 m <sup>3</sup>	5.77 MTPA Gross Hot metal	---	5.77 MTPA Gross Hot metal
5.	Sinter Plant Complex	- 2 sinter m/c of 252 m <sup>2</sup> grate area - 1 sinter m/c modified to 312 m <sup>2</sup> area - 1 new sinter m/c of 360 m <sup>2</sup> grate area	8.7 MTPA (5 MTPA + 3.7 MTPA)	---	8.7 MTPA (5 MTPA + 3.7 MTPA)
6.	SMS Complex	<b><u>SMS-I(upgraded from 1.5 MTPA to Stage-1: 1.306 MTPA &amp; Stage-2: 1.85 MTPA)</u></b> - 2x1300 t mixers - 5x100/130 t BOF - Casting ingot of different sizes with soaking pits. <b><u>SMS-II(with capacity augmentation)</u></b> - 2 x 2500 t mixers - 2/2 x 300 t BOF - 2 x 300 t LF(new) - 1 x 300 t Argon rinsing unit - 2x2 strand Slab caster	6.506 MTPA (3.156 MTPA + 3.35 MTPA)	---	6.506 MTPA (3.156 MTPA + 3.35 MTPA)
7.	Slabbing Mill	- Universal Slabbing Mill with 7 no. soaking pit batteries	-	---	-
8.	Hot Strip Mill	- 4x260 t Re-heating Furnaces - Roughing mill up-gradation	4.5 MTPA	---	4.5 MTPA
9.	CRM complex	<b><u>Existing CRM Complex</u></b> - Pickling line –I - 4-stand Tandem Cold Mill-I - Hood Annealing Furnaces - single stand Skin Pass Mill - 4 CR Shearing Lines - 3 CR Slitting Lines - Pickling Line-II - 5- stand Tandem Cold Mill –II - Electrolytic Cleaning Line - Hood Annealing Furnaces - Cont. Annealing Line - Twin stand / Temper Mill - Hot dip galvanizing line - galvanized sheet shearing line - coil corrugating line - acid regeneration plant-1 - conversion of Sulphuric acid to HCL pickling line <b><u>New CRM Complex</u></b> - Coupled Pickling and Tandem Mill, - Electrolytic Cleaning Line,	2.4 MTPA (1.2 MTPA + 1.2 MTPA)	---	2.4 MTPA (1.2 MTPA + 1.2 MTPA)

Sl. No.	Name of units/products	Configuration	Existing Capacity	Proposed capacity	Total
		- Bell Annealing Furnace, - Skin Pass Mill, - CR Annealed and Skin Passed Coil Packaging Line, - Tension Leveler, Inspection & recoiling line - Recoiling & Inspection line - Galvanized Coil Packaging Line			
10.	Lime-Dolo Kiln (Rotary Kiln for SMS-II)	- 6x270 t/d (4 kiln in operation: 3 for lime + 1 for dolomite)	6x270 TPD (at a time only 4 in operation)	---	6x270 TPD (at a time only 4 in operation)
11.	Raw Materials Preparation Plant (RMP)	-	Matching the production facilities	---	Matching the production facilities
12	Pellet Plant	Working area 1x348 m2	--	2.0 MTPA	2.0 MTPA
13	Coke Oven Battery with CDCP and By-product plant	7m tall, top charged battery comprising of two blocks of 34 ovens each, totaling 68 ovens.****	---	0.768 MTPA	0.768 MTPA

3.0 The Status of compliance of earlier EC was obtained from Regional Office, Ranchi vide Lr. No. 103-211/08/EPE/265, dated 08.01.2016. There are no non-compliances reported by Regional officer.

4.0 The total land required for the project is 36 ha (Industrial land within Bokaro Steel Plant's premises). No forestland is involved. The entire land is under the possession of SAIL-Bokaro. No river passes through the project area. It has been reported that no water body exists around the project and modification /diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the project area is flat and reported to lies between 23°38' N to 23°42' N Latitude and 86°02' E to 86°10' E Longitude in Survey of India topo sheet Nos. 73I/1 & 73I/2 at an elevation of 215 to 243 m AMSL. The ground water table reported to ranges between 4.8 to 8.8 m below the land surface during the post-monsoon season and 6.0 to 11.3 m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 7-8 m. Further, the stage of groundwater development is reported to be 0% and 31% in core and buffer zone respectively and thereby these are designated as safe areas.

6.0 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through the Forest Offices of the Forest Division and reported that no schedule-I fauna in the study area.

7.0 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process include **Pellatisation-Travelling grate process; and Coke Making - Coal Carbonisation**. The raw materials used and products manufactured are listed below:

Sn	Raw material	Quantity (TPA)	Source
PELLET PLANT			
1	Beneficiated Iron Ore Fines	2,500,000	Bolani Iron Ore mines
2	BF grade Limestone	47,520	Kuteshwar mines
3	BF grade Dolomite	47,520	Tulsidamar mines
4	Coke Breeze	31,680	In-plant generation
5	Bentonite	23,760	Kuchch region in Gujarat
COKE OVEN BATTERY			
6	Dry coal charge	1,011,000	Existing coal network

SI	Finished Products	Quantity (TPA)
PELLET PLANT		
1	Beneficiated Iron Ore Fines	2,500,000
2	BF grade Limestone	47,520
3	BF grade Dolomite	47,520
4	Coke Breeze	31,680
5	Bentonite	23,760
COKE OVEN BATTERY		
6	Dry coal charge	1,011,000

8.0 The targeted production capacity of the Coke Oven Battery #9 is 0.768 MTPA of gross Coke and that of the new Pellet plant is 2.0 million TPA of finished pellets. The ore for the plant would be procured from Bolani iron ore mines and lime-dolo mines of Kuteshwar and Tulsidama. The coke breeze generated from in-plant and coal from existing coal network of Bokaro Steel Plant would be used. The ore transportation will be done through railways as well as in-plant covered conveyors.

9.0 The water requirement of the project is estimated as 455 m<sup>3</sup>/day (60 m<sup>3</sup>/day for Pellet plant and 395 m<sup>3</sup>/day for Coke oven battery). No fresh water will be drawn from river/ground water table. The total water requirement will be met from recycling the treated wastewater as well as from the existing water allocation of Bokaro Steel plant.

10.0 The power requirement of the project is estimated as 32MVA (20 MVA for Pellet plant and 12 MVA for COB#9), which will be obtained from the existing Power network of BSL including import from DVC

11.0 Baseline Environmental Studies were conducted during winter season i.e. from December 2014 to February 2015. Ambient air quality monitoring has been carried out at 8 locations during December 2014 to February 2015 (Winter Season) and the data submitted indicated: mean PM<sub>10</sub> (68 µg/m<sup>3</sup> to 96 µg/m<sup>3</sup>), mean PM<sub>2.5</sub> (37 to 50 µg/m<sup>3</sup>), mean SO<sub>2</sub> (08 to 15 µg/m<sup>3</sup>) and mean NO<sub>x</sub> (20 to 48 µg/m<sup>3</sup>). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 2.5 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 11.45 µg/m<sup>3</sup> with respect to the SO<sub>2</sub> and 8.72 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 6.7 to 7.7, Total Hardness: 150 to 830 mg/L, Chlorides: 64 to 212mg/L, Fluoride: 0.56 to 1.37 mg/L. Heavy metals are within the limits. Surface water samples were analysed from 9 locations. pH: 7.1 to 7.6; DO: 5.2 to 7.8 mg/L and BOD: 2 to 7 mg/L.

13.0 Noise levels are in the range of 51.9 to 63.7 dB(A) for daytime and 41.5 to 52.1 dB(A) for night time.

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

15.0 It has been reported that a total of 154 TPA of Decanter Sludge as waste will be generated due to the project, all of which will be used in the Coke oven battery mixed as coal blend. It has been envisaged that an area of 116.44 ha (balance area from 33% of total plant area) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

16.0 It has been reported that the Consent to Establish from the Jharkhand State Pollution Control Board shall be applied post-facto grant of Environmental Clearance for the proposals.

17.0 The Public hearing of the project was held on 19.08.2015 for setting up of 0.768 MTPA COB#9 and 2.0 MTPA Pellet plant at existing Bokaro steel Plant, under the Chairmanship of Director, District Rural Development Agency, Bokaro. The issues raised during public hearing, such as infrastructure development, issues, municipal solid waste management in the area, modernization of townships, employment generation air pollution, etc. An amount of 59.7 Crores (2.5% of Project cost as per ToR amendment granted) has been earmarked for Enterprise Social Commitment based on public hearing issues

18.0 The capital cost of the project is Rs. 2388.17 Crores and the capital cost for environmental protection measures is proposed as Rs 167 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 41.8 Crores. The detailed CSR plan has been provided in the EMP in Clause No. 4.2.5.6 of Chapter 4 as well as its highlights attached as Annexure 4.3 of the EIA report. The employment generation from the proposed project is 710 as direct employment and ~1500 as indirect employment.

19.0 Greenbelt will be newly developed in 116.44 Ha and the existing plantation in 1670.18 ha will be maintained, which is totalling to about 33% of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 1600 trees per hectare. Total no. of 1,86,304 additional saplings (in 116.44 ha area) will be planted and nurtured in a period of 7 years.

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

21.0 The proposal was considered during the 17<sup>th</sup> meeting of Expert Appraisal Committee [EAC] (Industry-I) held on 6<sup>th</sup> – 7<sup>th</sup> April, 2017.

22.0 After detailed deliberation, it has been observed by the Committee that the issues raised during the Public hearing, quantitative assessment of pollution, air pollution in the colony, details of sewage treatment plant, post project monitoring details etc. are not addressed adequately and compliance report of earlier EC is more than one year old. It was also noted by the committee that there was no senior level representation from the proponent side in the meeting who could give the commitments on behalf of proponent. The PP shall submit following information for further consideration of the proposal:

- i) Latest certified compliance report of earlier EC by the Regional Office of MoEF&CC shall be submitted.
- ii) Issues raised during the public hearing along with action plan for addressing issues including budget provision and time frame for completion.
- iii) Skill development plan for addressing the issues of unemployment raised during the PH shall be prepared as per the modules developed by the Skill Council of India.
- iv) Plan for solid waste management in the colony including establishment of biogas from kitchen waste including digester system shall be prepared.
- v) The project proponent shall submit the plan for installation of the sewage treatment plant in the housing colony of the company with details of cost and timeframe thereof
- vi) Revised greenbelt plan including development of greenbelt in surrounding villages in addition to the mandatory requirement of 33% of total plant area.
- vii) Plan for reduction of power consumption by using LED, energy efficient appliances.
- viii) Post EC monitoring plan including number of stations, location of monitoring, parameters, frequency, etc.

**17.3.2 Proposed Expansion of the Steel Melting Plant from 19200 TPA to 85200 TPA of MS Billets of M/s. Arun Smelters Pvt. Ltd at SIPCOT Industrial Complex, Pappankuppam Village, Gummidipoondi Taluk, Tiruvallur district, Tamil Nadu. [Proposal No. IA/TN/IND/63370/2016, File No. J-11011/217/2016 - IA. II(I)]**

The proponent has made online application vide proposal no. **IA/TN/IND/63370/2016**, dated 22.03.2017 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The ToRs to the project were prescribed by the Ministry vide letter number J-11011/217/2016-IA.II(I) dated 03.12.2015. The proposed project activity is listed at Sl. No. 3(a) in Metallurgical industries (Secondary metallurgical process) under Category "A" EIA Notification 2006

2.0 The proposal for expansion of the Steel Melting Plant from 19200 TPA to 85200 TPA of MS Billets of M/s. Arun Smelters Private Limited was initially received in the Ministry on 01.06.2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC (I)] during its 8<sup>th</sup> meeting held between 27<sup>th</sup> – 28<sup>th</sup> June 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project dated 11<sup>th</sup> August, 2016. Based on the ToRs prescribed to the project, the project proponent applied for environmental clearance to the Ministry online on 22<sup>nd</sup> March 2017 along with EIA/MP report.

3.0 The project of **M/s. Arun Smelters Private Limited** (ASPL) has planned to expand the production capacity of their steel melting plant from 1,600 TPM (19,200 TPA) to 7,100 TPM (85,200 TPA) by replacing the existing 1 x 6.5 MT induction furnace by 2 x 8 MT & 1 x 7 MT induction furnaces. The proposed expansion will take place in their existing industry premises at SIPCOT Industrial Complex, Pappankuppam Village, Gummidipoondi Taluk, Tiruvallur District, Tamil Nadu. It was reported that the existing plant is secondary metallurgical processing industry established before EIA notification 2006 and does not attract the provisions of EIA notification vide 60 (E) dated 27.1.1994. Therefore, environmental clearance for the existing

plant was not obtained and no compliance report from Regional Office. Consent to Operate has been obtained from SPCB and valid up to 31.03.2017.

4.0 The existing industrial premise was located in the leased area of about 1.48 ha (3.58 Acres). No additional land is needed for the current expansion as the expansion activity will be carried out in same industrial premise. The land has been in a notified industrial estate (SIPCOT Industrial complex) and no forest land involved. No land has been acquired for the proposed expansion activities.

5.0 The entire project area falls in Survey of India topo sheet nos. 66 C/3 (D4403). The elevation above MSL 19 m. The Site Co-ordinates are as follows:

Node	Latitude	Longitude
A	13° 25.120' N	80° 6.878' E
B	13° 25.069' N	80° 6.878' E
C	13° 25.097' N	80° 6.776' E
D	13° 25.134' N	80° 6.778' E

6.0 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core zone of the project. The Pulicat wildlife sanctuary is reported to be located at 7.8 km in North direction. It was reported that the project is outside of the ESZ of the Pulicat wildlife sanctuary. No Defence Installation/ Historical Monuments/ Archaeological/ ports in 10 Km radius. The project is located area also does not report to form corridor for Schedule-I fauna. The project is located at 5.8 Km from the interstate boundary of Andhra Pradesh and Tamil Nadu.

7.0 The targeted capacity is 85,200 TPA of MS Billets. The raw materials used in the sponge melting are MS Scrap (74,029 TPA) sourced from Singapore and transported by ship cum road, Silicomanganese (4,167 TPA) sourced from nearby mines in the state and transported by road, Sponge Iron (8,710 TPA) sourced from Tiruvallur and transported by road.

8.0 The total water demand after the proposed expansion is 44.4 KLD which will be met from SIPCOT water supply. Considering water resource management, the quantum of treated water re-used in the process will be 19.2 KLD. The daily fresh water requirement amounts to 25.2 KLD. The total power requirement after the proposed expansion is 6.7 MVA which will be sourced from TANGEDCO.

9.0 Ambient air quality monitoring has been carried out at 8 locations during 1<sup>st</sup> June 2016 to 31<sup>st</sup> August 2016 and the data submitted indicated: PM<sub>10</sub> (64.3 µg/m<sup>3</sup> to 84.2 µg/m<sup>3</sup>), PM<sub>2.5</sub> (21.2 to 29.3 µg/m<sup>3</sup>), SO<sub>2</sub> (12.3 to 14.6 µg/m<sup>3</sup>) and NO<sub>x</sub> (24.5 to 27.8 µg/m<sup>3</sup>), CO (278 to 335 µg/m<sup>3</sup>). The results of the air modelling study indicate that the maximum increase of GLC for the proposed expansion is 1.4 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 2.3 µg/m<sup>3</sup> with respect to the SO<sub>2</sub>, 1.4 µg/m<sup>3</sup> with respect to the NO<sub>x</sub> in North direction.

10.0 Ground water quality has been monitored in 8 locations in the study area and analysed. The analysis results indicate that the pH ranges in between 7.1 to 7.7, which is well within the specified standard of 6.5 to 8.5. Total hardness was observed to be ranging from 263 to 477 mg/l. The Total Dissolved Solids (TDS) concentrations were found to be ranging in between 538 to 974 mg/l. Chlorides was observed to be ranging in between 26.3 and 47.7 mg/l.

11.0 Noise levels are in the range of 44 dB (A) to 48 dB (A) in residential areas and 72 dB (A) in industrial area.

12.0 The project is proposed to expand in the existing plant premises in the industrial land which is in a notified industrial estate. No R&R is involved.

13.0 The solid wastes generated in the plant are furnace slag (1,530 TPA) and mill scale (174 TPA) will be given to contractors, Runner and end bits (186 TPA) will be reused in process. Solar pan residue of 0.4 TPA will be sold to Tamil Nadu Waste Management Limited which is a TSDF.

14.0 It has been reported that Consent to Establish / Consent to Operate from the Tamil Nadu state Pollution Control Board (Consent order: 170716898795 dated 03.01.2017) valid upto 31.03.2017.

15.0 The Public hearing of the project was held on 11.08.2016 for the expansion in production from 19,200 TPA to 85,200 TPA. The issues raised in the public hearing are employment opportunities, air pollution and ground water. It was informed that the Enterprise Social Commitment will be carried out along with SIPCOT industrial complex, Gummidipoondi.

16.0 The capital cost of the project is Rs. 400 Lakhs and the capital cost for environmental protection measures is proposed as Rs.20 Lakhs. Annual recurring cost is 4 lakhs per annum. The CSR activities will be carried out along with SIPCOT, Gummidipoondi such as tree plantation, medical camp etc. The manpower in the existing plant is 25 persons and additional 85 persons and total manpower will be 110.

17.0 Greenbelt will be developed in 0.48 ha with native trees. The area allocated is 33% of the total area. There are no pending litigations involved with the proposed expansion.

18.0 ***Based on the presentation made and discussions held, the Committee recommended the project for environment clearance subject to stipulation of the following specific conditions and any other mitigative measures, as prescribed by the Ministry for environmental protection:***

- i) Environmental clearance is subject to valid consent to operation from the Tamil Nadu State Pollution Control Board
- ii) The plant shall achieve zero liquid discharge
- iii) The PP shall prepare Skill development plan as per National Skill Qualification Framework for ten different Levels in broad categories of competence for providing employability to the local people as also to provide focussed and specialised training for different levels of manpower in the areas of waste water treatment(ETP/CETP), air emission treatment, waste management etc. for employability within the industry along with budgetary requirements and time lines and shall implement the same.
- iv) The possibility of utilisation of Solar Energy shall be explored and implemented where ever possible in the plant area.
- v) Green belt shall be developed by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.
- vi) The layout plan shall be complied with emergency response plan by approach roads, exit roads to all working areas.



- vii) The project proponent shall rework the water requirement necessitated due to proposed expansion of the steel melting plant, and submit a revised water balance statement to Regional office of MoEF&CC.

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

*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.*

**17.4**

**16.3 FURTHER CONSIDERATION**

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

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

2.0 The project of M/s Nalwa Steel & Power Ltd. located in Village Taraimal, Tehsil Tamnar, District Raigarh, Chhattisgarh is for expansion of the existing Steel Plant from 0.16 MTPA to 1.0335 MTPA. The details of existing and proposed expansion is given below:

3.0 The total land required for the expansion project is 122.279 ha, out of which 77.268 ha is an agricultural land, no grazing land, 1.711 ha is Government Land. No forestland is involved. The entire land has not been acquired for the project. 38.605 ha has been purchased. 40.374 ha has been administratively processed and possession awaited while 43.30 ha is under process of acquisition. No river passes through the project area. It has been reported that natural water body exist around the project and modification/ diversion in the existing natural drainage pattern at any stage has not been proposed.

4.0. The topography of the area is flat and reported to lie between 22°00'35" to 22°02'10" N Latitude and 83° 22' 18" to 83° 23' 22" E Longitude in Survey of India topo sheet No. 64 N/8, at an elevation of 260 m AMSL. The ground water table at adjacent Taraimal village reported to ranges between 3.60 below the land surface during the post-monsoon season and 4.9 below the land surface during the pre-monsoon season. No ground water will be extracted for industrial use. Further, the stage of groundwater development is reported to be 12.84% in study area and thereby this is designated as safe area.

5.0. No wildlife sanctuary is located within distance of 10 km from the site. No national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

6.0. The process of manufacturing will be steel through the DRI as well as blast furnace route. There will be installation of Blast furnace (318,500 TPA), expansion of sponge iron plant (from 198,000 to 924,000 TPA), sinter plant (408,100 TPA), coke oven plant (200,000 TPA), SMS through EAF (624,000 TPA), SMS through IF-LF (160,000 to 409,500 TPA) rolling mill (250,000 to 450,000 TPA), WHRB based CPP (8 to 68 MW), CFBC based CPP (16 to 151 TPA), producer gas (12,000 to 24,000 Nm<sup>3</sup>/hr) Oxygen plant (100 to 3100 Nm<sup>3</sup>/hr), nitrogen plant (12,000 Nm<sup>3</sup>/hr) and argon plant (70 Nm<sup>3</sup>/hr). The sponge iron will increase from 6X100 TPD by addition of 4X500 TPD kilns while IF will increase from 2X12T+1X30T by addition of 2X12 T+2X30T furnaces (proposed revised configuration). The major raw materials to be used for expansion phase will be 1.49 million TPA iron ore, 1.37 million TPA coal & CPC, 0.14 million TPA limestone/ dolomite and 5000 TPA ferro alloys. Of the various solid wastes generated in the plant, 100% recycling/ reusing will be done for sponge iron plant dust, char, sinter plant dust, blast furnace slag, blast furnace sludge & flue dust, SMS slag & flue dust, rolling mill rejects & mill scales and coke oven dust. Ash will be generated from producer gas plant and captive power plant which will be disposed as per Fly Ash Notification.

7.0. The targeted production capacity of the crude steel from SMS is 1.033 million TPA. The iron ore for the plant would be procured from mines located in Odisha. Limestone, quartzite, dolomite and manganese ore will be purchased from mines located in Chhattisgarh and Madhya Pradesh. The ore transportation will be done through rail followed by road.

8.0. The make-up water requirement for the expansion project is estimated to be 18901 m<sup>3</sup>/day, all of which is fresh water and will be obtained from Mirouni Barrage across river Mahanadi.

9.0. The power requirement for the expansion project is estimated to be around 112 MW, all of which will be available from the captive power plant comprising of WHRB (68 MW) and CFBC (151 MW). Excess power will be sold.

10.0. Ambient air quality monitoring has been carried out at 8 locations during December 2015 and earlier during March-June 2011 and the data submitted indicated: PM<sub>10</sub> (34.5 µg/m<sup>3</sup> to 74.4 µg/m<sup>3</sup>), PM<sub>2.5</sub> (23.9 to 44.7 µg/m<sup>3</sup>), SO<sub>2</sub> (BDL to 16.6 µg/m<sup>3</sup>) and NO<sub>x</sub> (9.8 to 30.0 µg/m<sup>3</sup>). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 12.85 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 26.25 µg/m<sup>3</sup> with respect to the SO<sub>2</sub> and 5.58 µg/m<sup>3</sup> with respect to the NO<sub>2</sub>.

11.0 It has been reported that there are no people in the core zone of the project. R&R plan as per Model R&R policy of Chhattisgarh had been prepared and majority of the land acquired after paying due compensation. Land losers will be given preference in employment.

12.0 It has been reported that a total of 1.392 million tonnes of waste will be generated due to the expansion phase of the project, out of which 1.372 million tonnes will be reused used in sinter plant, power generation, cement plant, metal recovery, road making, SMS, brick / block / aggregate making or sold to consumers and 19602 TPA will be dumped in the earmarked dump yard. It has been envisaged that green belt/ afforestation will be developed in about 33% of the expansion area to attenuate the noise levels and trap the dust generated due to the project development activities.

13.0 The Public hearing of the project was held on 7<sup>th</sup> March 2014 for the proposed expansion. The main issues raised during public hearing are pertaining to increase in road accidents due to movement of trucks; employment; compensation; CSR; control of air and water pollution; water supply; cancellation of public hearing; stray elephants; ground water utilization; discharge into Kelo river and impact on fish yield; shortage of drinking water; Gram Sabha not conducted; impact of dust on crop yield/ trees/ gauchar; de-allocation of coal linkage; infrastructural development to be taken up in villages and in colony; dust pollution; and impact on agriculture & forest.

14.0 The capital cost of the project is Rs. 3500 Crores and the capital cost for environmental protection measures is proposed as Rs. 125 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 15 crores per annum. Additional manpower required for the project is about 750 directly and about 1300 for contractual jobs indirectly.

15.0 The proponent has mentioned that there is one court case to the project or related activity.

16.0 The Regional Office, MoEF&CC, Bhopal has inspected the site and submitted monitoring report vide letter no. 5-4/2007(ENV)/135 dated 21.07.2014 consequent to the Terms of Reference issued on 13.04.2011.

17.0 As reported in 29<sup>th</sup> EAC MoM, one litigation is pending at High Court of Chhattisgarh, Bilaspur against the project. Gita Devi Agrawal and others. Respondents, State of Chhattisgarh and others. Writ Petition No. 1700 of 2013. It is submitted by the petitioner that the Land Acquisition Officer, Gharghoda has initiated land acquisition proceedings for acquisition of Khasra Nos. 51 and 52 owned by the petitioners and registered a case bearing case no. 03-A-82/2012-2013 in which a declaration under section 6 of the Land Acquisition Act 1894 has been published in the newspaper on 18-10-2013. The litigation is in regard to acquisition vide Article 300A of the Constitution of India as well as various provisions of Land Acquisition Act 1894, the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013 and the provisions of the Panchayats (Extension of the Scheduled Areas) Act 1996.

18.0 The proposal was considered in 29<sup>th</sup> reconstituted Expert Appraisal Committee (Industry) held during 11<sup>th</sup> and 12<sup>th</sup> December 2014 and the Committee observed that the baseline data was collected in 2011; Plant was established in 2003; ToR granted in 2011; ToR validity was extended by a year in November 2013; Public hearing was held in April 2014; EC proposal

submitted to MOEF in May 2014. The Committee further observed that a village is existing adjacent to the Plant. The habitation is sandwiched between the existing and proposed projects. The EAC observed that AAQ values appeared very low as compared to CPCB data for Raipur located about 10 km away and also keeping in view that the TPP of M/s Jindal Power Ltd is located upwind of the project site. Fresh one-month AAQ data to be generated. Transportation involves 800 trucks (to-and fro). The Committee desired that a Plan for minimising truck movement and feasibility of using railway line and siding of project of their sister concern – M/s Jindal Power Ltd. located adjacent to this project should be explored. The EAC observed that number of complaints have been received during Public Hearing regarding poor air quality. The Committee after deliberations decided to send a team (sub-committee) of the EAC for a site visit to ascertain issues concerning the proposed expansion project. Further, the Committee also noted that there are several inconsistencies and shortcomings in the report and sought the following clarification:

- i) Baseline air data should be monitored for 1 month since the data presented is of 2011.
- ii) Coal washery details including capacity and status of EC. A component of coal washery has been included in the existing and the proposed expansion project. A clarification may be provided whether coal washery is included as a part of expansion project.
- iii) Water reservoir capacity
- iv) village population- whether 1800 or 597 persons residing in the villages adjoining the plant.
- v) Layout of the existing and proposed plant on a map as well as on a table along with land use breakup – existing and proposed in terms of agricultural land, forest land, habitation (settlements), water bodies, etc. Details of habitation of 597 persons in between existing and proposed expansion project areas.
- vi) Clarification on water consumption of the Plant per tonne of Steel Produced vis-à-vis CREP standards and the best available technologies in the world.
- vii) Requirement of cleaning system for the effluents + Scrubber for the PGP.
- viii) A specific plan for utilisation of solid waste management along with MOU from units for utilisation of the solid wastes. Plan for disposal of SMS slag.
- ix) Disaster Management Plan in line with the district DMP and should be submitted including the population close to the industrial premises.
- x) Existing OHS details should be submitted
- xi) Decongestion plan for the existing roads should be submitted for the proposed 600-800 trucks per day and a Plan for utilising the existing railway line of M/s Jindal Power Ltd. adjoining the existing Steel Plant should be examined.

19.0 Accordingly, the PP submitted the details to the ministry. Therefore, the proposal was considered in the present EAC meeting.

20.0 After detailed presentation by PP along with their consultant M/s Min Mec Consultancy Private Ltd., the committee noted the following:

- a) No site visit was made by the sub-committee of EAC as desired in the 29<sup>th</sup> EAC.
- b) No fresh status of compliance is presented.

- c) Baseline ambient air quality monitoring data was collected during December 2015 and earlier during March-June 2011 not comparable as collected in two different periods. The earlier data is of 6 years old and additional data is also more than 1 year old.
- d) The proposal for establishment of coal washery for 1.32 MTPA was made during the ToR. However, the PP dropped the proposed coal washery during the public hearing without prior approval from the ministry.
- e) Proposal was made for further changes in the configuration of the plant from 3X30 T to 2X30 T + 2X24 T in the present presentation.
- f) The habitation existing adjacent to the plant is sandwiched between the operating and proposed projects.

21.0 ***In view of the above facts and after detailed deliberations, the committee recommended that the PP should make fresh application for seeking ToRs.***

## **17.5 ANY OTHER ITEM**

**17.5.1** Proposed expansion of steel plant along with installation of cement grinding unit, at village Dasna, Jamuria, P.O. Bahadurpur, P.S.Jamuria, Dist., Burdwan, West Bengal of **M/s Shyam Sel and Power Ltd** [Proposal No. IA/WB/IND/62500/2013 dated 13<sup>th</sup> February 2017, F.No. J-11011/327/2013- IA II (I)) - **Validity of ToR.**

The proponent has made online application vide proposal No. IA/WB/IND/62500/2013 dated 13.02.2017 for extension of validity of Terms of Reference prescribed vide letter no. F. No. J-11011/327/2013- IA II (I) dated 17<sup>th</sup> February 2014.

2.0 It was informed that the draft EIA/EMP was prepared and application for Public hearing was made on 14<sup>th</sup> July 2015 and PH was conducted on 14<sup>th</sup> August 2015. The proceedings of PH also submitted on 26<sup>th</sup> August 2015.

3.0 It was informed that due to unexpected problems in the existing plant and tough market conditions, the PP unable to submit the final EIA/EMP.

4.0 ***The Committee after detailed deliberation recommended to extend the validity of ToR for a period of 1 year i.e. up to 16<sup>th</sup> February 2018 since the PP already prepared the EIA/EMP and Public hearing completed.***

**17.5.2** Proposed expansion of steel plant installing induction furnace 3×10 MT (90,000 TPA) and submerged Arc furnace 2× 5 mVA (Fe-Mn 25,500 TPA or SiMn – 18620 TPA or Fe Si - 9,975 TPA or Fe Cr - 20,000 TPA) by **Shri Shyam Ispat India Pvt. Ltd.**, at Taraimal village, Tamnar Tehsil, Raigarh Dist., Chattisgarh – Amendment in ToR regarding.

The proponent has made online application vide proposal No. **IA/ CG/IND/60729/2016** dated 04.03.2017 for extension of validity of Terms of Reference prescribed vide ToRs for undertaking F. No. J-11011/161/2009 - IA II (I) dated 31<sup>st</sup> January 2017.

2.0 Terms of reference were issued for Proposed expansion of steel plant installing induction furnace 3×10 MT (90,000 TPA) and submerged Arc furnace 2× 5 mVA (Fe-Mn 25,500 TPA or SiMn – 18620 TPA or Fe Si - 9,975 TPA or Fe Cr - 20,000 TPA) vide letter dated 31.01.2017.

3.0 Now, it is proposed to add Rolling Mill of 60,000 TPA capacity to the scope of the earlier proposal for integration of steel plant. The details of plant configuration as follows:

Sl.	Units	Existing / Consented capacities	Proposed expansion	Total capacity after expansion
1	Sponge iron through DRI process	90000 TPA (2x50 TPD & 2x100 TPD) which is under operation) + 30,000 TPA (1X100 TPD) which is under implementation	---	120000 TPA
2	M.s Billets	60000 TPA	90000 TPA	150000 TPA
3	Rolled Products	60000 TPA which is under implementation	60000 TPA	120000 TPA
4	Ferro alloys	---	2x6 mVA FeMn- 26600 TPA / SiMn -18620 TPA / FeSi – 9975 TPA / FeCr – 20000 TPA	2x6 mVA FeMn- 26600 TPA / SiMn -18620 TPA / FeSi – 9975 TPA / FeCr – 20000 TPA
5	Power Generation			
	WHRB	6 MW	--	6 MW
	FBC	18 MW	Dropped 6 MW	12 MW
	Total	24 MW		18 MW

4.0 PP has informed that additional 60 KLD of water will be required for the proposed rolling mill and total water requirement will be 135 KLD +60 KLD = 195 KLD.

5.0 *After detailed deliberation, the Committee recommended the proposal for amendment of ToR for addition of rolling mill as per the table mentioned above. The Committee also desired that the project proponent will reduce the specific water and power consumption as compared to the present level thereof.*

**17.5.3** For increase in production capacity from 1.2 (2×0.6) MTPA to 1.5 (2×0.75) MTPA by the name of **M/s Orissa Metaliks Private Limited**, at village Gokulpur, P.S. Shyamraipur, P.O. Kharagpur (local), Dist. Paschim Midnapore, West Bengal- **for amendment of EC under clause 7(ii) of EIA Notification 2006** regarding [ Proposal No. IA/WB/IND/5853/2011 dated 24th February 2017, F.No. J-11011/604/2010-IA.II(I)]

The proponent has made online application vide proposal no. IA/WB/IND/5853/2011, dated 24.02.2017 along with copies of EIA/EMP report seeking amendment in environmental clearance under the clause 7(ii) provisions of the EIA Notification, 2006 for the project

mentioned above. The environmental clearance for the existing project was granted by the Ministry vide letter number J-11011/604/2010-IA.II(I) dated 01.06.2012. The proposed project activity is listed at Sl. No. 3(a) in Metallurgical industries and is categorized under Category "A" EIA Notification 2006.

2.0 The 1.5 MTPA Beneficiation Plant, 2 x 0.6 MTPA Pellet Plant & Producer Gas Plant -75000 Nm<sup>3</sup>/hr of **M/s Rashmi Metaliks Limited** located in Village Gokulpur, P.O-Shyamraipur P.S-Kharagpur (L), District Paschim Manipur, State West Bengal has accorded environment clearance vide letter no J-11011/604/2010-I A II (I) dated 01.06.2012. Subsequently the plant was transferred to **M/s Orissa Metaliks Private Limited** vide File No- J-11011/604/2010-I A II (I) dated 4<sup>th</sup> January 2017. Consent to Operate was obtained from State Pollution Control Board vide CO No-106504 vide memo no-138-3888/WPB(HRO)-k/2014 (Pt-I); dated 19.01.2017 and valid up to 31.10.2021.

3.0 Now it is proposed to increase the production capacity from 1.2 MTPA to 1.5 MTPA by using 2 x 0.75 MTPA Pellet plant instead of 2 x 0.6 MTPA. The details of existing capacity and proposed enhancement and total capacity after expansion is as given below:

Sl. No	Plant	Unit	Existing Capacity	Proposed enhancement capacity	Total Capacity after expansion
1	I/O Beneficiation Plant	MTPA	1.50	---	1.50
2	Pellet-II	MTPA	0.60	0.15	0.75
3	Pellet-III	MTPA	0.60	0.15	0.75
4	Producer gas plant	N.c.m/hr	10 x 7500	---	10 x 7500

The requirement of resources as follows:

Sl. No	Plant	Existing Requirement	Proposed enhancement	Total requirement	Source
1	Power	8.4 MW	2.1 MW	10.5 MW	Own Captive Power Plant
2	Water	600 KLD	50 KLD	650 KLD	Kansabati river / Bore well
3	mw				
4					

4.0 M/s OMPL has withdrawal permission for 1789 KLD from SWID. Inspection of Regional Officer of MoEF&CC, Bhubaneswar was made in relation to the transfer of EC & compliance status submitted vide letter dated 27.07.2016

5.0 The current emission from the existing 1.20 MTPA Pellet plant is in the range of 14-25 mg/Nm<sup>3</sup>, there will not be too much incremental increase in the emission level, and existing APC devices (ESP, ID Fan, Multicone Cyclone) are sufficient enough to keep the point emission level below the permissible limit (50 mg/ Nm<sup>3</sup>) and in order to keep the fugitive emission below the permissible limit (100 mg/ Nm<sup>3</sup>) travelling grate, pneumatic conveying system, Dry fog system of sufficient capacities are already existing.

6.0 It was reported that enhancement in the production capacity will be made with following modifications / enhancement in the existing system:

Sl. No.	Proposed Modification Area	Enhancement / Modification Component	Existing Facilities	Proposed Additional facilities
1	Concentrate Unloading Handling Storage and Reclaiming	Belt conveyors Speed	1.00 meter/Sec	2.00 meter/Sec
		Covered storage shed for stacking and blending	25.00 x 104.00 meters	Adequate capacity
		Crane	One 20 Mt capacity with 5 M <sup>3</sup> Grab Bucket	Another one more crane will be introduced
		Intermediate storage Bins	10 storage bin and capacity is 4000 MT	Adequate capacity
2	Concentrate Drying, Flux Storage, Blending and Mixing	Concentrate Dryer	Operated at 45% of its Capacity	Will be operated for 20-22 hours in day
		Flux bins transfer time	4-5 hours	6-8 hours
3	Pelletizing, Screening and Handling	Pellet Disc	3 sets of Pellet Disc, having capacity 150 TPH	Another 2 sets of Pellet Disc will be installed and extend the building by 6.00 meters towards travelling grate
4	Preheating	Bad Designed	Bed Level: 160 mm	Bed Level will be increase around 1980 mm
		Speed range for travelling grate	0.5 to 1.3 meters/minutes	It may be operated at 1 to 2.00 meters/sec
		Heat resistance fan	Two sets of fans, capacity is 1,20,000 NM <sup>3</sup> / hour each where one is standby mode	Both fans will be made operative condition to meet the draft with additional capacity
		ID Fan	Now operated 30% of its designed capacity	Can be using 70% of its designed capacity
		Preheating zone Burners	Burners – 02 sets	Burners - 4 set
			Capacity - 6,00,000 kcal / hour in each burners	Heating Zone - Three set of burners
		Multi-cone Cyclone operating cycle	6 cycles/hour	10 cycles/hour
5	Roasting	Kiln operating range	1.2 rpm	1.5 rpm
6	Cooling	Cooler area	60 Sq.m	Adequate, each fan Capacity 1,00,000



				Nm <sup>3</sup> /hour with static pressure 6000 Pascal
7	Product Handling		No change	Adequate capacity
8	Environment Handling Equipment	ESP, Multi cone - cyclones, bag filters, product discharge, pneumatic handling system etc	No Change	Adequate capacity
9	Electrical system			Adequate capacity

7.0 The total capital cost of the project is Rs. 20.00 Crs and an amount of Rs. 1.30 Crores has been allocated for Environmental protection as Capital and Rs. 0.13 Crores per annum as recurring.

8.0 The committee noted that, to achieve the proposed enhancement, one more disc in the unit is proposed to install.

9.0 *The Committee after detailed deliberation is of the view that since the proponent has proposed to add additional unit(s) to the existing plant apart from the proposed enhancement in the performance in the process, the proposal may not be considered under clause 7(ii) of EIA Notification, 2006, as amended. The committee asked the PP to submit either for fresh ToR for the proposed expansion or submit revised application for the enhancement without additional units (discs).*

## 17.6 CASE FOR TERMS OF REFERENCE (ToR)

**17.6.1** Proposed 1 Million ton 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. IA/WB/IND/62536/2017 dated 15.02.2017. F. No. IA-J-11011/56/2017-IA-II(I) ----ToR

The proponent has made online application vide proposal No. IA/WB/IND/62536/2017 dated 15.02.2017 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & nonferrous), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

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

3.0 The land area acquired for Pellet Plant along with Producer Gas Plant is 121 Ha out of which 40.1 Ha land will be used for green belt development. Total project cost is approx Rs.1500 Crores rupees. Proposed employment generation from proposed project will be 2500 direct employments and 5000 indirect employment. The proposed capacity for different products for new site area as below:

S. No	Particulars of Facilities	Capacity
1.	Blast Furnace (2 x 450 m <sup>3</sup> )	0.70 Million T.P.A
2.	Sinter (1 x 105 m <sup>2</sup> )	0.60 Million T.P.A
3.	DRI (2 X 500 TPD + 2 x 350 TPD)	0.50 Million T.P.A
4.	Steel Making Facilities [(20 T EIF X 10) + (20T EAF X 2)] with LRF and oxygen optimized furnace	0.80 Million T.P.A
5.	Ferro Alloy (FeMn, FeSi, SiMn, FeCr) Plant (10 x 9 MVA)	0.12 Million T.P.A
6.	FeCr Briquette Manufacturing plant	40 ton/hr
7.	Coke Oven Plant (2 x 0.25 MTPA)	0.50 Million T.P.A
8.	Lime Dolomite Plant	200 TPD
9.	Oxygen Plant	200 TPD
10.	Hot Rolling Mill	0.35 Million T.P.A
11.	Cold Rolling Plant with Pickling Line & Continuous Galvanizing	0.35 Million T.P.A
12.	Ductile Iron Pipe Unit	0.30 Million T.P.A
13.	Captive Power Plant	225 MW [WHRB Based 90 MW + CFBC (Coal & dolochar Mix based) 3 x 45 MW]
14.	Pellet Plant	3.6 MTPA (4 x 0.89 MTPA)
15.	I/O Beneficiation Plant	3.6 MTPA (2 x 1.8 MTPA)
16.	Producer Gas Plant	150000 (20 x 7500 N.m <sup>3</sup> /hr)

4.0 The electricity load of **318.2 MW** will be procured from propose 225 MW Captive Power Plant and the remaining 93 MW will be drawn from WSEDCL. Company has also proposed to install **10 Number DG Set of 7200 KVA**.

5.0 Proposed raw material and fuel requirement for project are Coal: 1.4 MTPA Coking Coal : 0.67 MTPA Iron Ore : 4.5 MTPA Lime stone : 0.12 MTPA Magnesium Ore : 0.31 MTPA Chromium Ore : 0.27 MTPA Quartzite/ Limestone : 0.33 MTPA. Requirement would be fulfilled by:

Sr. No.	Name of the Raw Materials	Source
1	Iron ore lump	Applied for captive iron ore mines Alternate source: Purchased from Barbil-Joda, Orissa
2	Iron ore fines	Applied for captive iron ore mines Alternate source: Purchased from Barbil-Joda, Orissa
3	Non-coking coal	Captive coal mines in Raniganj Coalfields Balance through E-Auction or Imported
4	Coking coal	Purchased from BCCL, Dhanbad Alternate source: Imported
5	Dolomite	From Birmitrapur, Orissa / Bilaspur, CG

6	Limestone	From Birmitrapur, Orissa / Bilaspur, Raipur CG / Katni MP
7	Manganese ore	Captive mines in Balaghat, MP
8	Quartzite	From Belpahar Orissa // Bilaspur, Raipur CG

6.0 Fuel consumption will be mainly Electricity & Diesel (If required). Water Consumption for the proposed project will be 1163 KLD which will be sourced from Borewell / Kansabati River and waste water generation will be 138 KLD. 30 KLD Domestic waste water will be treated in Septic Tank followed by Soak Pit and 108 KLD industrial waste water generated will be treated and reused in the process and for green belt development and dust depression after treatment.

7.0 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.

**8.0 *After presentation and detailed deliberations, the committee observed that only 15% of the proposed land is under possession of the proponent and no consent or agreement from the land owners for the remaining land is available. No alternative site analysis has been made by the PP. Therefore, the committee asked the PP to submit consent or agreement for the proposed land to be acquired, copy of applications submitted for permission of required water, power, etc. for further consideration of the proposal.***

**17.6.2** Proposed expansion of CTD/TMT bars manufacturing unit by installation of M.S.Billet /Ingots manufacturing unit having production capacity of CTD/TMT bars -2.5 LTPA, M.S.Billets/S.S.Billets-2.6 LTPA of **M/s RTGL Industries Limited** situated at SP-293-296, Phase –IV, Industrial Area, Chopanki Tehsil, Bhiwadi Dist., Alwar (Rajasthan) [Proposal No. IA/RJ/IND/62716/2017, F. No. IA-J-11011/132/2017-IA-II(I)] ----- ToR.

The proponent has made online application vide proposal No. IA/RJ/IND/62716/2017 dated 23.02.2017 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & nonferrous), under category ‘A’ of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2.0 M/s RGTL Industries Ltd, proposes expansion of CTD/TMT bars manufacturing unit by installation of M.S Billet / S.S. Billets manufacturing unit having production capacity of CTD/TMT bars 2, 50,000 TPA (Existing), M.S Billets/S.S. Billets-2,60,000 TPA (Proposed). The proposed expansion will be located at SP -293-296, Phase –IV, Industrial area, Chopanki Tehsil, Bhiwadi Dist:Alwar (Rajasthan). The land area acquired for the steel plant is 6.86925 Ha out of which 2.26 Ha land will be used for greenbelt development. The proposed expansion will be carried out in the existing plant area of 6.86925 Ha. No additional land is acquired for the proposed expansion. Total project cost is 137.5 Crore rupees (Existing 43.16 Crore rupees, proposed 94.34 Crore rupees). Proposed employment from project after expansion will be 150 direct employment and 100 indirect employment. The proposed capacity for different products for existing site area as below:

S. No.	Product	Existing (TPA)	Proposed (TPA)	After expansion production capacity (TPA)
1.	CTD/TMT Bars	2,50,000	--	2,50,000
2.	M.S. Billets/SS Billets	--	2,60,000	2,60,000

3.0 The electricity load of 44,000 kVA (Existing 4,000 kVA & Proposed 40,000 kVA) is being/will be procured from Rajasthan State Electricity Board (RSEB). Company has also proposed to install 1X320 kVA DG set.

4.0 Proposed raw material and fuel requirement for project are: Sponge /Scrap Iron (2, 48,800 TPA), Ferro manganese (21,900 TPA ), Ferro chrome 10,100 TPA), coal 50t/day (for coal gasifier), 150 KL/month furnace oil & HSD 60 L/Hr .Requirement would be fulfill by domestic market. Fuel consumption is being /will be mainly reheating furnace and DG.

5.0 Water consumption after expansion for the project will be 142 KLD (fresh water 20 KLD & recycled 122 KLD) and waste water generation will be 69 KLD. Domestic waste water will be treated septic tank & soak pit and industrial waste water generated will be treated settling tank and reused for cooling tower & quenching purposes.

6.0 *After presentation and detailed deliberations, the committee noted that there was hardly any plantation in the existing plant and the compliance of the earlier EC was not satisfactory. Therefore, the committee deferred the project till the PP carries out plantation in the existing plant with at least 2000 saplings and submit the report along with substantiating photographs of plantation to the MoEF&CC duly verified by the revenue or the forest department.*

**17.6.3** Proposed Enhancement in Cement Production Capacity (2.0 MTPA to 2.3 MTPA) of Existing Stand-alone Grinding Unit by installation of New Slag Grinder at JL No. 80, Village & Mouza: Panchgarha, PS: Chanditala, District: Hooghly (West Bengal) by **M/s Dankuni Cement Works** (A Unit of M/s. UltraTech Cement Ltd.) [Proposal No. IA/WB/IND/62209/2017, F. No. J-11011/638/2008-IA.II(I)]

*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.*

**17.6.4** Greenfield Cement Plant of capacity 3.15 MTPA Clinker & 2.0 MTPA Cement and 2 x 25 MW Thermal Power Plant at Itikyala and Kolimigundla Villages, Kolimigundla Mandal, Kurnool Dist., Andhra Pradesh of **M/s The Ramco Cements Limited**. Proposal No. IA/AP/IND/62828/2017. F.No. IA-J-11011/129/2017-IA-II(I).

*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*

**17.6.5** Proposed Enhancement in Clinker Production Capacity (1.6 to 1.94 MTPA) by Process Optimization at Villages - Bhawaliya & Mangrol, Tehsil - Nimbahera, District - Chittorgarh (Rajasthan) by **M/s. Lafarge India Ltd.** Proposal No. IA/RJ/IND/62841/2017 F.No J-11011/113/2011-IA.II(I)

*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*

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

## **17.7 ENVIRONMENTAL CLEARANCE (EC)**

**17.7.1** Expansion of metallurgical unit at MIDC, Ph-I, Aurangabad, Daregoan, Jalana Maharashtra by **M/s Om Sairam Steel and Alloys Pvt Ltd.** [Proposal No. IA/MH/IND/62864/2015, F. No. J-11011/57/2015-IA.II (I)] – EC based on ToR

The proponent has made online application vide proposal no. IA/MH/IND/62864/2015, dated 01.03.2017 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The ToRs to the project were prescribed by the Ministry vide letter number J-11011/57/2015-IA.II (I) dated 01.01.2016. The proposed project activity is listed at Sl. No. 3(a) in Metallurgical industries and 1(d) Thermal Power Plants under Category "A" EIA Notification 2006.

2.0 The proposed project of **M/s Om Sairam Steel and Alloys Pvt. Ltd.** at Plot No. F-1, 2, 3, 8, 9, 10, ADD. MIDC Phase – II and adjacent Gut No. 46 & 63, Daregaon, Tehsil and District Jalna, Maharashtra State was initially received in the Ministry in February 2015 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 37<sup>th</sup> meeting held between 30<sup>th</sup> April – 1<sup>st</sup> May 2015 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project dated 01.01.2016. Based on the ToRs prescribed to the project, the project proponent applied for environmental clearance to the Ministry online on 01.03.2017 along with EIA/MP report.

3.0 The existing plant of M/s Om Sairam Steel and Alloys Pvt. Ltd. is currently manufacturing 528 TPD Billet and/ or 1000 TPD TMT Bars/angles/channels. Now the company proposes to expand the capacity and add new product, Sponge Iron, using iron ore/pellets and coal and generate its own power from waste heat as well as coal fired boiler. The existing project was accorded Environmental Clearance vide Letter SEAC-2009/CR-200/TC-2 dated 29<sup>th</sup> December 2010. The Status of compliance of earlier EC was obtained from Regional Office, Nagpur vide Lr. No. 5-22/2009(Env)/1333, dated 08.12. 2015. The Regional officer inspected and issued the certificate vide 5-22/2009(ENV)/1333 dated 08.12.2015. The details of proposed expansion as follows:

Sl. No	Particulars	Capacity		Total
		Existing	Proposed	
1	Sponge Iron (TPD)	0	1000	1000
2	Billets/ Ingots (TPD)	528	472	1000
3	TMT bars (TPD)	1000	0	1000
4	Power generation (MW)	0	50	50

4.0 The total land required for the project is 6.09 ha, out of total 2.6 .ha is for green belt development. No /forestland involved. The entire land has been acquired for the project. The Kundalika River passes through the study area. It has been reported that no other water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flat terrain and reported to lies between 19° 50' 52.39" N Latitude to 75° 50' 41.51" E Longitude in Survey of India topo sheet No. 47M-9 & 47 M13, at an elevation of 552 m AMSL. The northern part forms the highly dissected basaltic plateau; the ground water potential is expected to be poor. The depth to water levels in the district during May 2011 ranges between 3.84 and 16.20 m bgl. The depth to water levels during post monsoon (Nov.) ranges between 1.05 and 14.65 m.

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

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

Sl. No.	Product	Raw Material	Quantity TPD	Transport & Linkage
1	DRI Plant Sponge Iron	Iron Ore and Pellet	1450	By road from Raipur, Bellari, Bhilwara and Raigarh
		Coal B Grade	1200	
		Dolomite	50	
2	Billets and/or TMT bars	Sponge Iron	1000	By Road from Captive Mumbai & Local Raipur, Bellari
		Scrap	100	
		Pig Iron	80	
		Silico manganese	10	
3	Power Plant (FBC Boiler 24 MW & WHR 26 MW)	Dolochar + char	312	By road from Chandrapur
		Coal	420	

8.0 The only solid waste produced by the induction furnace is about 170 MT slag per day. It will be used for road making and land levelling. In addition, office waste generated shall be disposed off to local authority.

9.0 The targeted production capacity of the 1000 TPD. The ore for the plant would be procured from (linkage attached to EIA Report). The ore transportation will be done through road.

10.0 The water requirement of the project is estimated as 11,682 m<sup>3</sup>/day, out of which 752 m<sup>3</sup>/day of fresh water requirement will be obtained from the MIDC and the remaining requirement of 10945m<sup>3</sup>/day will be met from the recycled water. No drawl of groundwater / surface water.

12.0 The power requirement of the project is estimated as 58 MW, out of which 50MW will be obtained from the self and 8 MW from MSEDCL.

13.0 Baseline Environmental Studies were conducted during winter season (i.e. **October 2014 - December 2014**) Ambient air quality monitoring has been carried out at 14 locations during **October 2014 - December 2014** and the data submitted indicated: PM<sub>10</sub> (69.74 µg/m<sup>3</sup> to 64.04 µg/m<sup>3</sup>), PM<sub>2.5</sub> (26.7 to 20.06 µg/m<sup>3</sup>), SO<sub>2</sub> (18.9 to 12.5 µg/m<sup>3</sup>) and NO<sub>x</sub> (24.05 to 19.22 µg/m<sup>3</sup>). The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 72.79 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 35.13 µg/m<sup>3</sup> with respect to the SO<sub>2</sub> 25.93 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.

14.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.10 to 7.81, Total Hardness: 99 to 235 mg/l, Chlorides: 42 to 78 mg/l, Fluoride: 0.2 to 0.4 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 7.1 to 7.5; DO: 2.1 to 4.6 mg/l and BOD: <2 to 5.2 mg/l. COD from 7.08 to 11.68 mg/l.

15.0 Noise levels are in the range of 53.7 to 47.6 dB(A) for daytime and 48.9 to 42.3 dB(A) for night time.

16.0 It has been reported that no R&R is involved.

17.0 It has been reported that a total of 170 TPD of waste will be generated due to the project, which will be resale and used for Building construction material, road making. It has been envisaged that an area of 2.6 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.

18.0 It has been reported that the Consent to Operate from the Maharashtra State Pollution Control Board obtained vide Lr. NoBO/JD (APC)/EIC No. AD-18272-16/R/CC-10758 dated 02.12.2016 and consent is valid up to 31.05.2021

19.0 The **Public hearing of the project was held on 28.10.2015**. for production of Sponge Iron 1000 TPD, Billets and /or TMT Bar 1000 TPD and Power 50 MW on Waste-heat setting up of plant. The issues raised during public hearing are on Air Pollution Control; Health o workers; discharge of waste water; employment; infrastructure development for village; efficiency of ESP; rain water harvesting; etc. An amount of 1307 Lakhs (2.5 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

20.0 The capital cost of the project is Rs 523 Crores and the capital cost for environmental protection measures is proposed as Rs. 1300 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 504 Lakhs. The detailed CSR plan has been provided in the EMP in its page No.97 to 98. The total employment generation from the proposed expansion is 610 nos. (existing 400 + proposed 210)

21.0 It was reported that Greenbelt will be developed in 2.6 Ha which is about 33% of the total acquired area. A 100-m wide greenbelt, consisting of at least 2 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. It is proposed that total 4000 no. of saplings will be planted and nurtured in next 3-4 years.

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

23.0 After detailed presentation by PP along with their consultant M/s Utara Tech Environmental Consultancy & Laboratory, the committee noted the following:

- i) The baseline data was collected i.e. during October 2014 - December 2014 before submission of application to this Ministry i.e. February 2015.
- ii) The proponent has mentioned in the presentation made before 37<sup>th</sup> EAC that the Baseline was collected earlier. However, the same was not reflected in the ToR letter.
- iii) The public hearing was conducted (on 28.10.2015) before issue of the ToR (1.1.2016). The PP informed that the district authorities have conducted based on the minutes of the 37<sup>th</sup> EAC.
- iv) Whether draft EIA/EMP was prepared as per the prescribed ToR or not could not be ascertained due to non availability of Draft EIA/EMP copy submitted to SPCB.
- v) The certified compliance report submitted is also of more than one year old. It is also noted that there are several non-compliances to the conditions of the existing EC such as development of green belt and other issues. The PP has uploaded copy of analysis report on the MoEF&CC web-portal while making application in place of compliance report from the RO.
- vi) The issues raised during the public hearing is also not properly presented.

**24.0 *After detailed deliberation, the committee sought following information for further consideration of the proposal:***

- i) A certified copy of draft EIA/EMP submitted to SPCB for conduct of public hearing
- ii) Latest status of compliance on the earlier EC conditions from the Regional office of MoEF&CC
- iii) 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.
- iv) Environment Policy prescribing standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions.
- v) Skill development plan shall be prepared and implemented in consultation with skill development council of India.
- vi) The project proponent shall give the reasons as to why it should not apply for a change in EC condition for changing the plantation site.

**17.7.2** Expansion of Integrated Cement Plant by installing additional plant to produce 2.5 MTPA clinker and 1.50 MTPA Cement at Baga village, Arki tehsil, Soaln dist., Himachal Pradesh of **M/s Jaypee Himachal Plant** (a unit of Jaiprakash Associates Limited). [Proposal No. IA/HP/IND/63104/2015, F.No. J-11011/1216/2007-IA II(I)] – EC based on ToR

The proponent has made online application vide proposal no. IA/HP/IND/63104/2015, dated 09.03.2017 along with copies of EIA/EMP report seeking environmental clearance under



the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(d) in Cement Plants under Category "A" EIA Notification 2006.

2.0 The proposed project for Expansion of Clinker Production Capacity from 2.97 MTPA to 3.50 MTPA (Line-I) and installation of additional plant (Line-II) to produce 2.50 MTPA clinker & 1.50 MTPA cement located at Baga village, Arki tehsil, Solan district, Himachal Pradesh was initially received in Ministry on 12<sup>th</sup> May, 2015 for Line-I and 24<sup>th</sup> July, 2015 for Line-II to obtain Terms of Reference (ToR) as per EIA Notification, 2006. The project for clinker expansion (Line-I) was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 41<sup>st</sup> meeting held on 1<sup>st</sup> – 2<sup>nd</sup> June, 2015, ToRs was issued by MoEF&CC. Project for installation of additional plant (Line –II) was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 47<sup>th</sup> meeting held on 3<sup>rd</sup> - 4<sup>th</sup> September, 2015. Ministry had prescribed ToRs to the project on 15<sup>th</sup> July 2015 vide letter no. J-11011/1216/2007-IA II (I) for expansion of clinker production capacity (Line-I) and on 29<sup>th</sup> September 2015 vide letter no. J-11011/1216/2007-IA II (I), ToRs were prescribed for combined capacity (Line –I & Line –II) i.e. expansion from 2.97 MTPA to 6.0 MTPA clinker production and expansion from 2.54 MTPA to 4.04 MTPA cement production. Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 9<sup>th</sup> March 2017 vide online proposal no: IA/HP/IND/63104/2015.

3.0 M/s Jaypee Himachal Cement Plant, a unit of Jaiprakash Associates Limited (JAL) had set up an integrated Cement Plant (Line-I) to produce 2.05 MTPA clinker and 2.54 MTPA cement located in Baga village, Arki tehsil, Solan district, Himachal Pradesh for which Environmental Clearance was granted vide letter no: J-11011/26/2006-IA.II(I) dated 18<sup>th</sup> May 2006. Subsequently, the Environmental Clearance was amended for augmentation in clinker production capacity from 2.05 MTPA to 2.97 MTPA vide letter No: J-11011/1216/2007-IA II (I) dated 24<sup>th</sup> December 2013. Certified copy of Monitoring Report / Compliance report obtained from MoEF&CC, North Central Regional Office, Dehradun vide letter no: 6-68/2006/RO(NA)/279 dated 9<sup>th</sup> May 2016.

4.0 The existing cement plant is located in an area of 166.01 ha. As the expansion is proposed within the existing premises, no additional land is required. The land use for the plant site is under industrial category. The river Satluj is flowing a distance of 2.2 km, NE from the project boundary. No diversion in the existing natural drainage pattern is involved.

5.0 The topography of the area is a hilly terrain and geographically lies between Latitude: 31° 19' 26.2" – 31° 20' 17.0" North and Longitude: 76° 53' 4.0" – 76° 54' 4.5" East in Survey of India TOPO Sheet No. 53 A/15, A/16 & E/3, at an elevation of 1430 to 1500 m above MSL. There are no wells or tube wells in the plant area, so it was not possible to get pre and post monsoon water levels in the area.

6.0 Two wildlife sanctuaries and 21 protected forest exists within 10 km radius of project boundary. Majhathal Wildlife Sanctuary (5.5 km in SE) and Bandli Wildlife Sanctuary (9.9 km in N). Wildlife clearance for clinker expansion of Line–I (2.97 MTPA to 3.50 MTPA) was recommended by standing committee of NBWL during its 31<sup>st</sup> meeting held on 12<sup>th</sup> – 13<sup>th</sup> August 2014. NOC was issued by PCCF (WL)-cum-Chief Wildlife Warden, Shimla, H.P. vide its letter no: WL(Misc.)-Jaypee Cement/WLM/6684 dated 9<sup>th</sup> March 2016. Application for wildlife clearance for Line-II has been submitted to DFO Wildlife Division Shimla (HP) vide letter no.

JAL/JHCP/Unit-II/WL/2015 18835 dated 22nd August, 2015. The Core zone of the study area does not harbour any Schedule-I species or migratory corridors of any fauna.

7.0 The public hearing of the project was held on 2nd February 2017, for the proposed Expansion. The capital cost of the project is Rs.1585 crores and the capital cost for environmental protection measures is proposed as Rs. 126.72 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 9.0 crores.

8.0 It was reported that there are few court cases, against existing project related to land compensation, land acquisition, R&R plan and violation under the Environment (Protection] Act, 1986 and pending at state level.

9.0 After detailed deliberation, the committee opined that since the project is involved in violation of EIA Notification, 2006 due to excess production beyond the stipulated production capacity in the earlier EC, the proposal may not be considered through present application. Accordingly, the PP is advised to make an application under the provisions of S.O. 804 (E) dated 14<sup>th</sup> March 2017 which deals with all such violation cases.

### **Special agenda: Brief presentation on the notification vide S.O. 804 (E) dated 14.03.2017**

The member secretary made brief presentation to the committee on the notification vide S.O. 804 (E) dated 14.03.2017 on procedure for appraisal of Projects for grant of ToR / EC involving violation of EIA Notification, 2006.

### **17.7.3 Expansion of Existing Ferro Alloys Plant for production of either or Combination of High Carbon Ferro Chrome, Ferro Manganese & Silico Manganese with installation of Additional 4 X 9 MVA Capacity Sub Merged Arc Furnace M/s Misrilall Mines Pvt. Ltd. (Ferro Alloys Division) Village: Pankapal, Tehsil: Sukinda, District: Jajpur, State: Odisha [Proposal No. IA/OR/IND/63384/2016, File No. J-11011/307/2011-IA-II(I) – EC based on the ToR**

The Expansion of existing Ferro Alloy Plant for production of either or combination of High Carbon Ferro Chrome, Ferro Manganese and Silico Manganese with installation of additional 4 X 9 MVA Submerged Arc Furnace of M/s Misrilall Mines Pvt. Ltd. Ferro Alloys Division is located at village Pankapal, Tehsil Sukinda District Jajpur, State Odisha was initially received in the ministry on 17<sup>th</sup> June 2011 for obtaining Terms of Reference. The proposal was considered in the 26<sup>th</sup> meeting of EAC (Industry) held during 22<sup>nd</sup> – 23<sup>rd</sup> July 2011. ToR was issued by the Ministry vide Letter No. J-11011/307/2011-IA-II (I) dated 12<sup>th</sup> August 2011 with a valid period of two years for preparation of EIA/EMP Report. Baseline data collected during summer season (March, April & May) 2012. Application was submitted at State Pollution Control Board, Odisha for conduct of Public Hearing on 14.08.2012. OSPCB submitted request to the District Magistrate & Collector, Jajpur on 01.09.2012 for finalization of date and venue for conduct of Public Hearing. It was informed that the date and venue of Public Hearing could not be finalized by the District Magistrate & Collector, Jajpur district, Odisha within the validity period of ToR issued. The PP made an application for extensions of validity of the ToR. The request was considered in the 11<sup>th</sup> meeting of EAC (Industry) held during 26<sup>th</sup> – 27<sup>th</sup> August, 2013 and extension was issued for another a period of 1 year w.e.f. 11.08.2013 vide letter dated 4<sup>th</sup> October 2013. Public Hearing was conducted on dated 02/07/2014. The Public Hearing Proceedings was issued by OSPCB on dated 14/08/2014 vide Memo No. 13219/IND-II-PH-612 that is beyond 36 month of ToR issued.

2.0 The PP informed that, in the meantime there was no development regarding the Suspension of Mining License which was the main source for raw material procurement, PP was not clear whether the suspension order will be revoked or not and the said expansion proposal is based on the availability of Ore from the captive mines. Later, there are possibilities of opening of own Chromite mines and submitted the application of obtaining EC on 18/02/2015 and the proposal was considered in 35<sup>th</sup> reconstituted EAC (Industry) Meeting held on 26<sup>th</sup>- 27<sup>th</sup> March 2015. After detailed deliberations, the Committee sought following additional information for further consideration of the proposal:

- i) Analysis report for TCLP test for the slag should be submitted following MoEFCC method, HSM – 2008
- ii) One month monitoring and analysis data for the parameters of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> and CO should be submitted.
- iii) ToR point No 46 is not properly addressed in the EIA report. Revised report on ToR no 46 should be submitted. Nearest Hospitals/Health Centres data for the last 3 years should be submitted in a tabular form.
- iv) Details of secondary emission control measures should be submitted

3.0 The PP submitted information and the proposal was placed in the 45<sup>th</sup> reconstituted EAC (Industry) Meeting on 11<sup>th</sup> August 2015 and the Committee recommended the project for EC. However, the competent authority asked the PP to submit the documents for validity of ToR and date of submission of EIA/EMP report to the ministry with a proof of application. Then, PP submitted application for issue of fresh ToR on 30<sup>th</sup> May 2016. The proposal was considered in the 8<sup>th</sup> Expert Appraisal Committee (Industry) [EAC (I)] during its meeting held on 27<sup>th</sup> – 28<sup>th</sup> June 2016 and recommend the ToR with exemption of Public hearing process and only collecting one month data and submit EIA/EMP to the ministry. However, the matter was further examined in the ministry and decided that, the project proponent has to conduct full one season baseline study and also public consultation process for the project. The Ministry has prescribed the ToRs with a condition of Public Hearing to be conducted by Odisha Pollution Control Board vide letter dated 25.10.2016. The project proponent has applied for environmental clearance to the Ministry online on 22<sup>nd</sup> March 2017.

4.0 The committee noted that the PP has made an application without conduct of fresh public hearing as required under the Terms of Ministry's letter dated 25.10.2016. Therefore, the PP has not complied the prescribed ToRs. The committee after detailed deliberation, reached the opinion that the proposal cannot be considered at this stage. The PP is advised to make an application after conduct of Public hearing. *The proposal is differed for want of conduct of Public hearing as per the ToRs prescribed to the project proponent vide letter dated 25.10.2016.*

## 17.8 ANY OTHER ITEM

**17.8.1** Integrated Steel Plant (2.0MTPA), Cement Plant (1.4 MTPA) and Captive Power Plant (230 MW) at village Danapur, Taluk Hospet, District Bellary, Karnataka by **M/s B.M.M.Ispat Ltd** –for validity of Environmental Clearance as per clause 9 of EIA Notification 2006 regarding. [Proposal No. IA/KA/IND/3588/2010 dated 3<sup>rd</sup> March 2017, F.No. J-11011/236/2008-IA.II(I)]

Integrated Steel Plant (2.0MTPA), Cement Plant (1.4 MTPA) and Captive Power Plant (230 MW) at village Danapur, Taluk Hospet, District Bellary, Karnataka by **M/s B.M.M.Ispat Ltd** has obtained Environment Clearance vide F.No. J-11011/236/2008- IA II (I) dated 18<sup>th</sup> May 2010. The EC was valid for 5 years i.e. up to 17<sup>th</sup> May, 2015. As per the provisions of amendment in EIA notification vide SO 1141 (E), dated 29<sup>th</sup> April, 2015, the validity of EC will become 7 years i.e. up to 17<sup>th</sup> May, 2017.

2.0 M/s BMMIL obtained Consent for Establishment (CFE) and Consent of Operation (CFO) from Karnataka State Pollution Control Board has commissioned the following manufacturing units and they are in operation. The Status position of project implementation is as follows:

Sl. No.	Items	Unit	Capacity Granted	Existing Capacity / in operation	To be established
1	Iron ore beneficiation plant	MTPA	3.40	1.30	2.1
2	Palletizing Plant	MTPA	1.20	1.20	-
3	DR Plant	MTPA	0.70	0.70	-
4	EAF & BOF Steel making	MTPA	2.30	1.1	1.20
5	Rolling mills Hot strip mill Structural's /wire rods	MTPA MTPA	1.00 1.00	0.85	1.15
6	Oxygen Plant	TPD	2x500	1x 500	1x500
7	Power Plant	MW	230	3x70	20
9	Blast furnace	MTPA	1.70	-	1.70
10	Coke Oven	MTPA	0.80	-	0.80
11	Calcining	TPD	1,080	-	1080
12	Cement Plant	MTPA	1.40	-	1.40

3.0 The PP informed the following reasons for delay in establishing the Units:

- The State Government have allotted and handed over Project land [Private and Government Land] only in December 2012 after following due process of law, involving several meetings at different levels including State Government Secretariat level & Cabinet.
- The Hon'ble Supreme Court vide its order dated 29-07-2011 and 26-08-2011 has banned Iron Ore Mining Ore Operation in Bellary, Chitradurga & Tumkur Districts. This has resulted in scarcity of Iron Ore in the State and scaling down production capacity. However the ban was lifted by Hon'ble Supreme Court on 18.04-2013.
- The Steel Industries in Karnataka are facing crucial situation in procuring Quality Iron Ore for their Production activity. As per Honourable Supreme Court of India direction, Iron Ore has to be procured through E-AUCTION process only and existing Iron Ore Linkage agreements are not valid and they are not honoured. This has resulted obtaining Quality Iron Ore in time and hindered execution of project as planned.

- Due to domestic and global factors, the Indian Steel sector is facing severe narrowing in steel demand, there is a steep decline in construction, housing and infrastructure investments, falling investments in mining, metals and oil and gas due to a sharp fall in commodity prices. Our bankers were also very cautious and not forthcoming in financing the project.
- Chinese steel industry produces annually more than 650 MT of crude steel (more than half of global output), and flooded into the Indian and other world markets. On account of its low cost the Indian companies could not compete with the Chinese product and hence progress was retarded.

4.0 BMMIL informed the committee that the installation of various units and commissioning of operation would be completed within three years of extended validity period now sought. Accordingly, BMMIL requested for extension of validity of Environmental Clearance for a further period of three years w.e.f. 18.05.2017.

5.0 *The committee, after detailed deliberation recommended the extension of validity of EC for a further period of three years w.e.f 18.5.2017 and that the PP shall strictly adhere to time schedule submitted to the Ministry in this regard.*

**17.8.2** Expansion of Integrated Steel Plant (3.1 MTPA to 5.6 MTPA) at Meramandali, District Dhenkanal in Orissa by **M/s Bhushan Steel Limited** – amendment in EC condition. [Proposal No. IA/OR/IND/27427/2008 dated 7th March 2017, F.No. J-11011/829/200/-IA II (I)]

**M/s Bhushan Steel Limited** was granted environmental clearance for the expansion of Integrated Steel Plant (3.1 MTPA to 5.6 MTPA) at Meramandali, District Dhenkanal in Orissa vide the letter No. F No. J -11011/829/2008-IA II (I) dated 20<sup>th</sup> July 2012 wherein, as per specific condition No– XVIII, it was stipulated to transfer from wet to dry quenching of coke for Coke Oven Plants by September 2014.

2.0 It was informed that M/s Bhushan Steel Limited has initiated the process of ordering CDQ–1 & CDQ –2 Plant and entered into the Commercial Agreement with Nippon Steel for design & engineering and supply of imported equipment and started other proceedings. Some of the activities have completed of CDQ projects. The delay was due to severe financial crisis.

3.0 The PP made an application for extension of time line for completion of CDQ – 1 & 2 project and the request was considered in the 37<sup>th</sup> meeting of EAC (Industry) held on 30<sup>th</sup> April 2015 and recommended. The time line for completion of CDQ – 2 by May 2017 and CDQ - 1 by August 2017 by the ministry vide letter dated 30<sup>th</sup> September 2015.

4.0 It was informed that the erection of CDQ - 2 completed with an investment of Rs. 217.43 Crores out of total project cost of INR 284.81 Crore. Regarding CDQ - 1, the LC for Pre-Engineering established and civil work started at site in September 2016. The civil/piling work is under progress. The project execution will be taken on fast track after establishment of supply LC in favour of Nippon Steel, Japan once the finance in place. The work progress for both CDQ Projects largely suffered in between due to severe financial crisis in the company.

5.0 The proponent requested for time extension of for completion of CDQ – 2 for six months i.e. by November 2017 and for completion of CDQ-I for three years i.e. by August 2020

6.0 *After detailed deliberation, the committee recommended for grant of extension of time for completion of CDQ – 2 for six months i.e. by November 2017 and for completion of CDQ-I for two years i.e. by August 2019.*

**17.8.3** Integrated Steel Plant at village Bharatpur, Bhatapara, Dist. Raipur, Chattisgarh by **M/s Real Ispat & Power Limited** - Extension of validity of EC. [Proposal No. IA/CG/IND/3035/2009 dated 9<sup>th</sup> March 2017, F.No. J-11011/170/2009-IA.II(I)]

Integrated Steel Plant at village Bharatpur, Bhatapara, Dist. Raipur, Chattisgarh by **M/s Real Ispat & Power Limited** was granted Environment Clearance vide F.No. J- J-11011/170/2009-IA.II(I) dated 25<sup>th</sup> March 2010. The EC was valid for 5 years i.e. up to 24<sup>th</sup> March, 2015. As per the provisions of amendment in EIA notification vide SO 1141 (E), dated 29<sup>th</sup> April, 2015, the validity of EC will become 7 years i.e. up to 24<sup>th</sup> March, 2017. The proponent has made online application on 9<sup>th</sup> March 2017 vide proposal no. IA/CG/IND/3035/2009.

2.0 The PP informed that Consent to Establishment was obtained from Chhattisgarh Environment Conservation Board vide letter No. 2369/TS/CECB/2010 dated 23<sup>rd</sup> July 2010.

3.0 It was informed that total land required for the project is 300 Acres, of which 250.87 acers is private land and 49.13 acers is government land. Out of 250.87 acers of private land, 234.81 acers is acquired by the proponent and allocation is pending for 49.13 acers of government land and is in advance stage. It is also informed that water allocation was by state government and engineering plan approved by railways for proposed railway siding.

4.0 During detailed deliberation, the committee noted that the proposed project involves establishment of coal washery; pelletisation plant; sponge iron plant; sinter plant; blast furnace with PCM; steel melting shop with PCM; rolling mill; oxygen plant; coke oven plant; ferro alloy plant; WHRB power plant of total 80 MW capacity. It is also noted that no physical progress was made on the ground even after 7 years of the grant of EC and the total land required is not under the possession of the proponent. In view of number of components involved in the proposal, the completion of the project may not be possible within the requested 3 years' period of extension. *Therefore, the committee differed the proposal and advised the PP to make an application seeking fresh ToR.*

## **17.9 CASE FOR TERMS OF REFERENCE (ToR)**

**17.9.1** Installation of 2x5 MVA EAFs and 5x9 MVA SAFs for production of 257 TPD (89950 TPA) Ferro Alloys of **M/s Anjaney Ferro Alloy Ltd.** Unit II at Mouza Bhutberia No. – 17 P.O. Mihijam, Jamtara District, Jharkhand. Proposal No. IA/JH/IND/62898/2017 dated 2<sup>nd</sup> Mar, 2017 F.No IA-J-11011/128/2017-IA-II(I) -- 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.*

**17.9.2** Expansion of Shri Badrinarain Alloys & Steels Limited (Induction Furnaces of 2x8 T, 1x6 T, 2x10 T - 1,94,400 TPA Billets / Ingots and 1,62,000 TPA CTD & TMT Bars) by installation of Sponge Iron Plant (3x100 TPD Kilns), Induction Furnaces (3x10 T)

along with 12 MW capacity Captive Power Plant (6 MW WHRB + 6 MW AFBC utilising waste heat & dolochar from the proposed sponge plant ) located at Tulsibera Road, village Kulgachia, P.S.Ulubera, Mouza Sreerampur, Dist Howrah, West Bengal. [Proposal No. IA/WB/IND/62966/2017, F.No. J-11011/432/2008-IA II (I)] – For ToR

M/s Shri Badrinarain Alloys & Steels Limited operating (Induction Furnaces of 2x8 T, 1x6 T, 2x10 T - 1,94,400 TPA Billets / Ingots and 1,62,000 TPA CTD & TMT Bars) with the Consent operate from the West Bengal pollution Control Board vide consent order no. C0097218 dated 30.07.2015.

2.0 Now, it is proposed to install a new manufacturing unit for production of Sponge Iron, Billets/Ingots & Power at existing plant premises. The proposed project will be installed on the available land within the existing plant premises and some adjacent land owned by the company, totalling to 50 acres (20.23 Ha), out of which 16.5 acres (6.68 Ha) land will be used for green belt development.

3.0 Total project cost is approx. Rs. 148.13 Crores. Proposed employment generation from the proposed project will be 334.

4.0 The proposed as well as existing capacity for different products for entire project as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
<b>Existing Unit:</b>			
Induction Furnaces	5	Induction Furnaces (2x8 T, 1x6 T, 2x10 T)	1,94,400 TPA Billets / Ingots
Rolling Mill	1	1,62,000 TPA	1,62,000 TPA CTD & TMT Bars
<b>Proposed Unit:</b>			
Sponge Iron Plant	3	3x100 TPD Kilns	99,000 TPA Sponge Iron
Induction Furnaces	3	Induction Furnaces (3x10 T)	93,000 TPA Billets`
Captive Power Plant	1	12 MW	12 MW Power (6 MW WHRB based & 6 MW AFBC based, utilising waste heat and dolochar from proposed Sponge Iron Plant)

5.0 The electricity load of 15.6 MVA will be procured from Proposed 12 MW Capacity CPP & Damodar Valley Corporation (DVC). Proposed raw material and fuel requirement for project are Iron Ore (1,58,400 TPA), Dolomite/lime stone (4950 TPA), Pig Iron (14,250 TPA), Iron Scrap (14,350 TPA), Imported coal (1,24,836 TPA) etc.

6.0 Water Consumption for the proposed project will be 60.5 cu.m/hour. There will be no discharge of Industrial waste water (zero liquid discharge plant). Industrial waste water will be treated properly and will be reused in the plant area. Domestic wastewater will be treated in STP and treated waste water will be used in greenery.

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

8.0 After detailed presentation by the Project Proponent along with environmental consultant M/s Envirotech East Pvt. Ltd., Kolkata, the committee noted the following:

- i) The project is operating since 1983 with the consent to operate from the West Bengal Pollution Control Board.
- ii) There is no green belt developed by the project proponent as per the norms of CPCB i.e. 33% of total project area.

9.0 *After detailed deliberations, the Committee felt that, the project proponent is failed to develop the greenbelt required, since inception of the project and the PP has no concern on the environment protection measures. In view of this, the proposal is deferred and the project proponent was asked to submit fresh application after planting of saplings in the mandated 33% of the existing plant area*

**17.9.3** Proposed expansion of existing plant, MS, SS & Alloys billets/ingot from 220TPD to 750TPD, MS, SS & Alloys Bars, Rods and flat bars from 125TPD to 750TPD and bright bars 75 TPD by **M/s Jailaxmi Casting and Alloys Ltd.**, at Gut No. 74 & 75, Phalora, Paithan, Aurangabad, Maharashtra. [Proposal No. IA/MH/IND/63071/2017, F.No. IA-J-11011/131/2017-IA-II(I)]

M/s. Jailaxmi Casting And Alloys Pvt. Ltd. proposes to expand manufacturing capacity existing industrial unit for production of steel Billet/Ingot and Bar & Rods located at Gut No. 74,75 and 53, Village – Pharola & Mhalora, Telsil: Paithan, Dist: Aurangabad, Maharashtra.

2.0 The land area acquired for the proposed plant is 8.8 Ha. [88,200 m<sup>2</sup> (45,000 + 43,200 m<sup>2</sup>)]. 8.8 Ha. out of which 1.5 Ha land will be used for green belt development.

3.0 Total project cost is approx Rs. 73.72 Crore. Proposed employment generation from proposed project will be 550 nos. direct employment and indirect employment.

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

S. No.	Particulars	Existing	Proposed	Total
1	MS, SS & alloys billet/ingot (TPD)	220	530	750
2	MS, SS & alloys bars & rods, flats bars (TPD)	125	625	750
3	Proposed bright bars (TPD)	00	75	75

5.0 The electricity load of 30 MW will be procured from MSEDCL Company has also proposed to install 1 No. of 1000 kVA DG Set.

6.0 Fuel consumption will be mainly electricity, coal & FO. Proposed raw material and fuel requirement for project are;

S. No.	Name	Qty (TPD)	Source	Transportation
1	Sponge Iron	324	Raipur	Road
2	Scrap	486	Local	Road



	Ferro alloys as			
3	FeMn	7.5	Raipur	Road
4	SiMn	2.0	Raipur	Road
5	Moly	0.5	Imported	Road
6	Ni	1.0	Imported	Road
7	Coal	60	Chandrapur	Road
8	Furnace oil	20 kl	Mumbai	Road

7.0 Water Consumption for the proposed project will be 166m<sup>3</sup>/day and waste water generation will be 28 m<sup>3</sup>/day. Domestic waste water will be treated in STP and industrial waste water generated will be reused for process.

8.0 No National Park/WL etc are located near the site/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.

9.0 After presentation made by PP along with Ultra Tech Environment Consultancy and laboratory, the committee noted that following

- i) The mandated green belt of 33% of the project area is not available in the existing plant.
- ii) The expansion proposal was made without 33% of the green belt in the plant area. The PP has proposed plantation outside the plant area in lieu of the greenbelt within the plant area as there is no sufficient area is available in the proposed expansion.

**10.0 *After detailed deliberation, the committee noted that the proposed area for the expansion is not suitable. Therefore, the proposal is deferred and advised to make layout plan with 33% greenbelt at the proposed site itself or amendment in the existing CTO for further consideration of proposal.***

**17.9.4** Proposed Expansion in Paper Production Capacity from 45 TPD to 100 TPD at 9th km stone Nagina Road, Village Abdullpur Munna, Tehsil & District Bijnor (Uttar Pradesh) by **M/s Mohit Paper Mills Limited**. [Proposal No. IA/UP/IND/63181/2017, F.No. IA-J-11011/130/2017-IA-II(I)] --- ToR

Mohit Paper Mills Ltd. is a manufacturer of 45 TPD writing and printing paper from agro residual & recycled fibre at 9<sup>th</sup> Km Stone, Nagina road, Village Abdullpur Munna, Tehsil & District Bijnor (Uttar Pradesh).

2.0 The company has proposed the expansion in paper production capacity from 45 TPD to 100 TPD by up-gradation, modernization and efficiency improvement in process within existing plant premises.

3.0 The total plant area is 11.45 ha out of which 3.8 ha (33% of total plant area) has been already marked for greenbelt/ plantation & the same will be maintained & further dense.

4.0 The expansion will be done within the existing plant premises; hence, there will be no additional land requirement.

5.0 Total project cost is 6.0 Crore rupees. Total manpower requirement after the proposed expansion project will be 300 direct employment and 100-150 indirect employment.

6.0 The proposed expansion capacities for different products are given below:

Units	Existing Capacity	Additional Capacity	Total Capacity after Expansion
Paper Production from Agro-waste	45 TPD	55 TPD	100 TPD
Co-generation Power Plant	4.5 MW	Nil	4.5 MW
Chemical Recovery Plant	100 TPD	Nil	100 TPD

7.0 Total power requirement after proposed expansion will be 4.5 MW, which is being/ will be sourced from 4.5 MW Co generation power plant, D.G. Sets - 2 Nos. with capacity 1250 & 625 KVA each (for emergency only).

8.0 Raw materials of the project include: Bagasse (Sourced from nearby sugar mills via trucks) or wheat straw (Sourced from local suppliers via trolleys); Imported soft wood pulp/ imported waste paper (Sourced from European countries via sea, rail & road); Soap stone powder (Sourced from local suppliers via trucks); Chemicals like caustic soda, Lime, AKD, OBA, DSR, and Chlorine which is being/ will be procured from local chemical suppliers via truck; Fuel is/ will be agro waste such rice husk, bagasse pith which will be procured from local suppliers via trucks. (15% coal as auxiliary fuel is being/ will be used).

9.0 Total water requirement after the proposed expansion will be 4005 KLD (Existing requirement is 1805 KLD and additional 2200 KLD), which is being/will be sourced from groundwater. Wastewater generated in the process is being/ will be treated in ETP and quality of treated water is being/ will be maintained as per the standards of UPPCB and Charter, 2015. A part of treated water (50%) will be recycled in the process itself and the remaining (50%) will be discharged in the drain. Domestic waste water is being/ will be scientifically treated and is being/ will be used in greenbelt/ plantation development. Continuous online monitoring system for treated water has already been installed by the company.

10.0 Black liquor generated in the pulp section of the plant is being/will be sent to CRP for the recovery of soda ash and is being/will be sold to sodium silicate & glass industry or caustic manufacturing for self consumption.

11.0 The PP has made detailed presentation on the proposal. It is noted that the existing plant is operating with CTO. It is noted that the effluents discharged into the Nala are finally meeting into the Ganga River.

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

- i. Since the effluents discharged are finally meeting in the River Ganga, the PP shall comply with the Ganga Action Plan in consultation with the concerned department. Action plan for minimisation of utilisation of water by recycling and reuse shall be clearly laydown in the EIA /EMP report.
- ii. The process flow diagram including flowrates and the capacities of the pollution control equipment shall be mentioned clearly with material balance. The water balance diagram shall be separately mentioned with quantities.

- iii. Public Hearing to be conducted by the Uttar Pradesh Pollution Control Board.
- iv. 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.
- v. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

**GENERIC TERMS OF REFERENCE (ToR) IN RESPECT OF INDUSTRY SECTOR**

1. Executive Summary
2. Introduction
  - i. Details of the EIA Consultant including NABET accreditation
  - ii. Information about the project proponent
  - iii. Importance and benefits of the project
3. Project Description
  - i. Cost of project and time of completion.
  - ii. Products with capacities for the proposed project.
  - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
  - iv. List of raw materials required and their source along with mode of transportation.
  - v. Other chemicals and materials required with quantities and storage capacities
  - vi. Details of Emission, effluents, hazardous waste generation and their management.
  - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
  - viii. The project proponent shall furnish the requisite documents from the competent authority in support of drawl of ground water and surface water and supply of electricity.
  - ix. Process description along with major equipments and machineries, process flow sheet (Quantative) from raw material to products to be provided
  - x. Hazard identification and details of proposed safety systems.
  - xi. Expansion/modernization proposals:
    - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Cahnge as per circular dated 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/PCC shall be attached with the EIA-EMP report.
    - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
4. Site Details
  - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

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

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

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

**6. Environmental Status**

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

## 7. Impact Assessment and Environment Management Plan

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

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

## 8. Occupational health

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

## 9. Corporate Environment Policy

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

- iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. Enterprise Social Commitment (ESC)
- i. To address the Public Hearing issues, 2.5% of the total project cost of (Rs. ....crores), amounting to Rs. ....crores, shall be earmarked by the project proponent, towards Enterprise Social Commitment (ESC). Distinct ESC projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These ESC projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/ donations and or free camps shall be included in the above ESC budget
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. 'A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF 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

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**ADDITIONAL ToRS FOR PELLET PLANT**

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. PM(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.

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### **OKE OVEN PLANT**

1. Justification for selecting recovery/non-recovery (beehive) type batteries with the proposed unit size.
2. Details of proposed layout clearly demarcating various facilities such as coal storages, coke making, by-product recovery area, *etc* within the plant.
3. Details of coke oven plant (recovery/non-recovery type) including coal handling, coke oven battery operations, coke handling and preparation.
4. Scheme for coal changing, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

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### **ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS**

1. Type of the project – new/expansion/modernization
2. Type of fibres used (Asbestos and others) and preference of selection from techno-environmental angle should be furnished
3. As asbestos is used in several products and as the level of precautions differ from milling to usage in cement products, friction products gasketing, textiles and also differ with the process used, it is necessary to give process description and reasons for the choice for selection of process
4. Technology adopted, flow chart, process description and layout marking areas of potential environmental impacts
5. National standards and codes of practice in the use of asbestos particular to the industry should be furnished
6. In case of newly introduced technology, it should include the consequences of any failure of equipment/ technology and the product on environmental status.
7. In case of expansion project asbestos fibre to be measured at slack emission and work zone area, besides base line air quality.
8. In case of green field project asbestos fibre to be measured at ambient air.

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## **INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE**

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

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## **METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)**

1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with recording with proper calibration system
4. Details on toxic metals including fluoride emissions
5. Details on stack height.
6. Details on ash disposal and management
7. Complete process flow diagram describing process of lead/zinc/copper/ aluminium, *etc.*
8. Details on smelting, thermal refining, melting, slag fuming, and Waelz kiln operation
9. Details on Holding and de-gassing of molten metal from primary and secondary aluminium, materials pre-treatment, and from melting and smelting of secondary aluminium
10. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
11. Trace metals in waste material especially slag.
12. Plan for trace metal recovery
13. Trace metals in water

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## Executive Summary

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

- i. Project name and location (Village, Dist, State, Industrial Estate (if applicable))
- ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
- iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
- iv. Process description in brief, specifically indicating the 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

**Air Pollution**

<b>Plant /Unit</b>	<b>Pollutant s</b>	<b>Qty generate d</b>	<b>Method used to Control/ and specifications/attach Separate Sheet to furnish Details</b>	<b>Number of units planned &amp; Capacity</b>	<b>Budge t</b>	<b>Estimated Post Control Qty of Pollutant</b>	
						<b>Per Unit</b>	<b>Per Day</b>

**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> April 2017	7 <sup>th</sup> April 2017	
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	
<b>Members</b>					
2.	Dr. S. Panwar, Central Pulp and Paper Research Institute	Member	A	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. Sidd, 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	A	A	
12.	Shri Santosh Raghunath Gondhalekar	Member	P	P	
13.	Shri Ashok Upadhyay	Member	P	P	
15.	Shri Sharath Kumar Pallerla, Scientist 'F' / Director, MoEF&CC	Member Secretary	P	P	
16	Shri Rajasekhar Ratti, Scientist 'C', MoEF&CC	Dy. Director	P	P	

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