

## **MINUTES OF 31<sup>st</sup> MEETING OF THE RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY) HELD ON 8<sup>th</sup>-9<sup>th</sup> JANUARY 2015**

**31.1** Opening Remarks of the Chairman

**31.2** Confirmation of the Minutes of the 29<sup>th</sup> Reconstituted Expert Appraisal Committee (Industry) held during **11<sup>th</sup>-12<sup>th</sup> December 2014.**

The minutes of the 29<sup>th</sup> EAC(I) meeting on Industry-1 projects were confirmed subject to the following corrections:

Agenda No. 29.6.2: Subject title: the word "Uttarakhand" is replaced by "Uttar Pradesh". In Para 8, 2<sup>nd</sup> last line: Excess treated water of 225KLD shall be disposed off in the drain after meeting prescribed standards and not sent to CETP for further treatment as stated in the minutes. The unit is not located in an industrial area and there is no CETP. The project comes in the purview of RO, Lucknow and not RO, Chandigarh and this is replaced in all such reference.

Agenda Item No. 29.3.1 Correction as given in agenda Item No.31.9.3

Agenda Item No. 29.5.4 F.No. J-11011/158/2008-IA.II(I) is replaced by F.No. J-11011/467/2010-IA.II(I)

Agenda Item No. 29.5.5 F.No. J-11011/467/2010-IA.II(I) is replaced by F.No. J-11011/158/2008-IA.II(I)

### **THURSDAY, 8<sup>th</sup> JANUARY 2015**

#### **31.3 Environmental Clearance**

**31.3.1** Proposed Mill Expansion Plan to Increase Paper production from 135000TPA to 210000TPA and Increase in Captive Cogeneration Plant from 45.9MW to 90.9MW of **M/s Trident Ltd.** at village Dhoula, Tehsil & Dist. Barnala, Punjab (EC) (J-11011/1/2013-IA.II(I) TOR dated 25.04.2013)

M/s Trident Ltd (**herein after Project Proponent –PP**) and their EIA-EMP consultant M/s Chola MS Risk Services Limited - Chennai gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 6<sup>th</sup> meeting of the Expert Appraisal Committee (Industry) held on 5<sup>th</sup> – 7<sup>th</sup> March 2013 for preparation of EIA-EMP report. The TOR was awarded by MoEF&CC vide F.No. J-11011/1/2013-IA.II(I) dated 25<sup>th</sup> April, 2013 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 4<sup>th</sup> April, 2014 after conducting Public Hearing for grant of Environmental Clearance.

The proposal was exempted from Public hearing based on the Notification dated 3.3.2011 published in the Punjab Government Gazette on 22.03.2011 declaring 644 acres in village Dhoula, Fatehgarh Channa and Handiya of District Barnala, Punjab as an industrial area. The Ministry had vide letter dated 3<sup>rd</sup> June, 2014 informed PP to submit the EC obtained for the industrial area to the Ministry for further processing of the proposal. The matter was further examined in accordance with the OM dated 10<sup>th</sup> December, 2014 wherein Ministry has clarified that the exemption from Public Consultation, as provided for under

para 7(i) III. Stage (3)(i)(b) of EIA Notification, 2006 is available to the projects or activities or units located within the Industrial Estate or parks which are notified prior to 14.06.2006 i.e the EIA Notification coming into force. Therefore the matter was placed before the EAC. The proposed project activity is listed at S.No. 5(i) under Pulp and Paper under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

2. The salient points of the proposed project as per the final EIA-EMP report submitted by project authorities vide letter referred above in para 1 are as follows:

TLPD obtained Environmental Clearance (EC) for Mill Development Plan (MDP) during 2005 vide File no.J-11011/52/2005 IA-II(I) dated, 07.11.2005 for Paper production from 265TPD to 375TPD by upgrading PM # 1 to 110 TPD and installing PM # 2 of capacity 265 TPD and Captive generation from 9.4 MW to 49.4 MW. The industry obtained the Consent to Operate under Air (Prevention and Control of Pollution) Act, 1981, vide No. SEE (ZP-II)/SGR/APC/2012- 13/V-(371) V-413 dated, 23.07.2013 and further got renewed vide no. SEE (ZP-II)/SGR/APC/2012-13/V-(371)V-413 dated 23/7/2012, which is valid up to 22/1/2013 and further extended upto 22/1/2016. Consent to Operate under Water (Prevention and Control of Pollution) Act, 1974, vide no No. SEE (ZPII)/ SGR/WPC/2012-13/V-(399)V-518 dated, 23.07.2013 and further got renewed vide no. SEE (ZP-II)/SGR/WPC/2012-13/V-(399)V-518 dated 23/7/2012, which is valid up to 22/1/2013 and further extended upto 22/1/2016.

M/s Trident Limited Paper Division (TLPD) proposes to expand by implementing Mill Expansion Plan (MEP) with a view to improve technology, energy efficiency, marketability and long term environmental compliance. MEP will comprise the following:

- i. Up-gradation of paper machines #1 & #2 to increase production of paper from 375 TPD to 550 TPD
- ii. Up-gradation of the exiting ECF straw pulp mill to increase the capacity from 225 TPD to 280 TPD
- iii. Up-gradation of the existing ECF wood pulp mill to increase the capacity from 65 TPD to 150 TPD
- iv. Increase Captive Cogeneration Plant (CCP) from 49.4 MW to 90.9 MW by adding another 41.5 MW power plant.
- v. Upgrade / augment supporting sections consisting of chemical recovery, water intake, water treatment and wastewater treatment to match the above capacities

The EIA study was undertaken during October 2013 – January 2014. The TLPD mill area will be located within the coordinates of 30°17'57"N latitude and 75° 29'32'E longitude. The nearest railway station is Barnala (12.0 km), nearest airport is Chandigarh which is 175 km. The nearest village is Dhula which is 5 km. There are no major industries in the study area. The existing TLPD Mill has total land of 405 acres, including 210 acres comprising of vacant spaces, well covered with greenery & plantations using treated effluent. The proposed facilities will be located in the vacant spaces in the mill area and some of the roads and drains will be rerouted. About 20 acres of land is required for the MEP. No additional land is required as the proposed expansion is within the existing plant.

Details of fuel requirement for the existing and the proposed plant:

Input	Units	Existing (Pre- MEP)	Post MEP	Incremental
Furnace oil	Kla	9,100	4,600	(-)4,500

Coal for PG plant	tpa	-	25,600	25,600
Husk/Biomass	tpa	121,000	221,000	100,000
Coal (imported)	tpa	59,000	109,000	50,000
Coal (local)	tpa	169,000	310,000	141,000
Pet coke	tpa	29,000	52,000	23,000

Details of requirement of water for the existing operations and the proposed expansion are given below:

S. No	Water Requirement	Quantity (m <sup>3</sup> /d)
1	Total Fresh water requirement for Existing Operation	22,240
2	Additional Fresh water for MEP	8060
3	Total Fresh water requirement for post MEP	30,300
4	Water drawal permission from Uppli canal	25,000
5	Water abstraction Permission from the Central Ground Water Board	14,040

Details of the quantity of raw material required for the existing and the proposed facility:

Description	Unit	Pre-MEP	Post-MEP
Raw material requirement			
Straw	tpa	1,69,000	2,69,000
Wood	tpa	98,000	227,000

Ambient air quality monitoring has been carried out at 8 locations during October 2013 – January 2014 and the data submitted indicated: PM<sub>10</sub> (67µg/m<sup>3</sup> to 144µg/m<sup>3</sup>), PM<sub>2.5</sub> (38 to 87µg/m<sup>3</sup>), SO<sub>2</sub> (<5 to 18 µg/m<sup>3</sup>) and NO<sub>x</sub> (10 to 43µg/m<sup>3</sup>). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs would be 2.3µg/m<sup>3</sup>, 10µg/m<sup>3</sup> and 1.7µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> respectively. Hot Gas from BF will be treated in GCP before discharging to atmosphere. To control air emission in the plant, bag house, bag filters will be installed. The material handling section would be provided with dust suppression (DS) by water sprinkling at the stockyards and multiple dust extraction (DE)s. Good housekeeping practices will be adopted to control the fugitive emissions.

It was stated that MOU has been entered with cement companies – Ambuja for use of flyash. It was informed that the effluents are in great demand as farmers want it for irrigation. Effluents should be treated to prescribed norms before discharge into drains for external use. The company has proposed Black liquor evaporation ponds. Public hearing was conducted by PPCB on 30<sup>th</sup> September, 2014 at Existing premises of Trident Limited (Paper Division), Village Dhaula, District Barnala under the chairmanship of Sh. Jora Singh Thind, PCS, Additional Deputy Commissioner, Barnala. Approximately 950 people attended the public hearing. People requested for further assistance from Trident in creating employment opportunity for local people. Requested Trident to conduct more CSR activities in future in the surrounding area.

The Committee noted that the PP had acquired a large area of 170 ha as given in the EC letter No. J-11011/52/2005-IA-II(I) dated 7<sup>th</sup> November, 2005 for the purpose of using treated water for irrigation.

After detailed deliberations the Committee sought following additional information for further consideration of the proposal:

- i. Opacity data collected by the online monitoring system should be correlated with the particulate matter emission data and submitted.
- ii. CPCB issued Show Cause Notice on 3<sup>rd</sup> June 2014. Action plan w.r.t the SCN issued by CPCB should be submitted. Committee advised PP to get the SCN withdrawn and advised to comply with all the directions issued by CPCB.
- iii. NOx baseline data should be rechecked taking new data and air prediction modeling for NOx should be carried out on the new data and re-evaluated against the earlier values with different fuels used- furnace oil and Pet coke.
- iv. 2.5 % of the construction cost for the expansion project which includes 2% of the net retain profits should be furnished for the next 5 years should be earmarked for CSR related activity and the detailed breakup of the plan should be submitted.
- v. The extent of treated water being sent for in-situ irrigation and that let off in the drains for irrigation in nearby fields may be furnished. Details of crop productivity where it is used for irrigation (both in-situ as well as outside) – before and after use of effluents should be provided. In addition, sodium absorption ration (SAR) of the soil where it is being irrigated since the last EC should be furnished.

31.3.2 Proposed expansion of Ferro Alloys Plant with addition of 2x16.5 MVA SAF of **M/s T.S. Alloys Ltd.** at village Ananthapur, Tehsil Athagarh, Dist. Cuttack, Odhisa (EC) J-11011/43/2011.IA-II(I)

**M/s T.S. Alloys Ltd (herein after Project Proponent –PP)** and their EIA-EMP consultant M/s Visiontek Consultancy Services Private Limited - Bhubaneswar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 19<sup>th</sup> meeting of the Expert Appraisal Committee (Industry) held on 22<sup>nd</sup> – 23<sup>rd</sup> February, 2011 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/43/2011-IA.II(I) dated 13<sup>th</sup> April, 2011 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 12.03.2014 after conducting Public Hearing for grant of Environmental Clearance. The proposal was placed before the EAC for consideration. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

2. The salient points of the proposed project as per the final EIA-EMP report submitted by project authorities vide letter referred above in para 1 are as follows:

TS Alloys Ltd. (Formerly Rawmet Ferrous Industries Ltd.) is a Ferro alloy plant situated at Village Anantapur under Athagarh Block, District Cuttack of Odisha. It is an existing Ferro Alloys Plant operating since 2007. Latitude 20° 28' 11" N to 20° 58' 56" N Longitude 85° 44' 43" E to 85° 44' 11" E. The nearest village is Anantapur at 0.5km. Nearest town is Cuttack which is 10 km. NH - 42 Cuttack to Sambalpur is at 20 km SH – Baranga to Banki at 3.6km. Mahanadi River is at a distance of 0.5km. The nearest reserve forests are Chandaka R.F at 7.2 km, Sukasana R.F at 5.7 km and Subasi R.F at 4.8 km. Chandaka-Dampada WL Sanctuary & Nandankanan Zoo are located at 5.5 & 9.7 Km from plant site respectively. Application is in process for obtaining necessary recommendation from National Board of Wildlife. No migratory corridor of wildlife comes within 10 km radius of T. S. Alloys Ltd. The total capital

requirement for the proposed project has been estimated at Rs 130.95 croresRs.1300 Lakhs has been kept for proper environment management in and around the plant premises.

The unit is designed to produce Ferro-Chrome / Ferro-Manganese / Silico-Manganese from the same furnace. Presently it operates with 2 nos. of Submerged Electric Arc Furnace of 16.5 MVA capacity each with a production capacity of 59,400 TPA Ferro Chrome & 1,00,000 TPA capacity Briquetting Plant. The Ferro Chrome produced, meets the captive requirement of Tata Steel / domestic & international market. The proposed expansion is to establish additional 2 X 16.5 MVA Submerged Arc Furnace to enhance the production from 59,400 TPA to 1,20,000 TPA (along with modernization of existing Furnace); and to increase of Briquette production from 1,00,000 TPA to 2,00,000 TPA . The proposed expansion will be within the existing premises of 83.50 Acres and no additional land acquisition is envisaged.

#### Details of raw materials required for the project:

Sl. No.	Raw Materials	Annual Requirement in Tonnes	Source	Mode of Transportation
1	Chrome ore fines required to form chrome ore briquettes of 2,00,000 T	2,59,200	Mines in Odisha	Rail/Road
2	Chrome ore hard lumps	64,800	Mines in Odisha	Rail/Road
3	Friable lumps	12,340	Mines in Odisha	Rail/Road
4	Manganese ore (For Ferro Manganese)	3,06,800	Blended from MOIL, Odisha MOIL source; Special parcel from Balaghat	Rail/Road
5	Ferro Manganese slag	14,010	From own generation	Road
6	Lam Coke	72,000	Imported	Road
7	Quartzite	24,000	Local Source	Rail/Road
8	Dolomite	13,850	Local Source	Rail/Road
9	Magnesite	2,450	Local Source	Rail/Road
10	Electrode carbon paste	1,200	Indigenous	Shipping / Rail /Road
11	Hydrated lime	3,510	Indigenous	Road
12	Molasses	6,000	Indigenous	Road

Ambient air quality monitoring has been carried out at 8 locations during Dec 2013 to Feb 2014 and the data submitted indicated: PM<sub>10</sub> (28.60µg/m<sup>3</sup> to 68.60µg/m<sup>3</sup>), PM<sub>2.5</sub> (14.30 to 45.90µg/m<sup>3</sup>), SO<sub>2</sub> (<4.0 to 16µg/m<sup>3</sup>) and NO<sub>x</sub> (<9.0 to 19.60µg/m<sup>3</sup>). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.74094 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 3.16375 µg/m<sup>3</sup> with respect to the SO<sub>2</sub> 5.27292 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>. Dust extraction and dust suppression systems will be installed at appropriate locations. Attempts shall be made to cover all conveying system for raw materials; Jet Pulse bag filters and/or dry fog system at all dry material conveying and transfer points; Dust suppression system by water sprinkler at dump hopper of raw materials; Raw Materials will be fully covered during transportation to/ from the plant site by road/ rail; and Fugitive emissions will be regularly monitored by TSAL/external agencies on periodic basis as per statutory requirements and control measures upgraded if required.

Total power requirement for the project is 68.1 MVA (60 MW). It will be available from the 132 KV line of state transmission grid passing nearby. Subsequently, the power requirement will be met from the

CPP source. The water requirement of the plant after proposed expansion will be 2000m<sup>3</sup>/day. The lean season flow in River Mahanadi at its proposed intake point is 9157536m<sup>3</sup>/day, Out of which the total competing user consumption of water amounts to 409167 m<sup>3</sup>/day. Rain Water Harvesting facilities from roof top and other structures will be developed during proposed expansion and simultaneously storm water harvesting with recharge facility to ground water will also be made. The area receives an average annual rainfall of 1930.06 mm with an average annual intensity of 26.08 mm/day. The volume of run off water generated from the plant area considering monsoon average rain fall 32,192.55m<sup>3</sup>/annum.

The major part of the total water requirement shall be utilized for cooling water make up in furnace cooling system. The proposed project is expected to generate about 800 m<sup>3</sup>/day waste water through different sources. There would be an effluent treatment plant with adequate capacity to take care of the shop floor washings contaminated with suspended solids and oil and grease. The treated effluent will be recycled or reused for miscellaneous non production use. The plant would be designed on the concept of 'zero discharge' of plant effluent. The water used for furnace & gas cleaning plant operation are completely recycled with proper water treatment. The domestic effluents will be treated through STP of adequate size and the treated water shall be used for gardening. Canteen waste water is sent to soak pit through settling pit.

Of a total area of 83.5 acres, an area of about 28.50 acre has been earmarked for green belt development/plantation within the premises. Plantation has been carried over an area of 12.3 Acres. Further, the samplings shall be planted @2500 trees per ha and the width of the greenbelt around the plant premises shall be minimum 15m.

Public Hearing was conducted on 30.03.2013 at 11:30 A.M. at Anantapur Project U.P.School. Sri Laxmidhar Mohanty, Additional District Magistrate, Cuttack, Odisha supervised and presided over the public hearing process. The major issues raised during the Public Hearing are adequate air pollution control equipments, construction of by-pass road for transportation of material and construction of lavatory at factory truck parking area.

The Committee after detailed deliberations recommended the project for environmental clearance subject to stipulation of the following specific conditions and any other mitigative measures and conditions for environmental protection:

- i. The loss of chromium shall be further reduced.
- ii. Measures shall be taken to reduce PM levels in the ambient air. Stack of adequate height & diameter with continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm<sup>3</sup> and installing energy efficient technology.
- iii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 should be followed.

- v. Dust extraction system comprising of pulse jet type bag filter, centrifugal fan and motor, duct work including suction hoods, duct supports, stack, duct hopper, rotary air lock valves etc should be installed
- vi. Water sprinkling arrangements as well as dry fog system to control fugitive emission shall be undertaken.
- vii. Tap hole emissions shall be taken to GCP system by providing proper hood and suction system.
- viii. Water sprinkling at the raw material stockyard to control fugitive dust emissions
- ix. Driver system shall be provided at feeding point, transfer point at proportioning system to control fugitive dust emission.
- x. Dust suppression system and bag filters shall be installed to control the fugitive dust emissions at conveyor and transfer points, product handling, loading and unloading points.
- xi. The water consumption shall not exceed as per the standard prescribed for the steel plants.
- xii. Efforts shall further be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly.
- xiii. All the effluent shall be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage shall be treated in septic tank followed by soak pit.
- xiv. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.
- xv. Slag produced in Ferro Manganese (Fe-Mn) production shall be used in manufacture of Silico Manganese (Si-Mn). All the other ferro alloy slag shall be used in the preparation of building materials.
- xvi. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xvii. As proposed, green belt shall be developed in 33 % of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xviii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.
- xix. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs. The proponent shall prepare a detailed CSR Plan for every next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the

local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO, Bangalore. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.

- xx. The concrete drains shall be de-silted and regular supervision of the areas shall be carried out so that blocking of drains may be avoided for quick discharge of rainwater.
- xxi. Rainwater harvesting scheme shall be prepared so that the rainwater can be collected, re-used and may be used for ground water recharge.
- xxii. Monitoring report on Ambient Air Quality, fugitive dust and noise levels inside the plant shall be submitted along with the 6 monthly compliance report
- xxiii. Environmental Management Cell shall be established immediately and shall be headed by a Senior Officer and the mandate of the Cell shall be defined for effective management of environment control measures. The project shall employ an Environmental officer who would be technically qualified to look after various pollution control measures.
- xxiv. The project shall develop its own website to upload compliance measure taken to reduce pollution and to ensure implementation of transparency with general public.

### 31.3.3 Steel Manufacturing Unit of **M/s Bhawani Castings Pvt. Ltd.** at vill. Ambey Majra, Mandi Gobindgarh, Fatehgarh Sahib, Punjab (F.No.J-11011/398/2011-IA.II(I))

M/s Bhawani Castings Pvt. Ltd. (*herein after Project Proponent –PP*) and their EIA-EMP consultant M/s Envirotech (India) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 27<sup>th</sup> meeting of the Expert Appraisal Committee (Industry) held on 26-27<sup>th</sup> August 2011 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/398/2011-IA.II(I) dated 9.9.2011 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 29.11.2014 after conducting Public Hearing for grant of Environmental Clearance. It was noted that the consultant was not accredited by QCI/NEBAT, however, the consultant has produced stay order during the presentation. The proposed capacity of the unit after expansion will be 72,000 MTA Billets, MS Ingots, Bars & Flats and 72,000 MTA Structural steel. The Unit falls in Category B as per schedule; but being situated within 10 km of the Critically Polluted Area of Mandigobindgarh (Item No. ii of GC), the Environmental Clearance is to be given by Environment Impact Assessment Authority, GOI, New Delhi.

2. The salient points of the proposed project as per the final EIA-EMP report submitted by project authorities vide letter referred above in para 1 are as follows:

M/s Bhawani Castings Pvt. Ltd. is a Steel manufacturing Unit which is already manufacturing 36000MTA Steel Ingots at Village Ambey Majra, Tehsil- Mandi Gobindgarh, Distt-Fatehgarh Sahib, Punjab. The Industry now proposes to enhance the capacity of the unit by addition of Two no. Induction furnaces of capacities 10TPH & 7TPH each. It also proposes to install 1 no. rolling mill for manufacturing structural

steel section like TMT Bars & flats etc. The capacity of the unit after expansion will be 72,000 MTA Steel Ingots & 72,000 MTA TMT bars, flats. The total area of the plot is about 5 acre. There are no Wild Life Sanctuaries, Reserved /Protected Forests or Defence Installations, Rivers and Hill Ranges within 10 km of the project. It is about 5 kms from Mandi Gobindgarh and about 50 km from Chandigarh. Total cost of the Project is 12 crores and 52 lakhs have been provided for pollution control Measures. About 4 lakhs will be spent on annual maintenance of such measures.

The raw materials used are MS/CI Scrap, Sponge/Pig Iron, Silico Manganese. These will be sourced from Domestic as well as International Markets. The raw materials used in the manufacturing of structural sections is Steel Ingots and Billets which will be sourced from own unit.

The water requirement for domestic purpose will be 10 KLD and for cooling purpose will be 25 KLD. There is no use of water in the process. So the total water requirement will be 35 KLD. The total power demand for the unit after expansion shall be about 8380 MW. This demand will be met by sourcing power from Punjab State Power Corporation Limited from the nearby Sub-station. There will be about 70 persons working in the unit. The unit is situated in the critically Polluted area of Mandi Gobindgarh.

About 240 Ton/annum slag received from the manufacturing process shall be given to cement plant for further use. There is no process of waste water. Domestic waste water shall be treated through S.T.P. and the same will be used within the premises for plantation. In addition to the existing plantation, it is proposed to plant 100 no. of long leaved, low maintenance and moderate to fast growing species based on agro- climatic zones specified by PAU, Ludhiana along the boundary of unit.

Solid/hazardous wastes in the unit are expected from slag from the furnaces, solids from the Bag filters & Cyclones and sludge from S.T.P. Solids from Bag filters contain traces of metals in addition to dust etc. as such these will be collected separately in a dumping pit and sent to TSDF site for disposal. Slag from the furnace (about 23.5 Ton per day) received from the manufacturing process shall be used for filling of low lying area or for road making. STP sludge will be used within the premises as manure for plantation.

Ambient air quality monitoring has been carried out at 8 locations during December 2011 – February 2012 and the data submitted indicated:  $PM_{10}$  ( $76.9\mu\text{g}/\text{m}^3$  to  $96.8\mu\text{g}/\text{m}^3$ ),  $PM_{2.5}$  ( $30.1$  to  $47.3\mu\text{g}/\text{m}^3$ ),  $SO_2$  ( $11.5$  to  $18.5\mu\text{g}/\text{m}^3$ ) and  $NO_x$  ( $24.0$  to  $30.8\mu\text{g}/\text{m}^3$ ). For Air Pollution Control, Cyclones & Bag filters have been provided on Induction furnace and Scrubber on rolling mills. There will be generation of emission containing SPM. All the processes are closed circuit; as such emission to the atmosphere will be minimal. However, APCD, cyclone, bag filters will be provided at the exit point to arrest particulate matters.

Public Hearing of the project was conducted by PPCB at site on 23.10.2012 under the Chairmanship of Shri Praveen Kumar Thind, IAS, Additional Deputy Commissioner, Fatehgarh Sahib. Major issues raised during the public hearing are road in the village in very bad shape and the same should be got repaired immediately, residents of the area will get employment from the expansion plan of the industrial plant.

It was stated that CTO was granted on 23.05.2013 and renewed for 3 years. The Committee noted that the greenbelt development is very poor and details of green belt development should be furnished along with photographs as part of compliance report submitted on EC.

The Committee after detailed deliberations recommended the project for environmental clearance subject to stipulation of the following specific conditions and any other mitigative measures and conditions for environmental protection:

- i. Compliance report for CTO issued by PPCB shall be submitted to the Ministry and to the RO at Chandigarh.
- ii. Measures shall be taken to reduce PM levels in the ambient air. Stack of adequate height & diameter with continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels within prescribed standards and installing energy efficient technologies.
- iii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled as per G.S.R. 612 (E) dated 25.08.2014. Guidelines/Code of Practice issued by the CPCB shall be followed.
- iv. Efforts shall further be made to use rainwater from the rain water harvesting sources. Capacity of the reservoir shall be enhanced, if required, to meet the maximum water requirement. The Plant shall operate on a zero discharge concept.
- v. The wastewater generated shall be fully treated in an ETP and reused for plantation/greenbelt development. The Plant will operate on a zero discharge concept.
- vi. Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.
- vii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2010. All the fly ash shall be provided to cement and brick manufacturers for further utilization Bottom ash shall be fully utilized for road construction. Details of Memorandum of Understanding entered shall be submitted to the Ministry's Regional Office at Bhubaneswar.
- viii. Hazardous materials such as lubricating oil, compressed gases, paints and varnishes required during construction phase shall be stored properly as per the regulations at isolated places and used/recycled as per the E(P)A Rules, 1986.
- ix. All vehicles and construction machinery are properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.
- x. Green belt consisting of a 3-tier plantation of trees with thick canopy shall be developed all along the periphery of the plant, vacant areas, transfer points, etc , as part of 33% of total plant area.
- xi. Noise level shall be reduced by stopping leakages from various steam lines, compressed air lines and other high pressure equipment; and provide noise proof cabins to operators where remote control for operating noise generating equipment is feasible.
- xii. Disaster management plan shall be prepared and implemented. Regular drills thereof shall be conducted.

- xiii. All the commitments made to the public during public hearing/public consultation shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiv. Company shall develop an HSE Policy. All the permanent workers shall be covered under ESI Scheme. The company shall have the provision for treatment of its workers at the local Nursing Homes & Hospitals in case of emergency. Annual Medical Check-up on some medical parameters like Blood test, Chest X-Ray, Eye test, Audiometry, Spirometry etc. shall be conducted amongst the employees of the Company and records maintained thereof.
- xv. At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs. The proponent shall prepare a detailed CSR Plan for every next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO, Bangalore. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.

31.3.4 Proposed Low and medium Carbon Ferro Manganese (6000 TPA) Plant of **M/s Vulcan Alloys** at Plot No.B-23, MIDC, Butibori, Dist. Nagpur, Maharashtra (**EC**) (J-11011/35/2012-IA.II(I))

M/s Vulcan Alloys (herein after Project Proponent –PP) and their EIA-EMP consultant M/s Anacon Labs gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 36<sup>th</sup> meeting of the Expert Appraisal Committee (Industry) held on 24<sup>th</sup>-25<sup>th</sup> May, 2012 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/35/2012-IA.II(I) dated 15<sup>th</sup> June, 2012 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 31.12.2013. Public Hearing has been exempted for the project since the project is located within Butibori MIDC Industrial Area. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

2. The salient points of the proposed project as per the final EIA-EMP report submitted by project authorities vide letter referred above in para 1 are as follows:

M/s Vulcan Alloys has Proposed Low and medium Carbon Ferro Manganese (6000 TPA) Plant located at B-23 Butibori MIDC area, Tehsil-Hingna, District- Nagpur, State- Maharashtra. Latitude 20°55'41.31"N, Longitude 78°57'26.07"E. The total land requirement for the project area will be 1800 m<sup>2</sup>. The land is part of the Butibori MIDC Industrial Area. Plant site elevation is 274 m above MSL. The nearest highway is NH-7 (Butibori to Nagpur) (3.88Km, ESE). Nearest railway station is Butibori Railway station (5.95 Km, E ). River Krishna is 1.46km (SW) & Vena River, is 2.71 Km (E), Wadegaon Lake is 7.66 km E, Nanhi Lake is 9.5 Km W. No protected areas as per Wildlife Protection Act,1972 (Tiger reserve, Elephant reserve,

Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves) exists with 10 km radius of the plant boundary.

PP has stated that there is one furnace. The raw materials sources and composition required for proposed project are given in the following table. The principal raw materials to be used are manganese ore and bearing slag, aluminium and lime.

Following table shows the requirement of raw material and its capacity

S. N.	PRODUCT	CAPACITY (TPA)
1.	Low and Medium Carbon Ferro Manganese	6000
<b>Raw materials to be used for the production</b>		
2.	Manganese Ore	7500
3.	Silico Manganese	4500
4.	Aluminium	1000
5.	Lime	2000

Total quantity of raw water required – 8KLD. MIDC Butibori has water supply network for the individual industry. The current permitted power demand from the MIDC 200 hp, which will suffice for the ferro alloys plant. There is no special requirement for power; the power requirement can be fulfilled by the existing facilities provided by MIDC. One DG set of 627 KVA will be kept stand by in case of power failure. During the construction phase work will be generated for skilled, semiskilled and unskilled labours Technical persons will be recruited during the operation phase. It is estimated to employ direct indirect employment of 20 people of various skills for the plant.

TOR was issued on 07.08.2009. Moratorium was imposed on 31.01.2010 to 05.07.2011 and re-imposed on 17.09.2013 to 10.06.2014. Baseline collected during March-May 2009 and revalidated in March- May 2013.

Ambient air quality monitoring has been carried out at 8 locations during March-May 2014 and the data submitted indicated: PM<sub>10</sub> (38.0 -64.8 µg/m<sup>3</sup>), PM<sub>2.5</sub> (9.5-28.4 µg/m<sup>3</sup>), SO<sub>2</sub> (4.8-8.9 µg/m<sup>3</sup>) and NO<sub>x</sub> (8.6-23.3 µg/m<sup>3</sup>). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs would be 0.7 µg/m<sup>3</sup>, 0.95 µg/m<sup>3</sup> and 1.9 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> respectively. At all the transfer points, dust collector will be installed along with bag filters. Water spraying will controlled the fugitive emissions from storage area as well as internal open storage yard. Bag filters will be proposed for the plant with air cooler. Existing roads will be strengthened, if required, for transportation of material, goods etc.

As the water requirement is only for cooling and domestic purposes and there would be less wastewater generation from the plant. Hence at present there appears no requirement for any Effluent treatment plant. Domestic discharges from canteens and toilets would be channelized through proper sewage channel to soak pits. For any additional wastewater generation, it would be sent to existing CETP in MIDC for treatment.

The Committee desired that the coal from Belpahar and other coal mines from MCL be transported by conveyor. It was stated that there is a problem of land acquisition, but the matter would be pursued. The Committee also desired that a MOU be entered with for use of coal washery rejects.

The Committee after detailed deliberations recommended the project for environmental clearance subject to stipulation of the following specific conditions and any other mitigative measures and conditions for environmental protection:

- i. No Ferro Chrome shall be manufactured without prior approval from the Ministry of Environment & Forests.
- ii. The proponent shall examine the feasibility of transporting coal from Belpahar and other coal mines of MCL by closed conveyor. If the problem so land acquisition persists, the PP may examine laying of overhead conveyors. Until the conveyors become operational, the PP may use trucks of large capacity covered with tarpaulin.
- iii. Continuous monitoring facilities for the process stacks and sufficient air pollution control equipments viz. fume extraction system with bag filters, ID fan and stack of adequate height to submerged arc furnace shall be provided to control emissions below  $50 \text{ mg/Nm}^3$ .
- iv. Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- v. Stock piles of raw material should be stored in covered sheds. The bottom should be lined.
- vi. The total water requirement shall not exceed  $8\text{m}^3/\text{day}$ . The unit shall obtain requisite permission from the concerned authorities for water drawl. 'Zero' effluent discharge shall be strictly followed and no wastewater should be discharged outside the premises.
- vii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
- viii. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.
- ix. Slag produced in Ferro Manganese (Fe-Mn) production shall be reused/sold to potential buyers.
- x. An action plan for control of Cr and As in air and water shall be prepared and submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 6 months of issue of environment clearance letter.
- xi. Green belt should be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xii. At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on local needs and village-wise activity-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal.

Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office at Bhopal.

- xiii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall *inter-alia* address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xiv. Risk Analysis and Assessment and an On-Site and Off-site Emergency preparedness cum-Disaster Management Plan with emphasis on disaster prevention along with the control measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 6 months of issue of environment clearance letter.
- xv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

31.3.5 Proposed Integrated Steel Plant of **M/s Raipur Iron & Steel Co. Private Limited** at Lakhanpur, Dist. Jharsuguda, Odisha (EC) **TOR dated 07.08.2009** (J-11011/355/2009-IA.II(I))

M/s Raipur Iron & Steel Co. Private Limited (*herein after Project Proponent –PP*) and their EIA-EMP consultant M/s Anacon Laboratories Pvt. Ltd - Nagpur gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 1<sup>st</sup> meeting of the Expert Appraisal Committee (Industry) held on 20<sup>th</sup> – 21<sup>st</sup> July, 2009 for preparation of EIA-EMP report. The TOR was awarded by MoEF vide F.No. J-11011/355/2009-IA.II(I) dated 7<sup>th</sup> August, 2009 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 27<sup>th</sup> November, 2014 after conducting Public Hearing for grant of Environmental Clearance. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

2. The salient points of the proposed project as per the final EIA-EMP report submitted by project authorities vide letter referred above in para 1 are as follows:

M/s Raipur Iron & Steel Co. Pvt. Ltd. (RISCPL) is proposed to establish a mini integrated steel plant (incorporating sponge iron plant, induction furnace, rolling mill, ferro-alloy plant, coal based TPP, WHRB, FBC and coal washery). The proposed integrated steel plant envisages manufacturing the following products:

S. N.	Products	Proposed Capacity	Production Capacity
1.	Sponge Iron	1 X 350 TPD	1,15,000 TPA

2.	Induction Furnace	2 X 15 MT/Heat	99,000 TPA
3.	Rolling Mill	1 X 300 TPD	99,000 TPA
4.	Coal Washery	1 X 2.4 MTPA	2.4 MTPA
5.	Ferro alloys	2 X 9 MVA	30,000 TPA
6.	Total Power generation (33 MW)	WHRB from DRI plant	8 MW
		through FBC	25 MW

The details of raw material requirement, consumption per year, source of supply and mode of transportation is presented in the following table

Details	Consumption (per year)	Sources of supply	Mode of Transportation
<b>Raw Material for Coal washery</b>			
Raw Coal	24,00,000	MCL-Orissa	By Road (covered trucks)
<b>Raw material For sponge Iron</b>			
Iron Ore	184800	Barbil, Orissa	By Rail/ Road
Coal	149500	In – house- Coal Wash	By Covered conveyer
Dolomite	4620	NMDC/Orissa	By road (Covered trucks)
<b>Raw Material for Steel Melting Shop</b>			
Sponge iron	87500	In- house (SID)	By Covered conveyer
Scrap	26000	In- house	By Road (covered trucks)
Ferro Alloys	1000	In- house	----
<b>Raw Material for Rolling Mill</b>			
Billets	1,08,000 (99,000 In house + 9000 purchase)	In house (SMS) & purchase	----
Furnace oil	5445	Nearby Depot.	By road (Tankers)
<b>Raw Material for Ferro Alloys</b>			
Manganese Ore	60000	Local Areas	By Rail / Road
Dolomite	7450	Local Areas	By Road Covered trucks
Quartzite	20000	Local Areas	By Rail / Road
Electrode Paste	1050	Local Areas	By Road Covered trucks
Coal / Coke	23750	Local Areas	By Road Covered trucks
<b>Raw material for Power Plant (FBC Boiler)</b>			
Dolochar	34,650	In- house (SID)	By Road
Washery Rejects	2,10,000	In- house (Coal washery)	By Road

The proposed project of M/s Raipur Iron & Steel Co. Pvt. Ltd. will be located in village Kirarama, Tehsil Lakhapur, District Jharsuguda, Odisha. The site is situated at North latitude of 21°46'21.92" and East longitude of 83°53'10.23" and is on an average 200 meters above MSL. Total land requirement is 28.475 Acre out of which Govt. land is 7.05 acre, private land is 16.925 Acre and scheduled land is 4.5 Acre. The total water required for the proposed plant will be 4500 M3 /Day which will be sourced from Lirali nalla which is tributary of River IB. The nearest village is Kirarama (1.5 km), nearest town is Belpahar (6.9 km) NW, nearest Railway Station is Belpahar (6.9 km) NW. Nearest Airport is Raipur 335 km., nearest highway is N.H 200 (7.5 KM). No notified eco-sensitive areas, No historical/ archaeological No national

parks/wildlife sanctuary is present within 10km radius. Total project cost for the proposed plant is estimated as Rs 375 crores including Rs 20 crores on pollution control equipment

The proposed plant creates employment of 1000 people during construction and 466 people during operation phase. Total skilled, semi skilled and unskilled employment in the proposed plant will be 35, 65 and 100 respectively during operation phase.

The total power requirement for the plant is 29.7 MW. The substation will be adjacent to the embankment road at a suitable location. The intake pump house is proposed will be set up on the bank of river. The total power generation is proposed in the project will be 33 MW (8 MW from WHRB and 25 MW through FBC) and this power generated will be utilized for plant.

Ambient air quality monitoring has been carried out at 8 locations during March – May 2014. PM<sub>10</sub> concentration ranged from 28.1-59.5 µg/m<sup>3</sup> in summer 2009 and 26-74 µg/m<sup>3</sup> in summer 2014 in the study area. PM<sub>25</sub> concentration ranged from 9-42 µg/m<sup>3</sup> in summer 2014 in the study area. Concentration level of SO<sub>2</sub> ranged from 6-14.8 µg/m<sup>3</sup> in summer 2009 and 6-18 µg/m<sup>3</sup> in summer 2014 in the study area. The model simulations deal with dispersion of three major pollutants viz., Sulphur Dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>) and Particulate Matter (PM) emitted from the stacks. The maximum incremental ground level concentrations (GLCs) for PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> due to proposed units are carried out. The predicted 24 hourly maximum concentrations for PM10, SO2 and NOx are found to be 1.8 µg/m<sup>3</sup>, 21.0 µg/m<sup>3</sup> and 18.0 µg/m<sup>3</sup> respectively in proposed scenario.

Dust collector along with the bag filter will be installed at all the transfer points. The entire conveyor will be fully enclosed. Bag filters will be installed at the coal crusher and rotary breaker in the coal washery area. E.S.P. is proposed for control of Air Pollution, in the sponge iron kiln as well as CFBC. Bag filter is proposed for Ferro Alloys plant with Air cooler. Water spraying will control the fugitive emissions in the entire coal storage area, as well as in the internal open storage yards. For handling of ash – pneumatic ash handling system will be installed & the ash will be used as waste for land leveling, supply to Cement & Brick manufacturers. The fly ash silo will be installed at the boundary of unit by which a gravity ash flow pipe will facilitate immediate delivery of fly ash to all the bulkers coming in for carrying fly ash to cement plants.

Public Hearing was held on 14.7.2010 at 10.30 A. M. at village Kirarama Village, Tehsil - Lakhanpur, District Jharsuguda, Odisha. The major points of discussion were dust nuisance, deforestation and rise of heat, proposed waste water management plan, peripheral developmental work to be carried out in future

The Committee observed that the ToR was accorded in the year 2009 however, the final EIA report was submitted in the year 2014. PP mentioned that due to imposition of moratorium the EIA report cannot be submitted to the Ministry. The Committee also noted that the EIA consultant engaged by the PP for preparation of EIA/EMP report is not accredited for appraising A category projects.

3. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:-

- i. MoU with the cement plants for use of slag.

- ii. The Committee noted that the consultant is not accredited for the A category projects. All the data collected during the period March – May, 2014 should be revalidated by the accredited consultant and submitted
- iii. Details of MOU for use of coal washery rejects should be submitted
- iv. Detailed CSR plan for 5% of the project cost for the CSR related activity and the should be submitted.
- v. One month fresh AAQ data.

Further, the EAC(I) also noted that the TOR was granted on 07.08.2009. Moratorium was imposed in the region during 31.01.2010 to 05.07.2011. P.H. was conducted on 14.07.2010. The Committee observed that the PP had a window period between 05.07.2011 to 17.09.2013 when moratorium was lifted wherein the PP could have applied for EC. The Committee decided to refer the matter of validity of TOR to the Ministry before further consideration of the case.

### 31.4 FURTHER CONSIDERATION CASES

31.4.1 Manufacture of Structural Rolled products (2,16,000 TPA) in Induction Furnace and Rolling Mill and Ferro Alloys of **M/s India Steels** at vill. Palhori, Khasra No. 213/197/91/1, Paonta Sahib, H.P. (EC) [J-11011/741/2009-IA.II(I)] (Considered in Sept. 2014 EAC meeting)

The matter was again considered in the 23<sup>rd</sup> EAC meeting held during 18<sup>th</sup> – 19<sup>th</sup> September, 2014. The Committee noted that the data furnished with respect to AAQ appears erroneous. The Committee also sought details of green belt plan for the project. After deliberations, the Committee sought the following information which shall be further considered once the information is submitted to the Ministry.

- i. The proponent shall conduct air quality monitoring study for one month for the parameters of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub>. The details regarding instrument used and detection limit of the instrument shall also be submitted.
- ii. Revised green belt plan with approximately 10-15 meter width all along the periphery of the existing plant and the proposed plant layout shall be prepared and submitted covering 33% of total plant area.
- iii. Details of the consultant, including NABET accreditation, who has prepared the EIA-EMP Report

PP vide letter dated 10<sup>th</sup> November, 2014 submitted the revised green belt plan showing 3 – tier plantation of the trees all along the periphery of the existing plant/proposed plant having trees covering 33% of total area. PP also presented one month study on air pollution parameters and a copy of stay order given by the Punjab and Haryana High Court for the consultant M/s Envirotech (India)

4. After detailed deliberations the Committee recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering accord of environmental clearance.

- i. Measures shall be taken to reduce PM levels in the ambient air. Stack of adequate height & diameter with continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters

- etc. shall be provided to keep the emission levels within prescribed standards and installing energy efficient technologies.
- ii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled as per G.S.R. 612 (E) dated 25.08.2014. Guidelines/Code of Practice issued by the CPCB shall be followed.
  - iii. Efforts shall further be made to use rainwater from the rain water harvesting sources. Capacity of the reservoir shall be enhanced, if required, to meet the maximum water requirement. The Plant shall operate on a zero discharge concept.
  - iv. The wastewater generated shall be fully treated in an ETP and reused for plantation/greenbelt development. The Plant will operate on a zero discharge concept.
  - v. Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.
  - vi. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2010. All the fly ash shall be provided to cement and brick manufacturers for further utilization Bottom ash shall be fully utilized for road construction. Details of Memorandum of Understanding entered shall be submitted to the Ministry's Regional Office at Chandigarh.
  - vii. Hazardous materials such as lubricating oil, compressed gases, paints and varnishes required during construction phase shall be stored properly as per the regulations at isolated places and used/recycled as per the E(P)A Rules, 1986.
  - viii. All vehicles and construction machinery are properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.
  - ix. Green belt consisting of a 3-tier plantation of trees with thick canopy shall be developed all along the periphery of the plant, vacant areas, transfer points, etc , as part of 33% of total plant area.
  - x. Noise level shall be reduced by stopping leakages from various steam lines, compressed air lines and other high pressure equipment; and provide noise proof cabins to operators where remote control for operating noise generating equipment is feasible.
  - xi. Disaster management plan shall be prepared and implemented. Regular drills thereof shall be conducted.
  - xii. All the commitments made to the public during public hearing/public consultation shall be satisfactorily implemented and adequate budget provision shall be made accordingly.

- xiii. Company shall develop an HSE Policy. All the permanent workers shall be covered under ESI Scheme. The company shall have the provision for treatment of its workers at the local Nursing Homes & Hospitals in case of emergency. Annual Medical Check-up on some medical parameters like Blood test, Chest X-Ray, Eye test, Audiometry, Spirometry etc. shall be conducted amongst the employees of the Company and records maintained thereof.
- xiv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs. The proponent shall prepare a detailed CSR Plan for every next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO, Bangalore. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.

31.4.2 Proposed 2x4.9 MVA Ferro Alloys Plant (25,740 TPA Combination of Fe-Si, Si-Mn and Fe-Mn) of **M/s Thakur Prasad Sao & Sons Private Limited** at Village Lodsara, Tehsil Panposh, District Sundergarh, Odisha **(EC)** J-11011/401/2011-IA II (I)

The proposed project is within the existing plant premises of the Company at village- Lodsara, Tehsil - Panposh, near to Rourkela in Sundergarh district of Odisha State. Total land for the proposed project is 13.27 acres. The land is owned by the Project proponent. The present land is for industrial purposes. The ToR was issued by MoEF & CC vide letter J 11011/401/2011-IA-II (I) dated 09<sup>th</sup> September, 2011. With reference to the ToR, the period of baseline data were collected during Post Monsoon 2011. The Public Hearing was held on 17<sup>th</sup> April, 2012 as per EIA Notification 2006.

PP vide letter dated 15<sup>th</sup> May, 2012 applied for Environmental Clearance (EC) and the matter was considered in the EAC meeting held during 3<sup>rd</sup> December, 2012. However, it was considered as a violation case because one furnace was established with Consent to Establish from OSPCB prior to grant of EC. The EAC, however, recommended for grant of EC and requested to the MoEF & CC to deal with the violation matter accordingly.

Ministry vide letter dated 18<sup>th</sup> Feb 2013 advised PP to put up the matter of violation before the Board of Directors of the Company and submit a written commitment within 60 days in the form of a formal resolution to ensure that such violation will not be repeated. The Project proponent vide letter dated 27.02.2013 submitted the abstract of Resolution Passed by the Board in this regard . Ministry also requested State Govt. to initiate credible action on the violation by invoking powers under section 19 of EP Act 1986 for taking necessary legal action under Section 15 of the Act for the period for which the violation has taken place.

The Proponent vide letter dated 17.02.2014 submitted details on the legal action taken i.e. Case filed by the Collector, Sundargarh, Odisha in the Court of Sub divisional Judicial Magistrate under Section 15 of the EP Act, 1986. Ministry examined the document submitted by the PP and directed to report the

compliance vide letter dated 4<sup>th</sup> September 2014. The compliance was submitted by PP vide letter dated 19<sup>th</sup> September, 2014.

After detailed deliberation the Committee recommended the proposal for grant of EC as per the specific conditions of 3<sup>rd</sup> EAC meeting held during 3<sup>rd</sup> – 5<sup>th</sup> December, 2012.

31.4.3 Proposed for expansion project “Manufacturing of Asbestos based Cement Pipes” of **M/s Ahmedabad Cement Pipes** at Ahmedabad, Gujarat (**TOR**) (considered in May 2014 EAC meeting)

The Project Proponent (PP) gave a detailed presentation on the salient features of project and proposed environmental protection measures to be undertaken along with draft Terms of Reference for preparation of EIA-EMP Report. The proposed activity is listed at S.No. 4(c), Asbestos milling and asbestos based products under Category ‘A’ of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF. The proposal was earlier considered in the 19<sup>th</sup> EAC meeting held during 28<sup>th</sup> – 30<sup>th</sup> May, 2014. The Committee deferred the proposal with following observations:

- i. Data on asbestos fibre count in stack emissions, work zone and ambient air
- ii. Copy of the Environmental Clearance, Consent to Establish and Consent to Operate obtained for the existing unit

PP vide letter dated 7<sup>th</sup> November, 2014 submitted the aforesaid information.

M/s Ahmedabad Cement Pipes is situated near village Vadagam of district Sabarkantha in Gujarat. M/s Ahmedabad Cement Pipes is engaged in the manufacturing of Asbestos Cement pipes and has plan to expand manufacturing of Asbestos Cement Pipe @ 750 MT/Month. The existing rate of production is 115 MT/Month and proposed to increase production 750 MT/Month. The manufacturing process involves unit operations and unit processes. The production facility at this unit was commenced during year 1998. The expansion is within the existing premises, which is sufficient to accommodate the proposed expansion in manufacturing capacity. Hence no additional land is required to be acquired for this project. Total Plot area of the plant is 12342.29 m<sup>2</sup>. The expected cost of the proposed project will be around Rs. 5 crores.

Water requirement for the project will be met from own bore well. Total water requirement after proposed expansion is 20.1 KLD [8.7 KLD (Existing) + 11.4 KLD (expansion)]. 3.2 KLD Domestic effluents shall be disposed through septic tank & soak pit. Waste water generated from process will be reused to the manufacturing process. Waste water generated from pipe quarrying tank will be evaporated & product material consumed. Asbestos containing residue and Discarded Asbestos has reuse in manufacturing process. Empty drums and bags is handover to authorized vender for further recycle. The Management of Hazardous waste will be done as per Hazardous Waste Management Rules 2008.

The Source of Electricity obtained from UGVCL. The power capacity for the existing manufacturing activity is 72 KVA and same will be sufficient for expansion by increase in number of working hours. Unit has already developed greenbelt and open area in 4463.51 m<sup>2</sup> within plant premises. There are shrubs and trees developed in the greenbelt area. 33 % of the total plot area is earmarked for green cover / lawn development in the existing facility. Suitable plant species of local varieties will be planted with adequate spacing and density for their fast growth and survival.

After detailed deliberations, the Committee decided to conduct a site visit and consideration of the Report of the Site visit of the sub-committee for further consideration of the TOR proposal.

31.4.4 Proposed expansion project “Manufacturing of Asbestos Cement Pipes” of **M/s Ambica Pipes** at village Vadagam, Tehsil Dhasura, Dist. Sabarkantha, Gujarat (**TOR**) (considered in May 2014 EAC meeting)

The Project Proponent (PP) gave a detailed presentation on the salient features of project and proposed environmental protection measures to be undertaken along with draft Terms of Reference for preparation of EIA-EMP Report. The proposed activity is listed at S.No. 4(c), Asbestos milling and asbestos based products under Category ‘A’ of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF. The proposal was earlier considered in the 19<sup>th</sup> EAC meeting held during 28<sup>th</sup> – 30<sup>th</sup> May, 2014. The Committee deferred the proposal with following observations:

- i. Data on asbestos fibre count in stack emissions, work zone and ambient air
- ii. Copy of the Environmental Clearance, Consent To Establish and Consent To Operate obtained for the existing unit

PP vide letter dated 7<sup>th</sup> November, 2014 submitted the above information.

M/s Ambica Pipes is situated at plot No. 90 + 91, near Vadagam village of Sabarkantha district in Gujarat. The unit is engaged in the manufacturing of Asbestos Cement pipes (Used for conveying drinking water). The existing rate of production is 115 MT/Month and vide above proposal the PP has proposed to increase production to 400 MT/Month. The manufacturing process involves unit operations and unit processes. The production facility at this unit is commenced during year 1994. The expansion is within the existing premises, which is sufficient to accommodate the proposed expansion in manufacturing capacity. Hence no additional land is required to be acquired for this project. Total Plot area of the plant is 5455m<sup>2</sup>. The expected cost of the proposed project will be around Rs. 3 crores.

Water requirement will be met from own bore well. Total water requirement after commencement of proposed expansion will be 12.9 KLD [6.7 KLD (Existing) + 6.2 KLD (expansion)]. 3.2 KLD Domestic effluents shall be disposed through septic tank & soak pit. Waste water generated from process will be reused to the manufacturing process. Waste water generated from pipe quarrying tank will be evaporated & product material consumed. Asbestos containing residue and discarded asbestos shall be reused in manufacturing process. The Management of Hazardous waste will be done as per Hazardous Waste Management Rules 2008.

The Source of Electricity is UGVCL. The power capacity for the existing manufacturing activity is 72 KVA and same will be sufficient for expansion by increase in number of working hours.

After detailed deliberations, the Committee decided to conduct a site visit and consideration of the Report of the Site visit of the sub-committee for further consideration of the TOR proposal.

31.4.5 Proposed capacity expansion of Kraft Paper of **M/s Siddeshwari Paper Udyog Ltd.** at Dist. Udham Singh Nagar, Uttarakhand (EC) J-11011/407/2012.IA-II(I) (Considered in Oct. 2014)

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 25<sup>th</sup> meeting held during 13<sup>th</sup> -14<sup>th</sup> October, 2014 for grant of Environmental Clearance. As per the minutes of the meeting, the EAC after deliberations sought details of new technologies globally, if available, to bring to zero discharge shall be furnished so that pollutants do not pollute the River Ganga in line with decisions taken in meeting held on 8<sup>th</sup> October 2014 of Ministers of Water Resources and Environment & Forests on Action Plan for water polluting industries in Ganga River Basin. In addition, the Committee also sought details of best available technologies for treatment of TDS, colour, etc. The EAC also desired that permission from CGWA/State GWB is required for use of g/w for industrial operations. The Committee desired that activities under CSR shall cover specific skill development and training for the unemployed youth in the surrounding areas. Copies of the CTE and CTO shall also be provided.

The proponent vide letter dated 5<sup>th</sup> December, 2014 furnished the aforesaid additional information to the Ministry. The proposal was placed before the EAC for reconsideration. PP and their EIA consultant – J.M. EnviroNet Pvt. Ltd. made a presentation before the Committee.

PP has submitted the analysis of water quality of River Dhela, 2 km upstream and 2 km downstream, and for 8 ground water monitoring stations was conducted by TUV- SUD South Asia Pvt. Ltd (a laboratory recognised by MoEF & CPCB) for pH, TSS, TDS, COD and BOD. Regarding new technologies available for zero discharge, PP mentioned that a number of subject matter experts and different technology providers were consulted for Zero Liquid Discharge (ZLD), throughout the world but PP is unable to find any chemical pulping based paper industry that has adopted ZLD. PP further mentioned that there are number of technologies available to help reducing specific water consumption including the treatment at source. By following guidelines of recent Charter by CPCB, the mill has reduced its water consumption from 60m<sup>3</sup>/MT to 38 m<sup>3</sup>/MT.

Regarding available technologies for treatment of TDS, colour etc, PP mentioned that various technologies like ion - exchange, photo oxidation, ozone treatment and chemical precipitation are available out of which chemical precipitation is the most viable and easy to handle technology. PP mentioned that the permission for extraction of ground water from the CGWA is under process. As soon as the permission is received, a copy of the same will be submitted to MoEF&CC, New Delhi.

The Committee after deliberation noted that the analysis report for water quality of River Dhela submitted by the PP requires to be rechecked. The Committee desired that the PP resubmit the analysis report for the river water from 2km upstream and 1 km downstream of discharge point from institutions such as the Pollution Control Research Institute, Haridwar or CPPRI, Saharanpur and a fresh analysis report should be submitted

31.4.6 Production capacity enhancement of writing & Printing grades of paper of **M/s Naini Tissues Ltd.** at Tehsil Kashipur, Dist. Udham Singh Nagar, Uttarakhand (EC) J-11011/58/2013.IAII(I)

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 25<sup>th</sup> meeting held during 13<sup>th</sup> -14<sup>th</sup> October, 2014 for grant of Environmental Clearance. As per the minutes of the meeting, the EAC after deliberations sought details of new technologies globally, if available, to bring to zero discharge shall be furnished so that pollutants do not pollute the River Ganga in line with decisions

taken in meeting held on 8<sup>th</sup> October 2014 of Ministers of Water Resources and Environment & Forests on Action Plan for water polluting industries in Ganga River Basin. In addition, the Committee also sought details of best available technologies for treatment of TDS, colour, etc. The EAC also desired that permission from CGWA/State GWB is required for use of g/w for industrial operations. The Committee desired that activities under CSR shall cover specific skill development and training for the unemployed youth in the surrounding areas. Copies of the CTE and CTO shall also be provided.

The proponent vide letter dated 5<sup>th</sup> December, 2014 furnished the aforesaid additional information to the Ministry. The proposal was placed before the EAC for reconsideration. PP and their EIA consultant – J.M. EnviroNet Pvt. Ltd. made a presentation before the Committee.

PP has submitted the analysis of water quality of River Dhela, 2 km upstream and 2 km downstream, and for 8 ground water monitoring stations was conducted by TUV- SUD South Asia Pvt. Ltd (a laboratory recognised by MoEF & CPCB) for pH, TSS, TDS, COD and BOD. Regarding new technologies available for zero discharge, PP mentioned that a number of subject matter experts and different technology providers were consulted for ZLD, throughout the world but PP is unable to find any chemical pulping based paper industry that has adopted ZLD. PP further mentioned that there are number of technologies available to help reducing specific water consumption including the treatment at source. By following guidelines of recent Charter by CPCB, the mill has reduced its water consumption from 60m<sup>3</sup>/MT to 38 m<sup>3</sup>/MT.

Regarding available technologies for treatment of TDS, colour etc, PP mentioned that various technologies like ion - exchange, photo oxidation, ozone treatment and chemical precipitation are available out of which chemical precipitation is the most viable and easy to handle technology. PP mentioned that the permission for extraction of ground water from the CGWA is under process. As soon as the permission is received, a copy of the same will be submitted to MoEF&CC, New Delhi.

The Committee after deliberations noted that the analysis report for water quality of River Dhela submitted by the PP requires to be rechecked. The Committee desired that the PP resubmit the analysis report for the river water from 2km upstream and 1km downstream of discharge point from institutions such as the Pollution Control Research Institute, Haridwar or CPPRI, Saharanpur and a fresh analysis report should be submitted.

### **31.5 Any Other Items**

**31.5.1** Setting up of an 3 MTPA Integrated Cement Plant, 2MTPA Clinker Unit of **M/s Lafarge India Pvt. Ltd.** at village Alsindi, Tehsil Karsog, Dist. Mandi, H.P. (Letter dated 06.06.2014 seeking **Extn. of validity of EC** No.J-11011/241/2007-IA.II(I) dated 08.06.2009

The proposal was for installing integrated cement plant (3 MTPA cement, 2 MTPA clinker) at village DPF Ghanger and captive limestone mine (3 MTPA, 800 HA) at village Alsindi, Tehsil Karsog, Dist Mandi, in Himachal Pradesh by Lafarge India Pvt Ltd.(LIPL).

The proposal was considered in the EAC meeting held during 5-7<sup>th</sup> March 2013, and committee recommended for the revalidation of the EC granted to earlier vide letter no. J-11011/241/2007-IA II (I) dated 3.6.2009 and Ministry approved the proposal for grant of Environment clearance.

However, as per the minutes of the meeting, vide letter dated 26<sup>th</sup> July, 2013, PP has been asked to submit the stage 1 forestry clearance by 30<sup>th</sup> June 2014 before the grant of formal EC, as both the plant and mine area are falling in the Forest areas.

As per the advice of CF, Mandi, to leave out the dense forest cover areas from initially proposed areas, LIPL accordingly submitted a new proposal for Diversion with reduced areas as mentioned below.

Item	Area as per the initial proposal (in ha)	Area as per the revised proposal (in ha)
Mines	800	325
Plant	110	91.13
Conveyor	-	12.84
Bridge	-	0.88
Total	910	429.85

PP mentioned that the file is in process at FAC, MOEF. The FAC had, in its meet on 13<sup>th</sup> Feb. 2014, highlighted the requirement of following items for grant of Stage 1 forest clearance.

- i. DGPS map of the area being diverted and the area for the CA duly authenticated by the State government.
- ii. Forest cover map and 10 km radius maps of the areas being diverted duly authenticated by competent authority showing the location of the protected areas.
- iii. Documentary evidences for settlement of rights under the Schedule tribes and other Traditional Forest dwellers (Recognition of forest rights) Act, 2006 as per the MoEF guidelines.
- iv. Clarification from the Chief Wildlife Warden about the exact distance of the project site from Shikari Devi and Majathal Wildlife sanctuary.

PP mentioned that they have attended to all the points, except FRA point, which is pending with the state administration. PP further mentioned that some delay is anticipated in getting the FRA certificates as the necessary sub level committees at the village and Panchayat levels are not yet fully operational and are yet to understand the FRA requirements.

PP has requested for extension of validity of EC for submission of Stage – I Forest Clearance which is expected by Dec 2015, as this may take time in complying with the new regulations of FRA Act. An NOC from State Wildlife Board and approval of the Standing Committee on Wildlife is required from Wildlife angle as the project is located within 10km of Machal WL Sanctuary. The proposal is presently under consideration of the State WL Board. It was also informed that a case was filed in the High Court of H.P. at Shimla on the issue of WL angle.

After deliberations, the Committee recommended extension of validity of EC for a period of 5 years for obtaining Stage – I Forest Clearance and also NBWL clearance as the project involves wildlife clearance for being within 10km of the Machal WL Sanctuary vide SC Order dated 04.12.2006 in the matter of Goa Foundation Vs UOI & Ors.

31.5.2 Proposed Installation of Bleached Chemical Thermo Mechanical Pulp (BCTMP) Unit in existing Mill PSPD Bhadrachalam Unit of ITC-BCM of **M/s ITC Ltd.**, vill. Sarapaka, Mandal Burgampahad, dist. Khammam, Telangana (Letter dated 13.10.2014 **seeking exemption of P.H.** for TOR No. J-11011/574/2009-IA.II(I) dated 18.03.2001) (Considered in December 2014 EAC meeting)

The existing unit of M/s ITC Ltd was granted an EC on 18.03.2011. P.H was held on 30.04.2010 vide provisions of the EIA Notification 2006. The present proposal is for instillation of a Bleached Chemical Thermo Mechanical Pulp (BCTMP) Unit within the existing project premises.

The matter was considered in the 29<sup>th</sup> EAC meeting held during 11<sup>th</sup> – 12<sup>th</sup> December, 2014, wherein the PP had requested for grant of fresh ToR and permission to utilise the baseline studies undertaken for MGP and exemption of conduct of Public Hearing since the proposed BCTMP facility will be located within the existing facility and public hearing for other projects within the existing facility was conducted on 30.04.2010. The Committee had sought the latest Environmental Performance in terms of compliance of EC along with certified compliance report along with a note on the process details of this facility, plant layout (existing + proposed), emissions levels, solid waste generation and mode of disposal and effluent characteristics and environmental impacts of the proposed installation of BCTMP. The Committee also sought compliance of the issues raised in the earlier P.H. The Committee had decided that the report would be considered for giving exemption from conduct of P.H. under clause 7.2.

PP vide letter dated 29<sup>th</sup> December, 2014 submitted the aforesaid information which was taken up for consideration.

PP has submitted the summary of the proposed BCTMP project along with process description and mass balance related to environment. PP mentioned that BCTMP from the proposed project will be used in the middle layer of the three layered Paperboard. There will be no capacity addition to the existing Paper/Paperboard Plant and Chemical Pulp Plant beyond the current consented capacity. The proposed BCTMP production process will consist of chipping, impregnation, refining (mechanical means), bleaching, screening and final washing of pulp, which will require the following new installations in the existing facility:

- i. BCTMP plant capable of producing 1,00,000 AD TPA capacity, which will be the first of its kind in India,
- ii. Waste liquor evaporation plant (EVP) for effective conversion of waste liquor to energy and also to achieve “Zero Liquid Discharge (ZLD)” in BCTMP operations,
- iii. White liquor oxidation plant along with oxygen generation plant to recycle the caustic, thus reducing the fresh caustic consumption and bleaching chemicals,
- iv. Wood handling and chipping plant,
- v. Chip washing plant.

The details of the project are summarised below:

Parameter	Existing operation Condition	BCTMP operations	Post BCTMP operations	As per EC/CFO
Wood (lakh T)	8.2	1.5	9.7	NA
Black liquor solids (TPD)	1900	50	1950	2200
Steam generation (tph)	623	50	673	780
Power generation (MW)	90	15	105	114.5
Coal consumption (lakh T)	7.1	0.8	7.9	8.0
Ash generation (Coal fired Boilers) (TPD)	900	70	970	1070
Ash generation (Recovery Boilers) (TPD)	190	5	195	Internal recycling in recovery boilers as make up

Water Consumption (m3/d)	72,000	2000	74,000	79,000
Wastewater discharge (m3/d)	63,000	Nil (ZLD)	<68,800	68,800
Flue Gas generation (m3/sec)	4,54,000	12,000	4,66,000	5,26,000

PP also submitted compliance for the existing environmental clearances and status of compliance of the PH held in the year 2010.

After detailed deliberations, the Committee exempted the conduct of Public hearing and prescribed following specific TORs for preparation of a brief report on the impacts of the proposed project on env. in addition to the **additional TORs at Annexure -4**:

- i. 4 online AAQ stations already set up. AAQ data being collected for the last one year. AAQ data from this could be used for the TOR granted on 23.03.2012. The AAQ data of the past one year should be analyzed and submitted as part of the EIA-EMP Report.
- ii. Stack emission data should be analyzed and submitted
- iii. Effluent quality data at the point of discharge, u/s and d/s of discharge can be tested for COD, BOD and TDS.
- iv. Since the effluents are being used for irrigation, the ground water quality and soil quality data in terms of Sodium Absorption Ratio (SAR) of that area should be submitted.

31.5.3 Enhancing the efficiency of Co-generation Plant of existing mill (paper and Board Production) Unit: Bhadrachalam of **M/s ITC Ltd**, at Village Sarapaka, Mandal Burgampahad, Dist. Khammam, AP (Amendment in EC No –J-11011/574/2009-IA-II(I)) dated 18.03.2011.

The Environmental Clearance for the above proposal was granted vide letter F.No.J-11011/574/2009-IA-II(I) dated 18th March 2011. PP obtained CTO vide APPCB/VJA/KTM/10571/HO/CFO/2013-2845 dt 08-08-2013. There are 3 (Three) Chemical Recovery Boilers (CRB) of steam generation capacity of 250 tph and 6 (Six) Coal Fired Boilers (CFB) of steam generation capacity of 530 tph for the existing plant. The total steam generation capacity is 780 tph. The total power generation from 7 (Seven) Turbo Generators (TG) is 114.5 MW.

PP mentioned that Coal Fired boilers generate steam at 62 at a pressure compared to contemporary boilers of > 100 ata pressure. Due to ageing of the boilers and Turbo Generators, the capacity and efficiency have come down considerably. Due to low efficiency together with multiple units of coal fired boilers and TGs, steam and power cost per ton of finished product is considerably high. In order to be competitive, it is necessary to replace some of the aged and inefficient boilers and TGs with new Best Available Technology boiler and TG

PP has proposed to install 1 x 220 tph new CFBC (Circulating Fluidized Bed Combustion) coal fired boiler replacing three existing low energy efficiency AFBC (Atmospheric Fluidized Bed Combustion) coal fired boilers, augmentation of fuel and ash handling facilities for the proposed 220tph boiler and 1 x 36 MW Extraction Backpressure Turbo Generator (TG) replacing three existing TGs. PP mentioned that total capacity of Boilers will remain same at 530 tph (*as per consent*)

The details of the existing and the proposed project are summarised below:

TG	Present capacity	Present Status	Post project	Post Project status
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	MW		MW	
TG 1	5	Retired	-	Retired
TG 2	7.5	In Operation	-	Will be stopped and kept as standby
TG 3	21	In Operation	17.5	In Operation (derated)
TG 4	20	In Operation	-	Will be stopped and kept as standby
TG 5	21	In Operation	21	In Operation
TG 6	15	In Operation	15	In Operation
TG 7	25	In Operation	25	In Operation
TG - New	-	-	36	In Operation
<b>Total</b>	<b>114.5</b>		<b>114.5</b>	

The modernisation of captive power plant will comprise of the following:

- i. Single boiler of 220 tph capacity replacing CFB 4,5 & 6. No change in overall Capacity
- ii. CFBC boiler in place of existing AFBC boilers
- iii. 110 ata steam pressure replacing 62ata and temperature of 480°C with 530°C.
- iv. New TG in place of TG 1, 2 & 4 and part of TG 3 de-rated from 21 MW to 17.5 MW
- v. The new TG will be designed for 107 ata & 530°C steam.

PP mentioned that by above mentioned modifications the overall coal consumption in the Co-generation facility will be reduced by 80,000 tpa with no increase in capacity of the Co-gen unit. High efficiency ESP will be installed to maintain particulate matter emissions below 50 mg/Nm<sup>3</sup> against 115 mg/Nm<sup>3</sup> for existing boilers. New stack height of 100 m will be provided for 220 tph boiler as per guidelines suggested by CPCB. PM emission reduction by 0.5 T/day (about 60% from baseline). SO<sub>2</sub> emission reduction by 1.8 T/day (about 10% from baseline) and NOx emissions reduction by 9.5 T/day (about 70% from baseline)

After deliberations, the Committee recommended amendment of the EC with the aforesaid modifications.

31.5.3 Proposed Capacity Expansion of DI pipes Plant (1,10,000 TPA to 300, 000 TPA) of DI pipes of **M/s Tata Metalliks DI Pipes Limited** at Samraipur Block, Gokulpur, Block- Kharagpur-1, Paschim Medinipur, West Bengal (**TOR**) (J-11011/173/2007-IA.II(I)) – Letter dated 11.12.2014 of PP requesting for incorporation in Minutes of Nov. 2014 in regard to collection of baseline data)

PP vide letter dated 11.12.2014 requested for use of baseline data and other data collected during the summer season (March-May 2014) for the proposed project of M/s Tata Metalliks Ltd, whose boundary is adjoining the another expansion project of M/s Tata Metalliks. The recommendation of the Committee is already incorporated in the minutes of the 29<sup>th</sup> EAC meeting held during 11<sup>th</sup> -12<sup>th</sup> December, 2014 as following:

The Committee also agreed for the use of baseline data and other data (sodar and hydrogeology) collected during the summer season (March-May 2014) for the proposed project of M/s Tata Metalliks Ltd, whose boundary is adjoining the another expansion project of M/s Tata Metaliks for which a TOR No. J-11011/377/2013-IA.II(I) was granted by MOEF&CC on 19<sup>th</sup> May 2014 for "Proposed Capacity expansion from 3, 45,000 TPA Pig Iron Production to 5,00,000 TPA hot metal production and 10 MW waste heat recovery power plant at Gokulpur village, PO Samraipur, Tehsil Kharagpur, District Pashchim Medinipur, West Bengal".

31.5.4 Integrated Cement Manufacturing Unit of **M/s Bhavya Cements Ltd.**, at Vill. Tangeda, Mandal Dachepally, Dist. Guntur, A.P. (Letter dated 12.12.2014 seeking extn. of validity of EC No.J-11011/1186/2007-IA.II(I) dated 22.09.2008

M/s Bhavya Cements Ltd obtained Environmental Clearance for integrated Cement Plant of 4 Million TPA (8500 TPD) Capacity, 15 MW captive power plant and Captive mining from Ministry of Environment and Forests (MoEF) vide letter no. F. No. J-11011/1186/2007-IA II (I) dated 22.09.2008 at Thangeda Village, Dachepally Mandal, Guntur Dist, Andhra Pradesh.

The Phase I project for 1 Million TPA (3000 TPD) production is in operation, while the phase II construction is in progress and is expected to be completed in 14 months. The company has already acquired 65.00 ha of land. Total project cost of the project is Rs. 630 crores (Phase II) and Rs. 30 crores (Phase I) is earmarked towards the capital cost for environmental protection. As there has been a delay in financial closure, PP has requested for extension of validity of EC for further period of 5 years. PP mentioned that orders are placed for equipment and civil works are in progress.

The Committee noted that the EC has expired on 21.09.2013, and PP applied on 12.12.2014, i.e. after the expiry of EC. The Committee after deliberations decided that the matter may be referred to the Ministry for a decision.

31.5.5 Letter dated 05.12.2014 of **M/s Xindia Steels Ltd.** regarding EC for their Stand-Alone Pellet Plant at Villages Kunikere-Hirebagnal, Taluk & Dist. Koppal, Karnataka.

PP did not attend the meeting. The Member-Secretary informed that an application for TOR is for regularisation of their existing Stand-Alone Pellet Plant. However, the PP has already incorporated the unit in the proposal of an ISP, which was considered for EC in the EAC(I) meeting held in the EAC(I) meeting held on 28<sup>th</sup>-29<sup>th</sup> August 2014 and recommended for EC. In view of this, the Committee decided that the application for the regularisation of the existing Pellet Plant need not be considered again for EC.

31.5.6 Installation of Reheating Furnace for the steel processing unit of **M/s Prime Gold- SAIL JVC Limited** located at Billowa, Dabra, district Gwalior, Madhya Pradesh- Letter dated 01.07.2014 of M/s Prime Gold-SAIL JVC Ltd for establishing a Re-Heating Furnace for Steel processing Unit at Gawalior, M.P. (**Applicability of EIA Notification**) (Considered in July 2014 meeting)

PP did not attend the meeting. The Committee decided that the proposal will be considered as and when requested by the PP.

31.5.7 Proposed Integrated Steel Plant (0.4 MTPA) with 43MW CPP of **M/s Rashi Steel and Power Ltd**, at vill. Paraghat and Beltukri, Tehsil Masturi, Dist. Bialspur, Chhattisgarh (Amendment in EC) (J-11011/46/2010-IA.II(I), Bilaspur, Chhattisgarh (EC) Considered in Aug 2014 meeting)

PP did not attend the meeting. It was decided that the matter would be referred back to EAC as and when requested by the PP.

31.5.8 Permission to Allow Production of Agglomerated Iron Ore within the overall capacity of Iron ore Pellet and Iron ore Sinter and Bifurcate the Iron ore Beneficiation capacity granted with Hi-Grade Iron ore Pellets of **M/s Vandana Ispat Ltd.**, at vill. Kopedigh and Anjora, Dist. Rajnandgaon, Chhattisgarh – Request letter dated 12.07.2014 for Amendment of EC J-11011/1172/2007-IA.II(I) dated 08.10.2010 –considered in Sept. 2014).

ToR for the above proposal was granted vide letter No. J-11011/1172/2007-IA(II)I dated 23/04/2008 and EC Granted on 08.10.2010.

The PP had applied on dated 19.05.2012 for amendment in EC for “Minor change in product and process within the already granted environment clearance, to grant permission to alternatively allow the production of either 13.77 lakhs tons/annum of ‘Iron Ore Pellets’ or ‘Iron Ore Sinter’ in place of separately allowed capacity of Iron Ore Sinter of 6.27 lakhs ton/annum, and already granted permission for 7.5 lakhs tons/annum Hi Grade Iron Ore Beneficiation Plant in proposed steel project and allow to keep the iron ore beneficiation capacity to remain the same at 7.5 lakhs ton/annum”

The proposal was considered on 34th EAC on June 2012 Meeting and the Committee had recommended for grant of amendment in EC. However, the Ministry vide letter dated 17<sup>th</sup> May, 2013 and 7<sup>th</sup> August, 2013 observed that there is change in scope and there is increase in pollution load due to increase in capacity of Sinter Plant and requested the PP to apply afresh for environmental Clearance with fresh Form-I. PP has reapplied for amendment with the justification that there is no change in Scope as well as no change in pollution Load. There will be no change in quantity of bulk input raw materials, fuel as well as output. Further, PP vide letter dated 17.12.2013 was informed for personal hearing on 24.12.2013, however, PP did not appear for personal hearing. PP vide letter dated July 12,2014 again requested for amendment in the EC and the matter was considered in the 23<sup>rd</sup> EAC meeting however, PP did not attend the meeting.

PP vide letter dated 01.01.2015 again requested for amendment in the EC and requested for extension of validity of EC for further period of 5 years. It was informed that the Sinter Plant capacity is being reduced from 6,27,000 MT to 1,77,000 MT (reduced by 4.5LTPA). The High grade Iron ore Beneficiation Plant capacity would remain at 7,50, 000 TPA. The Pelletisation Plant would continue with have a capacity of 12,00,000 TPA and a Blast Furnace of 1.2MTPA would be used. No Unit has been established so far.

Details of production capacity vis-à-vis the request for amendment:

Process	As per sanctioned EC (capacity in TPA)	Requested capacity change in TPA	Proposed capacity in TPA
Iron Ore Beneficiation	7,50,000	No change required only to be mentioned	7,50,000

		separately	
Pelletisation	7,50,000	+4,50,000	12,00,000
Sintering	6,27,000	-4,50,000	1,77,000
Total capacity of Pelletisation and Sintering together	13,77,000	0	13,77,000

**Comparison on coal requirement:**

Process	Requirement in TPA as per sanctioned EC	Proposed requirement in TPA after the revision in EC	Remark
Sintering	15675	4425	-11250
Pelletisation	18750	30000	+11250
Total change	34425	34425	00

**Table showing no increase in Pollution Load:**

Process	Capacity TPA	Coal Requirement	SPM (g/s)	NOX( g/s)	SOX (g/s)
<b><u>A. Sanctioned as per EC</u></b>					
Sintering	6,27000	15675	0.21	4.40	1.24
Pelletisation	7,50000	18750	0.25	5.26	1.48
<b><u>Total for A.</u></b>	<b><u>13,77,000</u></b>	<b><u>34425</u></b>	<b><u>0.46</u></b>	<b><u>9.66</u></b>	<b><u>2.72</u></b>
<b><u>B. Revised Capacity</u></b>					
Sintering	1,77000	4425	0.06	1.24	0.35
Pelletisation	12,00,000	30000	0.4	8.42	2.37
<b><u>Total for B.</u></b>	<b><u>13,77.000</u></b>	<b><u>34425</u></b>	<b><u>0.46</u></b>	<b><u>9.66</u></b>	<b><u>2.72</u></b>

Land acquisition is almost complete and is expected to be completed by end of March 2015. Water clearance has been obtained. Railway line connectivity is being pursued.

The Committee after deliberations recommended the project for amendment of EC with the aforesaid changes.

**31.5.9 Change of fuel (use of Pet Coke instead of coal) at Gagal Cement Works (Unit-II) of M/s ACC Ltd at P.O. Barmana, Dist. Bilaspur, H.P. (Amendment to EC dated 27.12.2005)**

Environmental Clearance (EC) to the above proposal was accorded by MOEF vide letter no. J-11011/308/2005-IA II (I) dated 27.12.2005. The Project Proponent (PP) vide letter dated 4.6.2014 sought for the amendment in the EC dated 27.12.2005 for use of Pet Coke instead of coal. The matter was considered in the 21<sup>st</sup> EAC meeting held during 30th July, 2014

The Committee noted that as per the EC accorded on 27.12.2005 the existing and the proposed project site is surrounded by the wild life sanctuaries viz. Govind Sagar Wild Life sanctuary, Darlaghat (Piplughat) Wild Life Sanctuary, Maithan Wild Life Sanctuary and Bandi Wild Life Sanctuary. The Committee sought the following details from the PP for further processing of the issue:

- i. Map showing the distance between the project site and the wild life sanctuaries as referred above; and

ii. Status of wild life clearance obtained for the existing unit

PP submitted the details regarding the wild life sanctuaries viz. Govind Sagar Wild Life Sanctuary, Darlaghat (Piplughat) Wild Life Sanctuary, Maithan Wild Life Sanctuary and Bandi Wild Life Sanctuary.

Govind Sagar WLS is denotified by Govt of H.P vide notification No. FEE-B-F-II/2005-II/ Gobindsagar dated 07.06.2013. Distance is 12.8 km wrt to Galgal Cement works. Darlaghat (Piplughat) WLS is also denotified by Govt of H.P vide notification No. FEE-B-N/2005-II/ Darlaghat dated 07.06.2013. Distance is 22.02 km wrt to Galgal Cement works. Majathal / Maithan WLS is denotified by Govt of H.P vide notification No. FEE-B-F(6)-n/2005-II/ Majasthal dated 07.06.2013. Distance is 11.8 km with respect to Galgal Cement works. For Bandli / Bandi WLS Govt of H.P vide notification No. FEE-B-F(6)-n/2005-II/ Bandli dated 07.06.2013, mentioned that of an actual area of 41 Sq.km was reduced to an area of 32.11 sq.km. The Bandli WLS is at a distance of 4.1 km with respect to Galgal Cement works.

PP has requested for amendment in environmental clearance for utilisation of pet coke, which is refinery waste, as much as possible in place of coal depending upon it's availability without any increase in the plant cement/clinker production capacity.

The Committee noted that the use of pet-coke will reduce the pollution level with respect to sulphur emissions and other emissions due to transportation of coal etc. The Committee however, noted that the project comes in the ambit of the SC Order dated 04.12.2006 in the W.P. 460/2004 – Goa Foundation Vs UOI & Ors. The Committee while recommending the use of pet coke in place of coal as a fuel also decided that the PP requires abiding by the SC order and decided that the NBWL clearance may be pursued with the Ministry.

### 31.6 Cases for Terms of Reference (TOR)

#### 31.6.1 Manufacture of Manganese Di-Oxide and Manganese Oxide and Various Ferro Alloys Products of **M/s Ekvira Alloys Pvt. Ltd.** at Khasra No.75, Nagpur-Umrer Road, Mouza Pipri, Tehsil Kuhl, Dist. Nagpur, Maharashtra (TOR)

The PP along with their EIA-EMP consultant Pollution and Ecology Control Services (PECS), Nagpur (MS) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(a) under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s Ekvira Alloys Pvt. Ltd is proposed to install unit to manufacture Manganous Oxide and Manganese Dioxide and Various Ferro Alloys, at Khasra No. 75/2, Mouza Pipri, Tah: Kuhl, Dist: Nagpur. The raw material will be sourced from local mines in Nagpur District and nearby area. Total 3.32 Acres of Land is in possession of M/s Ekvira Alloys Pvt. Ltd. No Rehabilitation/Resettlement required. Nearest Highway is SH 9: 100 m, E, SH 254.4kms SE. Nearest Airport is Nagpur which is 17 Km. Nearest Railway Station is Khapri railway station which is 13km. Nearest Town is Nagpur 17Kms. Nearest water body is Dhora River, (2.5 kms). Investment incurred for this Plant is Rs. 2.85 crores. The budget for environmental protection measure is Rs. 50Lacs. Latitude 21° 01'51.40"N/Longitude 79°10'13.36"E. Electricity requirement for the project is 2.5 MW which will be sourced from State Electricity Board.

No National Park, Biosphere Reserve and Wildlife Sanctuary including Notified Eco- Sensitive Areas exists within 10 km radius. There is no archaeological monument, interstate boundary and defence installation found in the 10km radius of study area. No nallah/water body, public highways, forests within the project site.

The list of products to be manufactured are given below:

<b>By thermite process (5 Nos. of MS Crucibles of 200kg each)</b>		
<b>S. No</b>	<b>Item</b>	<b>Quantity in MTPA</b>
1	Ferro Alloys Low & Medium Carbon	500
2	Ferro Alloys High Carbon	600
3	Silico Manganese	500
4	Ferro Titanium	600
5	Ferro Molybdenum	600
6	Pig Iron	500
By Installing Induction Furnace (1 no of 200kg each)		
7	Aluminum Ingote	1200
By Installing Furnace (2 Nos. of 200kg each)		
8	Manganese dioxide	500
9	Manganese oxide	1000

In the process water is required for zigging and cooling purpose only. The water is 100% re-circulated after proper treatment, so that there is no disposal of effluent. The total requirement of fresh water from ground water source to meet process make- up and drinking needs and for other miscellaneous purpose. Roof top rain water harvesting is proposed.

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

- i. P.H. shall be conducted by the Maharashtra Pollution Control Board.

#### 31.6.2 Existing Pellet Plant (1.2MTPA) of **M/s MSPL Ltd.** at village Halavarthi, Tehsil & Dist. Koppal, Karnataka (TOR)

The PP along with their EIA-EMP consultant Pollution and Ecology Control Services (PECS), Nagpur (MS) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proposal is for regularising the existing pellet plant of capacity 1.2 MPTA. The proposed project activity is listed at S.No. 3(a) under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s MSPL limited has established 1.2 MTPA pellet plat (in operation) in 2010 at Survey no. 2, 8, 9, 12 to 15, 132, 136 & part of 5, 6, 7, 16, 17 Village: Halavarthi, Tehsil: Koppal, District: Koppal. Government of Karnataka has Issued Environmental clearance for the project under letter no. FEE 28 ECO 2010 Dated: 1/10/2010. And Karnataka State Pollution Control Board has granted Consent for Operation, combined consent order no. 97/ PCB/ MINI CFO/ 2014-15/ 538 Dated: 11 August 2014.

Further, Karnataka State Pollution Control Board has issued a letter no.PCB/MINI/LIMESTONE/2014-15/3579 Dated 16 Oct 2014 to MSPL, asked M/s MSPL Limited to apply for TOR to the 'stand-alone' Pelletisation Plant within 7/12/2014 and shall obtain EC by the MoEF within one year.

PP has applied for the Project of Existing Iron Ore Pelletisation plant of 1.2 MTPA. The total Land requirement is 41 acres out of 113 acres in possession. The existing plant premises already in possession of MSPL Limited. Therefore no additional land needs to be acquired. To total project cost Rs 300.50 crores. PP mentioned that 168 workers already working in the plant.

Capital & Recurring Cost towards Environment Protection measures Environment Protection measures will be 15 crores. Recurring cost 0.75 crores per annum. The total water requirement for the project is 330 m<sup>3</sup> and would be sourced from River Tungabhadra.

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

- i. P.H. shall be conducted by the Karnataka Pollution Control Board.

31.6.3 Tannery Unit (Wet Blue Skin to Finished Leather) of **M/s Allana Indargo Foods Pvt. Ltd.** at A-2, RIICO Industrial Area, Manpura Macheri, Jaipur, Rajasthan (TOR)

MS informed the Committee that the proposal is a Category B project and the file is to be transferred to SEIAA, Rajasthan which was constituted on 24.12.2014.

31.6.4 Proposed 4x100TPD Sponge Iron Plant, 2x12T + 1x12T Induction Furnace, 90,000MTPA Rolling Mill and 18MW Power Plant (6MW WHRB, 2MW Coal Char based, 10MW Coal Based) of **M/s Jharkhand Ispat Pvt. Ltd.**, at Hesla, P.O.Argada, Dist. Ramgarh, Jharkhand (TOR) (J-11011/41/20130IA.II(I))

The matter was considered in the 7th EAC meeting held during 4th April, 2013– 5th April, 2013. The Committee deferred the consideration of the proposal as the proponent has already established and operating 2x100 TPD sponge iron unit without obtaining prior environmental clearance from the Ministry. As the aforesaid proposal involves violation, the Committee recommended that the Ministry shall deal with the violation matter in accordance with its Office Memorandum dated 12.12.2012.

It was noted that M/s Jharkhand Ispat Private Limited has established and operating 4 x100 TPD sponge iron unit at Village Hesla, P.O. Argada, District Ramgarh, Jharkhand. Out of the 4 x100 TPD sponge iron units, 2x100 TPD units were established during the year of 2003 for which CTE and CTO were issued by the Jharkhand State Pollution Control Board (JSPCB). For the remaining 2x100 TPD sponge iron unit, the CTE and CTO were issued by the JSPCB on 6.11.2006 and 24.12.2011 respectively. At the time of renewal of application for the CTO, JSPCB directed the proponent to stop operation of the 2x100 TPD sponge iron unit till Environmental Clearance is obtained.

MoEF&CC vide letter dated 12/06/2013 directed JIPL to submit the formal resolution from Board of Directors of the company and credible action taken by State Government as per OM dated 12/12/2012. PP vide letter dated 4<sup>th</sup> January, 2014 submitted the requisite documents.

The PP along with their EIA-EMP consultant Bhagavathi Ana Labs Private Limited gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA-EMP report. The proponent is requesting for regularization and seeks EC for 4 X 100 TPD Sponge Iron Plant, 2 X 12 T + 1 X 12 T Induction Furnace, 90,000 MTPA Rolling mill and 18 MW Power Plants (6 MW WHRB, 2 MW Coal Char Based, 10 MW Coal Based). The proposed project activity is listed at S.No. 3(a) under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

The project is located at village Hesla, Tehsil Argada, District Ramgarh, Jharkhand. The total area of of the project is 25.54 Acres. Nearest railway station is Aragada which is 1.5 Km from the site and nearest airport is Ranchi Airport at a distance of 50 Kms. Nearest access road is Naisarai - Giddi Road , Adjacent and NH # 33 is at a distance of 4.0 km. No Forest Area/ wild life Sanctuaries / National Parks/ Archaeological/ Historically Important Site within study area within 15-km radius

Power requirement for the project is 17.6 MW, Source – CPP/ JSEB. Total water requirement for the project is 5622 m3/d which will be sourced from River Damodar. The total area of the project is 25.54 acres is in the procession of PP. An additional land of 10 acres is proposed to be bought by the PP at is proposed at Khasra No. 50/11, 50/12, 50/16, 50/17.

The detail of units for which NOC has been obtained from JPCB and for which EC is required:

Sl. No	Project Details	Phase I NOC &CFO issued by JPCB in 2003 valid till 30/09/13	Phase II* NOC &CFO issued by JPCB in 2006 Valid till 30/09/12	Seeking EC for
1	Sponge Iron Plant	2 x 100 TPD	2 x 100 TPD	4 x 100 TPD
2	Induction Furnace & billet caster	-	2 X 12 T induction furnace & billet caster	2 x 12T + 1 x 12T New & billet caster
3	Rolling mill	-	-	New 90000 MT/Y
4	Captive Power Plant - WHRB Base -Coal char - Coal Base	-	-	CPP New (18MW) 6MW 2MW 10 MW

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

- i. P.H. shall be conducted by the Jharkhand Pollution Control Board.

The Committee sought a specific clarification from the PP on the status of construction and operation of the aforesaid units (existing as well as proposed) before grant of TOR.

**FRIDAY, 9<sup>th</sup> JANUARY 2015**

### 31.7 Environmental Clearance

31.7.1 Expansion of Integrated Steel Plant from 5 to 10 MTPA and Power Plant from 300 to 600 MW (Gas Based) of **M/s JSW Steel Limited** at Geethapuram, Village Dolvi, Tehsil Pen, District Raigarh in Maharashtra (EC) J-11011/76/2013 - IA II (I)

M/s JSW Steel Limited (herein after Project Proponent –PP) and their EIA-EMP consultant M/s MECON Limited - Ranchi gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 7<sup>th</sup> meeting of the Expert Appraisal Committee (Industry) held on 4<sup>th</sup> – 5<sup>th</sup> April, 2013 for preparation of EIA-EMP report. The TOR was awarded by MoEF&CC vide F.No. J-11011/76/2013-IA.II(I) dated 28<sup>th</sup> May, 2013 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 3<sup>rd</sup> May, 2014 after conducting Public Hearing for grant of Environmental Clearance. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF&CC.

2. The salient points of the proposed project as per the final EIA-EMP report submitted by project authorities vide letter referred above in para 1 are as follows:

M/s JSW Steel Limited (JSWSL) proposes to expand the integrated steel plant to 10.0 MTPA from existing 5.0 MTPA at Geethapuram, Dolvi in Raigarh District of Maharashtra. The existing steel plant is based on the Direct Reduced Iron (DRI) - Blast Furnace-CONARC–Ladle Furnace & VD/VOD - Continuous Casting – Rolling Mill (CSP) route. The expansion shall be based on proven BF - BOF route. Expansion of 3.0 MTPA Steel Plant to 5.0 MTPA and 300 MW Captive Power Plant under implementation. The site falls between Longitude - 73°00'00" - 73°05'00" E, Latitude - 18°39'00" - 18°45'00" N. Land comprises Dolvi, Jui Bapuji & Khar Karavi Villages. Pen is the nearest railway station at about 8 km (aerial distance) on the Konkan Railway line connecting Mumbai-Mangalore along the west coast of India. The nearest airport is Mumbai (national and international) located about 80 km in the north direction from the proposed project site. The company has already a total of about 1200 acres of land in its possession for its existing operating integrated steel plant complex of 5.0 MTPA capacity. Some of the proposed additional capacities are proposed to be setup within the existing plant and some need relocated by acquiring additional 600 acres land. There is no national park, biosphere reserve, sanctuary, habitat for migratory birds, archeological site, defence installation etc. within 10 km of the periphery of the plant boundary. The total project cost is estimated to be Rs. 17,000 Cr. An amount of Rs. 168.5 crores has been earmarked for action plan for enterprise social commitment towards CSR activities for 10 years.

The production facilities after the expansion is given below: **(Expansion of JSWSL (existing 5 MTPA to 10 MTPA))**

Sl. No.	Technological facility	Units / Facilities (EC accorded) under 5 MTPA	Proposed facilities under 5 to 10 MTPA	Total Plant Capacity AT 10 MTPA
1.	DRI (Gas based Mega Module)	2.0 MTPA (by augmentation)	2.0 MTPA	4.0 MTPA
2.	Pellet Plant	4.0 MTPA	4.0 MTPA	8.0 MTPA

Sl. No.	Technological facility	Units / Facilities (EC accorded) under 5 MTPA	Proposed facilities under 5 to 10 MTPA	Total Plant Capacity AT 10 MTPA
3.	Coke Ovens including By-product plant	2.0 MTPA	2.5 MTPA	4.5 MTPA
4.	Sinter Plant	2.8+ 3.2 MTPA	8.0 MTPA	14.0 MTPA
5.	Blast Furnace including Pig casting	3.6 MTPA by modification of existing Blast Furnace	4.5 MTPA	8.1 MTPA
6.	SMS (CONARC)	5.2 MTPA (By Augmenting the existing facilities)	-	5.2 MTPA
7.	SMS -BOF	-	6.0 MTPA	6.0 MTPA
8.	Ladle Furnace(LF)	2x200 t +205 t	2X300 t	2x200 t + 205 t 2X300 t
9.	VD/VOD & RH-TP	1x200 t + 1x205 t	2x300 t	1x200 t + 1x205 t 2x300 t
10.	CSP(HRC Coil) Thin Caster-cum-Hot Strip Finishing Train	3.5 MTPA (By Augmenting)	-	3.5 MTPA
11.	Conventional Slab Caster	2x1 strands (3.68 MTPA)	2x2 strands (5.72 MTPA)	Total 6 strands (9.4 MTPA)
12.	Billet Caster	-	1x6 Strands	6 strands (1.5 MTPA)
13.	Plate Mill	1.5 MTPA	-	1.5 MTPA
14.	CRM (Hot Rolled Skin Pass + Cold Rolled Full Hard Coil + Hot Rolled Pickled & Oiled Coil)	1.0 MTPA	1.5 MTPA	2.5 MTPA
15.	Galvanizing Line (Cold Rolled Steel Strips, Hot Dip Zinc Coated Full Hard)	0.6 MTPA	-	0.6 MTPA
16.	Electrical Steel CRGO line	0.4 MTPA	-	0.4 MTPA
17.	Tin Plate Mill	0.4 MTPA	-	0.4 MTPA
18.	Colour Coating Plant	0.5 MTPA	-	0.5 MTPA
19.	Lime /Dolo Plant	1800 TPD	1800 TPD	3600 TPD
20.	Oxygen Plant	4100 TPD	3500 TPD	7600 TPD
21.	Hot Rolling Mill with shearing & slitting line	-	5.0 MTPA	5.0 MTPA

Sl. No.	Technological facility	Units / Facilities (EC accorded) under 5 MTPA	Proposed facilities under 5 to 10 MTPA	Total Plant Capacity AT 10 MTPA
22.	Bar Mill	-	1.4 MTPA	1.4 MTPA
23	Slag & Clinker Grinding Unit	-	10 MTPA	10 MTPA
24.	Captive Power Plant	300 MW	300 MW	600 MW (based on surplus gases of BF & Coke Oven) +RLNG
25.	Township	-	150 acres	150 acres

**The list of raw materials required for the project:**

Sr. No	Description	Raw Material Requirements at (10 Mtpa)		
		Quantity	Source	Mode of transport
A	Iron bearing raw materials (IBRM)			
1	C.L.O.	0.38	NMDC/Imported	Rail/ Sea
2	Iron Ore Fines	19.72	Imported	Sea
	Total	20.1		
B	Fluxes			
1	Lime stone (40-80 mm)	1.30	Imported	Sea
2	Dolomite (40 to 80 mm)	0.72	Imported	Sea
3	Lime stone (Sinter grade)	0.71	Imported	Sea
4	Dolomite (Sinter grade)	1.55	Imported	Sea
5	Quartzite	0.24	Rajasthan	Rail
	Total	4.52		
C	Carbon bearing raw material (CBRM)			
1	a) Hard Coking coal 60%	3.72	Imported	Sea
	b) Semi Hard Coking coal 40%	2.59	Imported	Sea
2	PCI Coal	1.25	Imported	Sea
3	Coke breeze	0.18	Indigenous	-
4	Anthracite (Low VM, Ash)	0.23	Imported	Sea
	Total	8.02		
	Grand Total	32.64	All Figures are in Million ton	

The total water requirement for the 10 MTPA steel plant, 600 MW power plant and township will be about 116 MLD. At present JSW ISPAT Steel Ltd., Dolvi Works has been allocated about 56 MLD water from River Amba, Nagothane, K.T.Bandhara and consent for 30 MLD has been obtained. Application is in progress for the balance amount. M/s JSW has permission for drawl of 53.66MLD from Irrigation Dept., Govt. of Maharashtra. Water drawl from River Amba sanctioned. Permission for additional 65MLD water is under consideration of Govt. of Maharashtra. It was further stated that the region receives heavy rainfall of about 3000mm annually and surplus water is available in the Dam.

The requirement of total manpower for proposed expansion project will be about 5,000. However, the proposed Integrated Steel Plant will additionally generate more than 15,000 indirect secondary and tertiary employment.

The specific water conservation measures that are being taken include the following:

- i. Closed re-circulating soft water primary cooling system.
- ii. Industrial water as secondary cooling media to pass through heat exchangers and heat rejected in cooling towers.
- iii. Blow down from the cooling tower of clean circuit will be fed as make-up water to cooling circuit of contaminated water. Pressure filtration system shall be provided for cleaning the contaminated water.
- iv. Dry BOF GCP for water scrubber elimination.
- v. Back wash water from the pressure filters will be treated in a sludge thickener and the concentrated sludge will be pumped to the sludge drying bed.
- vi. MBR & RO based COBP ETP and entire plant for 199% recycle/reuse.
- vii. Rainwater harvesting schemes from roof top of the buildings will be included in the proposed project as part of the water conservation measures.

The wastewater generated from the indirect cooling circuit would be routed through the cooling tower and pressure filter for recycling purpose. The wastewater generated from the coke ovens will be treated in a bio-oxidation plant to reduce the level of phenolic compounds, oil & grease and cyanide. The treated wastewater will be reused in the system. The wastewater of gas cleaning plants of blast furnace and steel melt shop containing suspended solids will be clarified in the wastewater treatment plant. The clarified water will be recycled to the waste gas cleaning units. Similarly, the wastewater coming out from the continuous casting machine will be treated to remove scale and oil and the treated water will be recycled after cooling. The plant sanitary waste water will be treated in sewage treatment plant and the treated water will be used for dust suppression and maintenance of plant green belt.

**Details of solid waste generated and utilization:**

Solid Waste Generation and Utilization at 10 MTPA			
SN	Solid waste	Generation Quantity (tpa)	Utilization
1	BF slag	3,000,000	Granulated and shall be used for cement manufacture
2	SMS slag	1800,000	Slag is processed and used in Sinter plant, making internal road surface etc.; balance for filling low lying area Extensive research being done by JSW for utilization of SMS slag as an aggregate/cement is in the final stages.
3	BF / Filter plant sludge	70,100	Used in Pellet and Sinter Plants after dewatering
4	DRI plant process water sludge	73,300	Used in Sinter plants after dewatering
5	Mills scales (SMS, Rolling mills, DRI Plant)	506,900	Used in Sinter plants
6	Flue dust from Blast furnace	62,100	Used in Sinter plants
7	Dust from bag filter of CONARC and de-dusting dust	90,500	Used in Sinter plants
8	Lime / Dolo dusts	-	Lime + Dolo fines used in Pellet and Sinter plants

In addition, HW generation such as waste oil, tar sludge, waste water treatment sludge and empty discarded container are being sold to authorised recyclers.

Ambient air quality monitoring has been carried out at 9 locations during December – February 2012-2013. PM<sub>10</sub> concentration ranged from 51-98 µg/m<sup>3</sup>, PM<sub>25</sub> concentration ranged from 13-34 µg/m<sup>3</sup>, concentration level of SO<sub>2</sub> ranged from BDL (Below Detection Limit) -15 µg/m<sup>3</sup> and NO<sub>x</sub> concentration is BDL-25 µg/m<sup>3</sup> during winter 2012. The model simulations deal with dispersion of three major pollutants viz., Sulphur Dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>) and Particulate Matter (PM) emitted from the stacks. The maximum incremental ground level concentrations (GLCs) for PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> due to proposed units are carried out. The predicted 24 hourly maximum concentrations for PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> are found to be 15.3 µg/m<sup>3</sup>, 4.2 µg/m<sup>3</sup> and 7.3 µg/m<sup>3</sup> respectively in proposed scenario.

The various measures taken to control fugitive dust emissions are given below:

- i. De-dusting system with bag filters at all dust generating locations in all the units have been installed to control the dust emissions as well as in the BF cast house and SMS and dust emission levels at work zone are within prescribed limits.
- ii. For the expansion project (5 MTPA), which is under various stages, secondary fugitive dust emission system will be installed at the BF Cast House, SMS and all other units.

Public hearing was conducted on 28.01.2014 at Pen Education Society's Jaikisan Vidya Mandir and Higher Medium School at Wadhkal, Taluk. Pen, Dist. Raigad, Maharashtra. The issues raise during the public hearing are measures for pollution control, information on gas holder installed in the project, infrastructure development for water supply in the neighbouring areas, repair of roads, road traffic, development of fishing activity, repair of kharland Bund, arrangement for village candidates sent for training in Bellary, more employment for the locals etc.

The Committee noted that the EC was granted on 12.12.2012, only about 2 years ago and the PP has already applied for further expansion for doubling the capacity from 5MTPA to 10 MTPA although many of the units of the existing steel plant for the EC granted in 12.11.2012, are yet to be commissioned and are at various stages of construction/ yet to start construction as given below:

S.N.	UNIT	Capacity for which EC was accorded in 12.11.2012	Status as in Jan. 2015
1.	DRI (Gas based)	0.8 MTPA (by augmentation)	Commissioned
2.	Pellet Plant	4MTPA	Commissioned
	Sinter Plant	3.2 MTPA	80% complete. Under advanced stage of construction. Commissioning in Dec. 2015
4.	Blast Furnace including pig Casting	1.6MTPA (by augmentation)	Under advanced stage of construction. Commissioning in Dec. 2015
5.	SMS (CONARC)	2.2 MTPA	Under progress (70% completed). Commissioning in Dec. 2015
6.	CSP (HRC Coil) Thin Caster-cum-Hot Strip Finishing Train	0.5MTPA (by augmenting)	Under advanced stage of construction (65%). Commissioning in Dec. 2015
7.	Lime & Dolo Kilns	2x600 TPD	Commissioned one unit (1x600 TPD).
8.	Oxygen Plant	2500TPD	Under execution (civil work in progress), completion in Jan. 2016.

9.	Captive Power Plant	300MW	55MW commissioned
10.	Plate Mill	1.5MTPA	Technology Selection under progress. Construction of these facilities is yet to start.
11.	Cold Rolling Mill	1 MTPA	
12.	Galvanising Line (cold rolled steel strips, hot dip zinc coated full hard)	0.6MTPA	
13.	Electrical Steel CRGO Line	0.4MTPA	
14.	Tin Plate Line	0.4MTPA	

Since the units for the 5 MTPA project are not completed/constructed, many of the air pollution control systems are yet to be installed and their compliance can be ascertained only after the expansion project (5 MTPA) is operationalised. Thus, the issues of compliance of the EC granted on 12.11.2012 could not be ascertained.

The Committee was informed that a Showcause Notice was issued to M/s JSW Ispat Steel Ltd (Dolvi Works) dated 11<sup>th</sup> November, 2014 based on the RO, Bhopal monitoring report dated 10.06.2014.. Show Cause Notice was issued to M/s JSW Ispat Steel Ltd (Dolvi Works) dated 11<sup>th</sup> November, 2014 based on the RO, Bhopal monitoring report dated 10.06.2014. The major issues raised in the SCN are that the works of proposed Jetty was started earlier at site. Further, no documentary evidence was submitted with respect to approval of final CZMP indicating Dharamter as CRZ-III. Six monthly compliance and analytical reports of third party were not submitted for EC 2009. Proponent has obtained Consent to Establish (CTE) from MPCB vide letter dated 23.09.2013 for expansion of existing jetty i.e. 331.5 m to 1741 m long Jetty. Later, PA has approached Ministry's for issuance of ToR which was considered on 26-28<sup>th</sup> Dec 2013. Simultaneously, the works of proposed jetty was also started at site. MoEF&CC had accorded EC vide letter dated 12.01.2009 for setting up of Coke oven plant having capacity of 1 MTPA in 60 acres within present site spread over 1,200 acres. The first unit was under construction stage. The validity of EC dated 12.01.2009 expired vide provisions of EIA 2006 on 11.01.2014 without obtaining extension of validity of EC. Details of area brought under plantation and density were also not submitted. In addition, the PP was implementing a number of projects as part of this project, for which EC had been granted to various other companies which they had acquired/amalgamated/created, without the due process of transfer of ECs in the name of M/s JSW Steel Ltd.

PP vide letter dated 22.11.2014 submitted the justification on the SCN and on request of PP, a hearing was given to PP on 04.12.2014. PP informed that the coke oven unit for which EC was valid until 11.01.2014 was operationlaised about a fortnight after validity of the project had expired. In regard to the violation of expansion of jetty without an EC, it was stated that only preliminary works had been started with respect to extension of the jetty from 331.5m to 1741m. The project has recently been granted a TOR by the Ministry.

3. After detailed deliberations the Committee sought following additional information for further consideration of the proposal:-

- i. ETP details not available in the report. ETP details along with report on cyanide management should be submitted
- ii. Gas balance details should be submitted report should be submitted for the power generated/plant operated versus quantity of gas required
- iii. CRZ map superimposing the layout plan of the project (existing and proposed) on the CRZ map prepared by any of the Agencies/Institutions authorised by MOEF&CC should be submitted and if any land is falling within CRZ, and if so, CRZ clearance.

- iv. Green belt details for 3 MTPA clearance and green belt details for 3 to 5 MTPA clearance and status of greenbelt development vis-à-vis EC conditions.
- v. Report on SMS plant waste utilization, blast furnace waste utilization plan.
- vi. Minimum 2.5 % of the capital cost for the expansion project should be earmarked for CSR activity and an action plan should be submitted
- vii. Details of implementation of CSR activity for the existing EC (5 MTPA) (in terms of what has been committed and what has been implemented) and a detailed CSR Plan for 2.5% of the total capital cost of the expansion project (10 MTPA)—village-wise, activity-wise details based on consultation with the villages and the district administration in the broad sectors of education, health, literacy including educating the girl child, skill development, alternate livelihood and creation of job opportunities, common infrastructure, drinking water and water conservation measures including rainwater harvesting, etc. , also incorporating the issues raised in the Public Hearing.
- viii. Time series data of ambient air quality and effluents collected for the various ECs for the first unit and subsequent expansions of the ISP.
- ix. If planning for the marine discharge then CRZ clearance has to be obtained. Details in this regard. Status of EC for the jetty expansion.
- x. Status of the CTO for the commissioned plant/units.
- xi. Copies of sanction of water drawl for the existing project (5 MTPA) and for the expansion project (10 MTPA) from Irrigation Dept, Govt. of Maharashtra vis-à-vis total water requirement for all the activities/units of the Integrated Steel Plant.
- xii. Plan for rain water harvesting (in view of the fact that the region receives high annual rainfall of 3000mm) and how this would supplement the total water requirement. In addition, details of water conservation measures to reduce the make-up water requirement for (5 MTPA and 10 MTPA) the project.
- xiii. Copy of the TOR granted by MOEF&CC for expansion of the Jetty from 331 to 1741m.
- xiv. Details of iron ore and coal linkages – for the existing 3MTPA, 5 MTPA (for which EC ahs been granted) and for the proposed 10MTPA project.

It has been further decided by the Committee that a sub-committee shall visit the plant and submit the report to the Ministry/EAC after furnishing of the aforesaid details except point no. (iii).

#### 31.7.2 Proposed Integrated Cement Plant (Clinker 3.5MTPA, Cement 5MTPA, Coal Washery 1MTPA) and Captive Power Plant (50MW) of **M/s UltraTech Cement Ltd.**, at villages Sarkipar, Piprahi & Simradih, Tehsil & District Balodabazar, Chhattisgarh **(EC)** (J-11011/625/2010-IA.II(I))

M/s UltraTech Cement Ltd. (**herein after Project Proponent –PP**) and their EIA-EMP consultant M/s J.M. EnviroNet Pvt Ltd gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 18<sup>th</sup> meeting of the Expert Appraisal Committee (Industry) held on 24<sup>th</sup> -25<sup>th</sup> January, 2011 for preparation of EIA-EMP report. The TOR was awarded by MoEF&CC vide F.No. J-11011/625/2010-IA.II(I) dated 10<sup>th</sup> march, 2011 for preparation of EIA-EMP report. PP submitted the final EIA-EMP report vide letter dated 8<sup>th</sup> march, 2013 after conducting Public Hearing for grant of Environmental Clearance. The matter was considered in the 11<sup>th</sup> EAC meeting held during 26<sup>th</sup> – 27<sup>th</sup> August, 2013.

However, the Committee noted that the total land requirement for the project is 222 ha (Government barren land – 18.54 ha and Private land – 203.46 ha) which is yet to be fully acquired by the M/s. Ultra

Tech Cement Limited. The Committee also noted that as per condition no. 11 of the ToR, *proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.* The Committee deferred the consideration of the proposal and *recommended that the proposal may be placed before the EAC, once the necessary documents indicating acquisition of total land of 222 ha is submitted by the M/s. Ultra Tech Cement Limited.* The proposal was placed before the EAC for consideration. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

PP vide letter dated 8<sup>th</sup> August, 2014 mentioned that they have acquired more than 90% of the land for the project.

2. The salient points of the proposed project as per the final EIA-EMP report submitted by project authorities vide letter referred above in para 1 are as follows:

M/s UltraTech Cement Ltd. is proposing a Greenfield Integrated Cement Project (Clinker 3.5 MTPA, Cement 5 MTPA, Coal Washery 1 MTPA) and Captive Power Plant (50 MW) at Villages Sarkipar, Piprahi & Simradih, Tehsil & District Balodabazar- Bhatapara, Chhattisgarh. The capacity of proposed project activity has been tabulated below:

S. N.	UNIT	Proposed Capacity
1.	Clinker (MTPA)	3.5
2.	Cement (MTPA)	5
3.	Coal Washery (MTPA)	1
4.	CPP (MW)	50

UTCL has also proposed to install WHRB of 15 MW. The total land required for the proposed project is 222 ha. Greenbelt will be developed in 73.26 ha (33% of the total project area). No forest land is involved. No National Park, Wildlife Sanctuary, Biosphere Reserve, Reserved Forest etc. exists within 10 km radius of the proposed project site. Two Reserved Forests falls within 10 km radius at a distance of approx. 0.5 km in E direction and 9.1 km in NE direction from the proposed project site. The cement plant is based on the dry process technology for cement manufacturing with pre-heater and pre-calciner technology. Out of the total plant area (i.e. 222 ha), 33% (73.26 ha) will be developed under green belt / plantation in a scientific manner in and around the plant & colony premises. A total of Rs. 6000 lakhs will be spent for CSR activities. Total cost of the project is Rs. 1200 crores. Capital cost for Environmental Protection Measures is Rs. 150 crores and Recurring Cost is Rs. 2 crores/annum.

Raw materials required for the proposed cement plant are Limestone which will be procured from Captive Kukurdih Limestone mine near the plant site; Iron Ore will be procured from the Raipur / Rajnandgaon area; Gypsum will be purchased from Vishakhapatnam; slag will be procured from Bhilai Steel Plant, NICCO & Fly ash will be procured from the CPP, Balco, NTPC etc. Coal will be used as fuel in both Cement Plant and Captive Power Plant which will be sourced from Captive Coal Washery & nearby market.

3650 KLD of water will be required for the proposed Integrated Cement Project which will be sourced from ground water. Total Power requirement for the proposed Integrated Cement Project is 60 MW which will be sourced from CPP (50 MW) & CSEB (10 MW).

Baseline study was conducted during Winter Season – December, 2011 to February, 2012. The concentration for all the 8 AAQM stations for  $PM_{10}$  ranges between 34.50 to 62.32 $\mu\text{g}/\text{m}^3$ ,  $PM_{2.5}$  ranges between 17.43 to 29.56 $\mu\text{g}/\text{m}^3$ ,  $SO_2$  ranges between 6.64 to 11.80 $\mu\text{g}/\text{m}^3$  and  $NO_2$  ranges between 9.20 to 16.60  $\mu\text{g}/\text{m}^3$ . Ambient noise levels measured at 8 locations around the project site varies from 44 to 51 Leq dB (A) during day time and during night time noise levels ranges from 38 to 44 Leq dB (A). The ground water analysis for all the 8 sampling stations shows that pH varies from 7.12 to 7.78. Total Hardness varies from 205.10 mg/l to 302.12mg/l & Total Dissolved Solids varies from 282.00mg/l to 528.00mg/l. The analysis results for soil shows that soil is moderately alkaline in nature as pH value ranges from 7.10 to 7.60, with organic matter 0.74 % to 0.86 % and is Silty loam in texture. The concentration of Nitrogen, Phosphorus & Potassium has been found to be in lesser amount in the soil samples. Maximum incremental concentration of PM due to Proposed Integrated Cement project will be 9.23 $\mu\text{g}/\text{m}^3$  at a distance of about 675 m in SW Direction.

All major sources of air pollution will be provided with bag house/bag filters/ESP to maintain particulate matter emissions within permissible limit. No industrial waste water will be generated in the Cement Plant. Domestic waste water generated from Cement Plant/Colony will be treated in the STP and treated water will be utilized for Greenbelt Development. Rain water harvesting structures will be constructed. No solid waste will be generated in cement manufacturing process. Dust collected from various pollution control equipments will be recycled back in the process. STP Sludge will be utilized as manure for green belt development within the plant premises.

Public Hearing for this Proposed Integrated Cement Plant was conducted on 30<sup>th</sup> Nov., 2012 under the chairmanship of Shri M Kalyani, Additional District Magistrate, Chhattisgarh. The major issues raised during public hearing are employment to the local population, technical training to graduates, employment to each adivasi land loser etc

4. After detailed deliberations the Committee recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering accord of environmental clearance:

- i. The proposed greenfield project shall comply with the new MOEF&CC Standards vide GSR 612 (E) dated 25.08.2014 with respect to particulate matter,  $SO_2$ ,  $NO_x$  for Cement sector.
- ii. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. Air pollution control devices such as Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill shall be provided to control  $PM_{10}$  and  $PM_{2.5}$  to meet prescribed standards. Low  $NO_x$  burners shall be provided to control  $NO_x$  emissions. Regular calibration of the instruments must be ensured.
- iii. All the pollution control devices/equipment in raw mill/kiln, kiln feeding system, clinker cooler, coal mill, cement mill, and cement silos, shall be interlocked so that in the event of the pollution control devices/systems not working, the respective unit(s) shut down automatically.

- iv. Possibilities shall be explored for the proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB) and a feasibility report shall be prepared and submitted to the Ministry and its Regional Office at Bhopal within 3 months from the date of issue of the letter.
- v. Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- vi. Feasibility for laying the railway line along with the other stack holders shall be explored.
- vii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be followed.
- viii. AAQ Modelling shall be carried out based on proposed project based on the specific mitigative measures proposed for the proposed project and mitigative measures taken to keep the emissions well below the standards.
- ix. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.
- x. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- xi. The coal yard shall be lined.
- xii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- xiii. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.
- xiv. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- xv. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.

- xvi. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / reprocessors only.
- xvii. The proponent shall implement a Plan for 100% utilisation the fly ash from the Power Plant in the Cement Plant. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008. Efforts shall be made to use fly ash maximum in making Pozzolona Portland Cement (PPC).
- xviii. The proposed cement plant kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes such as oil sludge, cut tyres, etc.
- xix. The proponent shall examine and prepare a plan for utilisation of high calorific wastes such as chemical wastes, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify suitable industries with such wastes and enter into an MOU for long-term utilisation of such wastes as per the E(P) A Rules, 1986 and with necessary approvals.
- xx. Efforts shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly. The PP shall enter into an MOU with units with potential for generating HW. And in accordance with HW Regulations and prior approval of the MPPCB.
- xxi. As proposed, green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xxii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xxiii. All the commitments made to the public during the Public Hearing / Public Consultation meeting shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xxiv. At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xxv. The proponent shall prepare a detailed CSR Plan for every next 5 years for the proposed project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as

part of the Compliance Report to RO, Bhopal. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.

- xxvi. A Risk Assessment Study and Disaster Preparedness and Management Plan along with the mitigation measures shall be prepared with a focus of Disaster Prevention and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xxvii. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xxviii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

### **31.8 Further Consideration Cases**

31.8.1 Expansion of Alumina Refinery (1 MTPA to 6 MTPA) and Captive Power Plant (from 75MW to 285MW) of **M/s Sesa Sterlite Ltd.** (Formerly M/s Vedanta Aluminium Ltd.) at Dist. Kalahandi, Odisha (EC) (J-11011/406/2011.IA-II(I)) (Considered in Nov. 2014)

The proposal was last considered in the 27th meeting of EAC(I) held on 13<sup>th</sup>-14<sup>th</sup> November 2014, wherein the Committee after deliberations had sought the following:

- (i) Details of land use break-up of total project area of 1552.65 ha has not been provided (break-up for 833.31 ha has been provided)
- (ii) It is stated that forestland is 'Nil' in the existing project which is incorrect, as forestry clearance has been granted by MOEF&CC for the forestland within the existing project site. The correct details of forestland (revenue/Protected Forest/Reserve forest/DLC land/etc) in the existing and proposed expansion project and status of forestry clearance should be provided. If forestland exists, status of forestry clearance.
- (iii) Clarification whether 783 ha is over and above the 1552.65 ha of total project area. If so, details of land use break-up for the additional area of 783 ha required for storing red mud, additional area for storing ash (specific details required) and for green belt. Specific clarification to be provided of this has forestland (revenue/Protected Forest/Reserve forest/DLC land/etc) and if so, details. If forestland exists, status of forestry clearance.
- (iv) Status of land acquisition for the expansion project along with supporting documents vis-à-vis MOEF O.M. No. 22-76/2014-IA.III dated 07.10.2014 for (iii) above.
- (v) The details of land requirement as per phase-I, II and III and by which year they (phase-I, II and III) are expected to be reached/achieved (2 MTPA, 5 MTPA and 6 MTPA).
- (vi) Status of EC of the bauxite mines from where the domestic sources of bauxite are identified as long term supplier of bauxite.

- (vii) A specific Alternate Plan for Procurement from both domestic and import should be provided in case no specific mines are available for mineral extraction of bauxite from mines in Odisha and rest of the country.

The PP vide letter dated 08.12.2014 had furnished their response. These issues were taken up for further consideration.

The PP and their EIA consultant – M/s Global Experts, Bhubaneshwar, Odisha made a presentation. It was informed that of the total project area of 1552.65ha, the total land area for the existing project is 833.31ha and that for the proposed expansion (from 1MTPA to 6MTPA) would require an additional area of 719.34ha. The break-up of land use of the total project area is as given below:

S.N.	LAND USE	EXISTING PROJECT (1MTPA) (in ha)	PROPOSED EXPANSION (6MTPA) (in ha)
1.	Agriculture	609.33	448.50
2.	Wasteland	184.48	219.32
3.	Habitation	7.69	46.63
4.	GJLand (Forestland)	26.123	Nil
5.	Water Bodies	5.69	4.89
	<b>Sub-Total</b>	<b>833.31</b>	<b>719.34</b>
	<b>TOTAL</b>	<b>1552.65</b>	

It was further stated that there are a few patches of Gramya Jungle Jagya (GJJ) land (which is forestland) of a total area of 26.123ha inside the existing 1MTPA Alumina Refinery, which is being maintained as part of the green belt as mandated by Govt. of Odisha as per their letter No. 9580 dated 06.05.2013, which states that *“the State Government has no objection in case the IDCO/User Agency desires to apply for forest diversion for about 26.123ha of GJJ land located inside the refinery complex (i.e. excluding the 2.82 ha of land stated to be outside the refinery complex out of the total area of 28.943 ha) subject to the stipulation that such forestland shall be retained/developed/maintained as a greenbelt within the Plant at project cost even as diversion is allowed by MOEF, GOI. Until the diversion if allowed by the MOEF, GOI under FC Act 1980, the User Agency shall not utilise that land for nay other purpose nor restrict the access of the villagers to the said forestland”*. It was stated that the land is at an advanced stage of diversion process by IDCO (the nodal agency of the Govt. of Odisha for land acquisition). FRA certificate has been issued by the District Collector.

It was clarified that the area of 783ha required for storage of red mud for the 6MTPA expansion project is part of the 1552.65 ha of the total land area. No forestland is envisaged in the proposed land to be acquired. It was stated that three villages namely – Rengopali, Kothuduar and Bandhaguda are under Rehabilitation by the IDCO, for which Section 4 Notification is completed and Section 6 Notification by the Govt. of Odisha is awaited.

It had been stated that for Phase-I, no additional land is required and the capacity of the 2 MTPA will be achieved in 2-3 months from the issuance of EC. Additional land will be required for Phase-II only for the Red Mud Pond (dry storage for future), Ash Pond, greenbelt and other associated facilities. The capacity of 5MTPA will be achieved in 18-20months from the issuance of EC. For phase-III, no additional land will be required and capacity will be attained by debottlenecking of 5MTPA capacity in 5-6months after attaining 5 MTPA capacity, i.e. 23-26 months from the issuance of EC. However, consequent to the

discussions and clarification sought by the EAC(I) on the phase-wise expansion, the PP submitted a letter dated 09.01.2015 as per which the phase-wise expansion of the 6MTPA project will be as given below:

S.N.	Phase	Capacity of the Alumina Refinery (MTPA)	Requirement of Bauxite (MTPA)
1.	I (Through process improvements)	2	5.2
2.	II (By adding similar stream of existing plant capacity the capacity will be enhanced by another 2 MTPA)	4	10.4
3.	III (By adding another similar stream of existing plant capacity the capacity will be enhanced by another 2 MTPA)	6	15.6
<b>TOTAL</b>		<b>6</b>	<b>15.6</b>

The details of Plant details vis-à-vis area required for the proposed expansion are given below:

S.N.	FACILITY	Existing land area (ha)	Addl. Land for Ph. I (ha)	Addl. Land for Ph.II (ha)	Addl. Land for Ph.III (ha)	TOTAL Land req. (ha)
1.	Main Plant with greenbelt	420	-	-	-	420
2.	Red Mud Storage Pond with green belt	211.47	53.5 ha (process of acquisition initiated))	-	<b>518.03</b> (yet to be acquired)	783
3.	Ash Pond with Pipeline with green belt	95.4	-	-	<b>80</b> (yet to be acquired)	175.4
4.	Township & Misc including greenbelt	52.5	-	-	<b>28</b> (yet to be acquired)	80.5
5.	Railway including greenbelt	53.8	-	-	<b>40</b> (yet to be acquired)	93.8
<b>TOTAL</b>		<b>833.17</b>	<b>53.5</b>	-	<b>666.03</b>	<b>1552.7</b>

Of the total project area of 1552.7ha, 833.17 + 53.5 ha is under advanced stage of acquisition and the balance 666.03 ha is yet to be acquired. Of the 666.03 ha, 221.73 ha is Govt. land which requires to be allocated by the Govt. of Odisha through their Nodal Agency –IDCO and the balance 444.3ha is private land which requires being acquired by the Govt. of Odisha through IDCO.

The PP has further stated in their letter dated 09.01.2015 that for the implementation of **Phase-I** no additional land is required. In regard to **Phase-II**, the process of acquiring 53.5 ha has been initiated through Section 4 Notification completed under the Land Acquisition Act. In regard to **Phase-III**, a total area of 666.03 ha is required for the Red Mud Storage Pond, Ash Pond, Township and Railways.

The total requirement of bauxite of 15.6 MTPA is to be met from own mines and from other sources. The status of existing captive bauxite mines for which EC has been obtained is given below:

S.N	Name of Bauxite Mine	Name of Company	Capacity (MTPA)	Date/Status of EC
1.	Mainpat Bauxite Mine, dsit. Sarguja, Chhattisgarh	BALCO	0.75	17.09.2008
2.	Bodai Daldali Bauxite Mine, Dist. Kawardha, Chhattisgarh	BALCO	1.25	09.04.2010
3.	Expansion of Wandhi-I and Wandh-II Bauxite Mine, dist. Kutch, Gujarat	GMDC	0.125 + 0.125	10.11.2006
	TOTAL		2.25 MTPA	

As against the total requirement of bauxite of 15.6 MTPA, a total of 2.80MTPA would be met from domestic sources, and 9.15 MTPA would be met from others (domestic) and from sources which export bauxite (3.41 MTPA). The State-wise procurement plan of bauxite is MP (0.15 MTPA), Jharkhand (0.50MTPA), Chhattisgarh (1.9MTPA), AP (0.8MTPA), West Coast (4.15MTPA), Odisha (0.65MTPA) amounting to a total quantity of 8.15MTPA. The Procurement plan through imports is Guinea (4 MTPA), Australia (2.5MTPA), Sierra Leone (1 MTPA), Indonesia/Malaysia (2 MTPA) amounting to a total of 9.5MTPA.

The Committee after deliberations noted that the Ph.I can be implemented with the existing land available with the PP and in regard to Ph.II - the proposed acquisition of 53.4ha for the red mud storage is sufficient for expansion to 4 MTPA. In regard to Ph.III (6 MTPA), land is yet to be acquired. Thus, the existing land and the proposed acquisition of 53.4ha for the red mud storage is sufficient for expansion to Ph. II to 4 MTPA. The Committee however noted that the PP does not have sufficient capacity of captive bauxite mines and the annual bauxite requirements for the expansion project is largely to be met from sources outside – domestic as well as imports.

The Committee after deliberations, recommended the project for environmental clearance subject to stipulation of the following specific conditions and any other mitigative measures.

- i. The environmental clearance is for Phase-I (2 MTPA) and Phase-II (4 MTPA) of the project only. No expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.
- ii. The complete details of land acquisition for 883ha required for Phase-I and II shall be furnished to MOEF&CC and to RO, Bhubaneshwar as part of the Compliance Report.
- iii. For Phase-III (6 MTPA), the proponent shall obtain an amendment of EC after completion of land acquisition of the balance area of 666.03ha.
- iv. The land acquisition of 53.4 ha required for Phase-II shall be completed before expansion to Phase-II (4 MTPA).
- v. Electrostatic precipitator(s) shall be provided to kiln and boiler stacks to control gaseous emissions within 50 mg/Nm<sup>3</sup>. The height of the stacks shall be as per the CPCB guidelines. Gaseous emissions shall be regularly monitored and records maintained and reports submitted to this Ministry including its Regional Office as part of the compliance report.
- vi. The estimated 4.8MTPA of red mud generated in Phase-I and II shall be stored in the red mud pond only designed as per the CPCB guidelines with proper leachate collection system and ground water all around the red mud disposal area shall be monitored regularly and report submitted to the

Odisha PCB/CPCB and Regional Office of the Ministry at Bhubaneswar. Proper care shall be taken to ensure no run off or seepage from the red mud disposal site to natural drainage. Sewage sludge shall be used as manure within the premises.

- vii. The red mud slurry shall be converted into red mud powder using a high pressure filtration system by which, the red mud shall not be in a slurry form but in cake form and thereafter sold for use by cement manufacturers. The entire amount of red mud generated from the project would be sold to cement industry. The stock piles shall be stored in areas which are lined.
- viii. A plan for utilisation of red mud generated shall be implemented. Under the Plan, MOU with shall be signed with potential buyers including cement companies for supply of red mud.
- ix. The details of coal linkage/procurement details for Phase-I and II of the project shall be furnished as part of the compliance report to MOEF&CC and to RO, Bhubaneswar.
- x. All the fly ash generated from the Alumina Refinery shall be properly stored in ash storage pond and provided to cement and brick manufacturers for further utilization. Ash pond created for the existing project shall be used for storage of ash for the expansion project. Ash shall be evacuated through HCSD.
- xi. Green belt shall be developed in 33% area to mitigate the effects of fugitive emissions as per the CPCB guidelines. Plant species from local area shall be selected in consultation with DFO for green belt development.
- xii. Rehabilitation and Resettlement Plan for the project affected population shall be implemented as per the policy of the Govt. of Odisha.
- xiii. For undertaking Phase-I and Phase-II of the project, the project proponent shall finalise the MOUs/Agreements for firm availability of bauxite of 5.2 MTPA for Phase-I and 10.4 MTPA for phase-II.
- xiv. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium sector shall be strictly implemented.
- xv. The gaseous emissions (PM10, PM2.5, SO<sub>2</sub>, NO<sub>x</sub>) from various process units shall conform to the standards prescribed by the concerned authorities from time to time. The OPPCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. The particulate emissions from the plant shall not exceed 50 mg/Nm<sup>3</sup>. At no time the emissions level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.
- xvi. In-plant control measures for checking fugitive emissions from spillage/raw materials handling etc. should be provided and particulate matter from Bauxite transport and crushing shall be provided with highly efficient bag filters and covered conveyers and adequate water sprinkling shall be done.
- xvii. The additional water requirement to be met from River Tel for Phase-I and II shall not exceed the quantity sanctioned by the State Government from River Tel.
- xviii. The requirement of make-up water at present is 0.20 cumecs and shall not exceed 0.40 cumecs for the phase-II expansion.
- xix. The existing raw water reservoir (2.1 lakh m<sup>3</sup> capacity), storm water pond (75,000m<sup>3</sup> capacity), caustic water pond (94,350m<sup>3</sup> capacity), red mud pond (7.2 lakh m<sup>3</sup> capacity), process water lake (21.4 lakhm<sup>3</sup> capacity), Ash water Lake (7.1 lakh m<sup>3</sup> capacity) totalling 39 lakh m<sup>3</sup> shall be utilised as rain water harvesting ponds. In addition, about 1 lakhm<sup>3</sup> of rainwater shall be harvested from township which will be recharged to groundwater to meet the domestic requirement of an estimated 2300 people for a complete year. With these water harvesting measures the PP shall reduce fresh water consumption to an extent of about 40% of.

- xx. The company shall construct separate RCC drains for carrying storm water inside the plant. Decanted water from red mud pond is collected in the Process Water Lake during the monsoon and the same water recycled back to the process through pumping arrangements.
- xxi. The plant will operate on a zero-discharge concept and all treated water shall be recycled and reused. No effluents shall be discharged outside the premises during the non-monsoon period and during the monsoon period water should be discharged only after proper treatment and meeting the norms of the OPCB/CPCB. There shall be separate drain for storm water/rainwater. The concrete drains shall be de-silted and regular supervision of the areas shall be carried out so that blocking of drains may be avoided for quick discharge of rainwater.
- xxii. Of the total area of 1552.65 ha, an area of 512.37 ha (33%) shall be developed into green belt. Of this, a total of 215.20 ha of green belt have been developed and the balance area of 297.17ha shall also be brought under plantation, which includes plantation in a width of 15-20m along the remaining boundary wall of 3km of the 8km.
- xxiii. Material transportation shall be by rail for which a dedicated railway line for transportation of both raw materials and products shall be established. Material handling areas shall have DFS.
- xxiv. The company shall comply with all the commitment made during public hearing/public consultation.
- xxv. The details of quantity and source of bauxite procured shall be submitted as part of the six-monthly compliance report.
- xxvi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- xxvii. At least 2.5 % of the total cost of the project (Rs 10,000 crores) shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs. The proponent shall prepare a detailed CSR Plan for every next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO, Bhubaneswar. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.

The Committee further recommended that the EC can be granted to the project only after furnishing of Sate-I Forestry clearance for the extent of forestland/GJJ found within the project area of 1552 ha. The Committee also recommended that the project need not go through a fresh appraisal process again for the Ph-III expansion from 4 to 6 MTPA. The Committee recommended that since the present EC application submitted by the PP has considered the impacts of the 6 MTPA project, the EC for Phase-III expansion to 6 MTPA project can be granted as an amendment after ascertaining the land acquisition details and without the requirement of going through the whole EIA process afresh.

31.8.2 Proposed Greenfield Integrated Cement Project (Clinker 4.5MTPA, Cement 5.5MTPA), CPP (75MW), DG Set (3x6MW) & WHRB (15MW) of **M/s UltraTech Cement Ltd.**, at villages Vellianai

& D. Gugalur, Tehsil Karur & Vedasandur, Districts Karur & Dindigul, TN (EC) (J-11011/102/2010-IA.II(I) (Considered in Nov. 2013)

The matter was considered in the EAC meeting held during 19<sup>th</sup> December, 2013 and the project was recommended for grant of Environmental Clearance. However, the Ministry vide letter dated 9<sup>th</sup> April, 2014 requested the PP to submit the following information:

- i. Status of Environmental Clearance for the Captive Limestone mines.
- ii. Firm coal linkage document for the cement cum power plant
- iii. Permission from central ground water authority for usage of water from bore wells

PP vide letter dated 18<sup>th</sup> November, 2014 submitted the requisite documents.

4. After detailed deliberations the Committee recommended the project for environmental clearance and stipulated specific conditions as decided during the EAC meeting held during 19<sup>th</sup> December, 2013 along with the following additional conditions while considering accord of environmental clearance.

- i. Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- ii. Plant should not be operated without EC for the captive limestone mine.

31.8.3 Expansion of Crude Steel Production (from 9.7MTPA to 11MTPA) at Tata Steel Works of **M/s Tata Steel Ltd.**, Jamshedpur, Dist. East Singhbhum, Jharkhand [**J-11011/691/2007-IA-II(I)**] (Further consideration of TOR) (Considered in Sept. 2014)

The matter was considered in the 23<sup>rd</sup> EAC meeting held during 18<sup>th</sup> – 19<sup>th</sup> September, 2014. The Committee after deliberations had sought the following details for further consideration of the expansion proposal:

- i. Action Plan for reuse of LD slag.
- ii. Details of plant layout including green belt and water harvesting structures of the existing Plant and with proposed (both in tabular form in acres/sq.m and in figure with different for existing and proposed units). Plan for decongestion of the entire plant and for development of green belt.
- iii. Pollution load increase (effluents and emissions) of the proposed expansion vis-à-vis the existing load.
- iv. Break-up of existing and proposed expansion project of the ISP along with capacities of production of the units.
- v. It has been stated that there will not be any structural additions in the plant. Justification for the same shall be submitted.
- vi. Details of upgradation/modernisation of the existing plant.
- vii. Status of environmental compliance of EC for the existing (9.7 MTPA) shall be submitted.
- viii. Energy balance and water balance and specific energy and water conservation measures being adopted in the existing plant. Details of recycling and reuse.

The Committee decided that the proposal will be further considered after receipt of the aforesaid details. PP submitted the aforesaid information and made presentation before the committee.

Regarding LD slag, PP stated that the total generation of LD slag at 11 MTPA stage shall be approximately 2 MTPA. It is proposed that the slag will be processed in Metal Recovery Plant (MRP) for recovery of metallics. Recycling in Sinter Plants, Blast Furnaces and LD Converters. The LD slag will be used in preparation of Road Sub Grade, Paver Blocks, Cement Making, Rail Ballast, Infrastructure Development at Galudih, Soil Conditioner

In regard to green belt development, PP informed that TSL leasehold area in Jamshedpur is ~5094 Ha which includes 717 ha for Steel Works. With given conditions for 33% of green belt development in and around steel works, a total of approx. 237 ha of land would be required for developing the area in green belt. At present approx. 1382 ha is available for greenbelt development in Tata steel leasehold area which includes Jamshedpur Steel Works and Colony. Out of the above, greenbelt development has already been developed in approx. 1323 Ha.

In regard to water harvesting, it was informed that Tata Steel at Jamshedpur site consists of number of buildings, factory sheds, utility areas, railway yards, parking areas etc., which limit the open area available for natural recharge and for construction of natural ponds/reservoirs. However, two water bodies exist inside steel works as Upper Cooling Pond (UCP) and the Lower Cooling Pond (LCP), one of which was desilted and its capacity enhanced. The run-off water of the plant is captured to the extent possible in the Upper and lower Cooling Ponds. TSL has constructed roof top RWH structures in all major buildings.

In regard to decongestion plan, the PP stated that the peripheral and arterial roads inside the Works have already been widened. Conveyor/Pipe conveyor for material handling to reduce vehicular movement shall be installed. Electrification of the Raw Material yard for faster evacuation of railway wagons shall be carried out. Bus services for internal movement. Engine on Load (EOL) at wagon tippler for Raw Material Handling area shall be installed. Traffic movement within the Plant moderated by minimizing crisscross movement of trucks shall be practiced. Designated parking place for trucks inside and outside steel works and foot over bridge to divert pedestrian and cyclist from main road (heavy vehicles) shall be constructed.

In regard to pollution load (effluent & emission) of the proposed expansion vis-à-vis existing load, PP stated that all new air pollution control equipment designed for 50 mg/Nm<sup>3</sup> shall be installed, existing Bag Filters and ESPs, Dust Suppressions Systems – Dry Fog shall be upgraded, Pipe Conveyors, Tyre Washing facility, Industrial Vacuum Cleaning System, Secondary fume extraction systems at LD Shops shall be installed. Water Pollution Control Equipment like Biological Oxidation Treatment Plant for Coke Oven effluent treatment by State-of-the Art AIS system, Implementation of Central Effluent Treatment Plant with RO, Close loop waste water treatment systems for mills and De-oiling facility for Mill scales and sludge shall be practiced.

PP submitted following table for break-up of existing and proposed expansion project along with the capacities of the production of the units.

No.	Facilities	Existing Facilities	Production (MTPA)	Facilities After Expansion	Production (MTPA)

i	Coke Oven Batteries with by-products recovery	Battery # 5 to 11	3.4	Battery# 5 to 11	3.4
ii	Sinter Plant	SP# 1 to 4	8.0	SP# 1 to 4	9.0
iii	Pellet Plant	1 unit	6.0	1 unit	8.0
iv	Blast Furnace	BF- C,F,G,H,I	10.55	BF- C,D,E,F,G,H,I	12.50
v	BOF	LD# 1 to 3	9.7	LD# 1 to 3	11.0
vi	Lime Kilns	Kiln# 1 to 9	3600 TPD	Kiln# 1 to 10	4200 TPD
vii	New bar Mill (NBM)	1 unit	0.6	1 unit	1.0
viii	Wire Rod Mill (WRM)	1 unit	0.37	1 unit	0.5
ix	Merchant Mill (MM)	1 unit	0.265	1 unit	0.43
x	Hot Strip Mill (HSM)	1 unit	3.55	1 unit	4.3
xi	Thin Slab & Continuous Caster (TSCR)	1 unit	2.34	1 unit	2.65
xii	Cold Rolling Mill (CRM)	1 unit	2.19	1 unit	2.19

In regard to structural additions within the Plant proposed for the expansion project, the PP provided details for Charge Coke Production, Enablers for Pellet Plant, Enablers for increasing the Hot Metal Production, Enablers for increasing the Crude Steel Production, Enablers for increasing Production in the Mills, Power Generation at 11 MTPA Crude Steel Production. PP also provided details of upgradation/modernisation of the existing plant for Fugitive dust control, Stack emission.

PP submitted compliance report issued by RO, Bhubaneswar dated 06.01.2015 for status of environmental compliance of EC for the existing (9.7 MTPA).

Regarding energy and water balance PP submitted that the present specific energy consumption is 6.017 Gcal/tcs (refer to performance of 2013-14, i.e. FY14). Over the next 5 years the following projects are expected to be completed and commissioned:

- 1) Coke Dry Quenching in new Coke Oven Batteries
- 2) Gas Holders – BF Gas, C.O. Gas and LD Gas
- 3) Recovery of LD Gas from LD3

The estimated additional electrical power requirement (690 Million kWh) would be met from additional in-plant generation from extra by-product gases as well as external sources such as Ramchandrapur-Baripada 400 kV line of Power Grid Corporation of India Limited (PGCIL) through Bulk Power Receiving Substation (BPRS), Tata Power Company Limited (TPCL), Jojobera Power Plant and DVC substation at Golmuri.

The committee after deliberations recommended for grant of ToR at Annexure-1 read with Additional TORs at Annexure 2 without PH. However compliance to earlier PH would require to be submitted as part of the EIA-EMP report.

31.8.4 Capacity Expansion (0.3 MTPA to 0.8 MTPA) (Ph-II) of Cold Rolling Mill of **M/s Tata Steel Ltd.** at Bara, Golmuri-cum-Jugsalai, Jamshedpur, Dist Purbi Singhbhum, Jharkhand (EC) [J-11011/22/2013-IA-II(I)]

The matter was considered in the 23<sup>rd</sup> EAC meeting held during 18<sup>th</sup> -19<sup>th</sup> September, 2014. The Committee sought the following details for further consideration of the case:

- (i) Status of WL Clearance from the Standing Committee on Wildlife vis-à-vis SC Order dated 04.12.2006 in view of the fact that Dalma Wildlife Sanctuary is located at a distance of 2.7 km. In case the eco-sensitive zone of the Dalma WL Sanctuary has been notified to be 2.7km, a copy of the MOEF Notification demarcating the ESA and distance of the project from the boundary of the ESA shall be furnished.
- (ii) Details of greenbelt development in a tabular form for the 33% of the plant area with specific details of the greenbelt in the layout of the plant.
- (iii) Copy of CPCB permission obtained for oil recycling unit shall be submitted. To confirm whether the hazardous wastes sent to Bristol Petroleum are being disposed off as per the approved guidelines of CPCB and also whether he is authorised under EPA Rules to operate the disposal facility.

PP submitted response to the above queries raised by the Committee and made presentation. It was stated that M/s Tata Steel had submitted the application vide letters No. EMD/C-38/206/13 and EMD/C-38/207/13 dated 08.11.2013 to DFO, Jamshedpur. A response was received from DFO vide letter dated 02.09.2014 that the proposed expansion project of Cold Rolling Mill is located in non-forestland with no possibility of impacts on the Dalma WL Sanctuary. A letter was thereafter submitted to PCCF (WL) vide letter No. EMD/C-38/167/14 dated 18.10.2014 for NBWL clearance. It was further stated that the MOEF&CC had notified vide Notification dated 29.03.2012 an area of upto 5km from the boundary of the Dalma WL Sanctuary as Eco-sensitive Zone. The project site is located outside the boundary of the Dalma Eco Sensitive Zone at a shortest aerial distance of 2.7km in the North direction. In all other directions it is beyond 2.7km outside the ESZ. Therefore, the project does not come in the ambit of the NBWL clearance.

The total area under greenbelt development is proposed to be increased from 0.58ha to 2.74 ha. It was clarified that M/s Bristol Petroleum Pvt. Ltd who is the authorised recycler for HW products generated is an authorised agency as per consent dated 26.03.2013 and dated 30.05.2014 issued by WB SPCB.

The Committee after deliberations recommended the project for environmental clearance subject to stipulation of the following conditions and any other mitigative measures:

- i. The PP shall obtain prior NBWL clearance before expansion.
- ii. The PP shall participate a WL Conservation Plan in and around the project site drawn up in consultation with the PCCF(WL), Government of Jharkhand. Separate Funds shall be earmarked for the various activities identified and details of the expenditure made thereon shall be submitted as part of the Compliance Report to RO, Ranchi.

- iii. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided to keep the emission levels below  $50 \text{ mg/Nm}^3$  by installing energy efficient technology.
- iv. In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.
- v. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008 and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed.
- vi. The water consumption shall not exceed as per the standard prescribed for the sponge iron plants and steel plants.
- vii. Efforts shall further be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly.
- viii. All the effluents shall be treated and used for dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Domestic wastewater will be treated in the Sewage Treatment Plant.
- ix. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Ranchi, SPCB and CPCB.
- x. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Ranchi, SPCB and CPCB.
- xi. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Ranchi.

- xiii. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Ranchi, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xiv. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xv. As proposed, green belt shall be developed in 33 % of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xvi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.
- xvii. At least 5 % of the total cost of the expansion project shall be earmarked towards the Enterprise Social Commitment (ESC) based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Ranchi. Implementation of such program shall be ensured accordingly in a time bound manner.
- xviii. All the commitments made to the public during the Public Hearing / Public Consultation meeting shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Ranchi.
- xix. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

The Committee also recommended that in case the PP furnishes a copy of the PCCF (WL), Govt. of Jharkhand providing the specific distance (shortest aerial distance of the outer boundary of the ESZ of Dalma WL sanctuary from the boundary of the project), both in their covering letter as well as in a map (i.e. clarifying the specific distance in km the project is outside the ESZ) , the specific condition No. (1) stipulated above could be deleted without referring the matter back to the EAC.

31.8.5 Expansion of Existing Steel Alloys Manufacturing Unit of **M/s R.L. Steels Energy Ltd.**, at Dist. Aurangabad, Maharashtra (**EC**) (J-11011/578/2011-IA.II(I) (Considered in EAC meeting in October 2014)

The proposal is regarding Expansion of existing Steel Alloys manufacturing unit of M/s R.L. Steels Energy Ltd. at dist. Aurangabad, Maharashtra. TOR was awarded on 14<sup>th</sup> February, 2012. Consultant is M/s SD engineering services Pvt Ltd, Aurangabad. The Public hearing was conducted on 11.07.2012 and Final EIA-EMP Report was submitted on 21<sup>st</sup> October, 2012.

The matter was considered in the 25<sup>th</sup> EAC meeting held during 13<sup>th</sup> 14<sup>th</sup> October, 2014. Committee advised the PP to submit the following information for further consideration of the matter

- i. Clarification for not applying for Environmental Clearance for the existing unit, since the project cost was more than 100 crores.
- ii. Consent to Establish details.

- iii. One-month AAQ data shall be freshly collected through an accredited consultant and shall be submitted to the Ministry.

PP vide letter dated 29<sup>th</sup> November, 2014 has submitted the above information which was considered in the EAC(I) meeting. It was informed that the unit was established prior to 2006. The unit is in operation since year 2004. The PP also stated that the capital investment of the project in year 2008 was 62.74 crores only. PP has produced a certificate issued by M/s Shah Dash & Co. Ltd, Chartered Accountants, that M/s R.L. Steels Energy Ltd has made an investment in Plant and Machinery of Rs. 62.74 crores as on 31<sup>st</sup> March, 2008. Regarding AAQM data, PP presented the AAQ data generated for period of Oct-Nov 2014.

The committee after deliberations again requested the PP to submit Consent to Establish (CTE/CTO) of 2004 (when the unit was established for the first time) for further consideration of the matter.

31.8.6 Proposed for Integrated Cement Plant of 5 MTPA (2x2.5 MTPA) Capacity with captive Power Plant of 54 MW (2x27MW) and Limestone Mining (5.4 MTPA) of 701.268ha of **M/s Rajputana Properties Pvt. Ltd (a subsidiary of M/s Dalmia Cement Ventures Ltd** at village Mangrol, Taluka Nimbahera, Dist. Chhittorgarh, Rajasthan (EC) (J-11011/472/2010-IA.II(I) (Considered in August 2014)

The matter was considered in the 22<sup>nd</sup> EAC meeting held during 28<sup>th</sup>–29<sup>th</sup> August, 2014 and the Committee after deliberations decided that the project is pre-mature and should be delisted and considered only after the project proponent has acquired at least 70-80% of the total land and details thereof furnished to the Ministry and for consideration of the Committee.

PP vide letter dated 4<sup>th</sup> December, 2014 submitted consent of land owners. PP informed that 80% of the land owners have given consent to give their land. PP also submitted the accreditation details of the consultant.

After detailed deliberations the Committee recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering grant of environmental clearance:

- i. The expansion project shall comply with the new MOEF&CC Standards vide GSR 612 (E) dated 25.08.2014 with respect to particulate matter, SO<sub>2</sub>, NO<sub>x</sub> for Cement sector.
- ii. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO<sub>x</sub> burners shall be provided to control NO<sub>x</sub> emissions. Regular calibration of the instruments must be ensured.
- iii. All the pollution control devices/equipment in raw mill/kiln, kiln feeding system, clinker cooler, coal mill, cement mill, and cement silos, shall be interlocked so that in the event of the pollution control devices/systems not working, the respective unit(s) shut down automatically.

- iv. Possibilities shall be explored for the proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB) and a feasibility report shall be prepared and submitted to the Ministry and its Regional Office at Bhopal within 3 months from the date of issue of the letter.
- v. Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- vi. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be followed.
- vii. AAQ Modelling shall be carried out based on proposed expansion based on the specific mitigative measures proposed for the expansion project and mitigative measures taken to keep the emissions well below the standards.
- viii. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.
- ix. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- x. The coal yard shall be lined and covered.
- xi. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- xii. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.
- xiii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- xiv. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.
- xv. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / reprocessors only.
- xvi. The proponent shall implement a Plan for 100% utilisation the fly ash from Power Plants in the Cement Plant. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended

in 2003 and 2008. Efforts shall be made to use fly ash maximum in making Pozzolona Portland Cement (PPC).

- xvii. The proposed cement plant kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes such as oil sludge, cut tyres, etc and other wastes including biomass, etc
- xviii. The proponent shall examine and prepare a plan for utilisation of high calorific wastes such as chemical wastes, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify suitable industries with such wastes and enter into an MOU for long-term utilisation of such wastes as per the E(P) A Rules, 1986 and with necessary approvals.
- xix. Efforts shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly. The PP shall enter into an MOU with units with potential for generating HW. And in accordance with HW Regulations and prior approval of the MPPCB.
- xx. As proposed, green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xxi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xxii. All the commitments made to the public during the Public Hearing / Public Consultation meeting shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xxiii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xxiv. The proponent shall prepare a detailed CSR Plan for every next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO, Bhopal. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.
- xxv. A Risk Assessment Study and Disaster Preparedness and Management Plan along with the mitigation measures shall be prepared with a focus of Disaster Prevention and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.

- xxvi. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xxvii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

### 31.9 Any Other Items

- 31.9.1 Proposed Greenfield integrated Cement project (Clinker 4 MTPA, Cement 6 MTPA, CPP 60 MW and WHRB 15 MW) of **M/s UltraTech Cement Ltd** at village Petnikote, Mandal Kolimigundia, Dist. Kurnool AP (Letter dated 25.11.2013 for extension of validity of ToR No. J-11011/404/2011-IA.II(I) dated 22.12.2011)

The ToR for the above proposal was granted vide letter No. J-11011/404/2011-IA-II(I) dated 22/12/2011. PP mentioned that since they are in the process of acquisition of land for the proposed project, the validity of the ToR may be extended for a period of 1 year.

The committee after deliberation recommended the extension of validity of ToR for a period of 1 year with effect from 22/12/2014.

- 31.9.2 Proposed Capacity Expansion of Pig Iron Production (from 345,000 to 500,000 TPA) and 10 MW WHRPP of **M/s Tata Metaliks Ltd.** at Gokulpur, PO Samraipur, Tehsil Kharagpur, Dist. Paschim Mednipur, West Bengal (TOR No.J-11011/377/2013-IA.II(I)– Letter dated 19.11.2014 for amending TOR dated 19.05.2014 delinking WHR CPP from Pig Iron Expansion project.

ToR for the proposal of Capacity expansion of Pig Iron Production from 3,45,000 TPA to 5,00,000 TPA and Setting up of 10 MW Waste Heat Recovery power plant was accorded by the Ministry vide letter No. J-11011/377/2013-IA-II(I) dated 19<sup>th</sup> May 2014.

PP vide letter dated 19<sup>th</sup> November, 2014 requested that 10 MW Waste Heat Recovery power plant will use gas generated from the Coke Plant and it will be an integral part of the Coke Oven Plant Project. The Coke Plant and the connected waste heat recovery power plant fall under category B for which the application is being made to the SEIAA in West Bengal for processing and giving the required clearances. Therefore, PP has requested to de-link the waste heat recovery power plant from the pig iron expansion project by amending the terms of reference.

The Committee noted that WHRB can operate only using hot flue gases produced from the Coke Oven Plant which is being set up as a separate entity by another company namely, M/s GSA Commercial Pvt Limited, West Bengal in the same location. After deliberations, the Committee decided that there is no need for amendment of ToR since the WHRB is an integral part of the Pig Iron Expansion Project of M/s Tata Metaliks and cannot be considered as part of the company running the Coke Oven Unit, which is a separate entity. However, it was noted that Coke Oven falls under Category B. The issue is limited to

obtaining the hot flue gas from the Coke Oven Unit for the 10MWWHRB which is part of the Cat A project (Pig Iron Expansion Unit). Hence in view of this, the Committee was of the view that the WHRB may be retained as part of the Cat A project and the PP may enter into an MOU with the M/s GSA Commercial Pvt Limited, West Bengal company for supply of the gas for running the WHRB. The PP may obtain an EC separately for the Pig Iron Plant-cum-WHRB and M/s GSA Commercial Pvt Limited, West Bengal may separately obtain EC for the Coke Oven Unit from SEIAA, WB and CTO by WBPCB. It is desirable that the two units are made operational at tandem.

31.9.2 Expansion of Steel Plant by Installation of Iron Ore Beneficiation Plant (1MTPA), along with Rolling Mill (0.3 MTPA), Arc Furnace (5000TPA), and Biomass based Power Plant (20MW) of **M/s Godavari Power & Ispat Ltd.**, at Siltara Industrial Estate, Siltara, Dist. Raipur, Chhattisgarh (Letter dated 23.12.2014 seeking Amendment of EC No.J-11011/179/2009-IA.II(I) dated 25.08.2009)

Environmental Clearance for the expansion proposal was accorded vide letter No. 11011/179/2009 – IA-II(I) dated 25<sup>th</sup> August, 2009. Following were the units for the expansion proposal:

- |                                 |   |               |
|---------------------------------|---|---------------|
| i. Iron Ore Beneficiation Plant | - | 10,00,000 TPA |
| ii. Rolling Mill                | - | 3,00.000 TPA  |
| iii. Arc Furnace                | - | 5,000 TPA     |
| iv. Biomass based Power Plant   | - | 20 MW         |

PP mentioned that out of the above facilities, PP could only establish the biomass based power plant of 20 MW and iron ore beneficiation plant of 10.00 Lac TPA (under construction). The establishment of Rolling Mill is still pending. PP has requested for an amendment in the existing Rolling Mill capacity of 3 Lakh TPA to 4 Lakh TPA. The change in technology is also included since PP is producing the rolled products via direct hot charging process instead of conventional reheating process, in which continuous cast billets are directly fed into the Rolling Mill. Moreover, the speed of the mill will be increased with the help of DC variable drive to achieve the required capacity of 4 lakh TPA. Further, there will be no requirement of any type of fuel in the hot charging process of rolling and the SO<sub>2</sub> emission will be zero. For the purpose of setting up these facilities, there will be no additional requirement of land, water and power.

The PP explained that the benefits from the direct rolling technology include the following:

- i. Energy saving is the main benefit as it consists in avoiding the normal cooling of the billet down to room temperature and the reheating for initiating the rolling. Thus the process is of less energy and more environmentally friendly.
- ii. The billet is cooled down to the temperature required by the casting process before entering the rolling mill with roller conveyor system to reduce the losses during transferring the billet from CCM to roughing stand.
- iii. Low capital investment for main equipments in case of green field units.
- iv. Low operational cost of rolled steel depending on unit costs
- v. Reduced requirements of personnel / manpower
- vi. Reduced civil works and infrastructure costs
- vii. Reduced energy consumption

After detailed deliberations the Committee recommended the project for amendment in environmental clearance, however, the Committee advised PP to submit the following information.

- i. Report on how the use of furnace oil use will improve ambient air quality in the area
- ii. Green belt in the area along with the photographs

The Committee further stated that the PP may submit the aforesaid information for internal discussion and they are not required for the presentation.

31.9.3 Letter dated 17.10.2014 of Expansion of Integrated Steel Plant (0.1 MTPA to 0.35 MTPA) of **M/s Shri Mahavir Ferro Alloy Pvt. Ltd.** at Jiabahal, Kalunga Industrial Estate, Kalunga, Dist. Sundergarh, Odisha - on Corrigendum dated 20.04.2012 to the EC No. J-11011/606/2007-IA.II(I) dated 29.01.2008

The project proponent did not attend the meeting. The Committee decided to consider the proposal as and when requested by the proponent.

31.9.4 Enhancement of Clinker Production Capacity (2 to 2.5 MTPA) and change in product Mix from 4.8 MTPA (1.1 MTPA OPC & 3.7 MTPA of PSC) to 4.8 MTPA of OPC/PSC/GGBS of **M/s JSW Cement Ltd.,** at vill. Bilakalagudur, Mandal Gadivelula, Dist. Kurnool. A.P. (TOR) – Letter dated 18.11.2014 seeking exemption of P.H.

ToR for the proposal of Expansion in Clinker Production Capacity from 2.0 MTPA to 2.50 MTPA at Bilakalagudur, Gadivemula, Distt. Kurnool, A.P. was issued by this Ministry vide letter No J-11011/889/2007-IA.II(I), dated 22<sup>nd</sup> October 2014.

PP has requested to amend the ToR and mentioned that since GGBS is an intermediate product, GGBS also to be included as finished product. Following table shows the amendment sought by the PP:

Projects	Present Capacity	Proposed Expansion	Capacity After Expansion
Clinker Production (MTPA)	2.0	0.50	2.50
Cement Production (MTPA)	4.80 (1.10 OPC + 3.70 PSC)	Nil	4.80 (1.10 OPC+ 3.70 PSC/ GGBS)*
CPP (MW)	36 (18 x 2)**	-	36 (18 x 2)

PP also requested for corrigendum in the ToR for the following:

S.	Information mentioned at page No.1, para 3 of TOR	Corrections requested in the above TOR
1.	Total land required for the proposed project is 263.05ha which is already available within the existing plant premises. No additional land is required for the proposed expansion.	No Additional land is required for the proposed expansion project as the capacity expansion is being achieved through process optimization within the existing plant premises only.
2.	Around 4500m <sup>3</sup> /day of water will be required for the proposed project	No additional water will be required for the proposed project expansion. Our existing water requirement is 4500 M <sup>3</sup> /day which will not exceed.
3.	Total power requirement for the proposed project will be 40 MW	No additional power will be required for the proposed project expansion. Our existing power requirement is 40 MW which will not exceed.
4.	Total cost of the project is Rs. 630 crores	There will be no additional capital investment for the proposed project expansion.

PP also informed that the minor increase in capacity will be achieved through Optimization and de-bottlenecking of existing equipment & processes not affecting land, air and water environment. Therefore, the PP has requested to exempt from Public Hearing process.

The Committee after deliberations accepted the amendment sought by the PP as mentioned in the above tables. Regarding exemption of Public Hearing the Committee noted that since there is no additional resource requirement in the present proposal and also increase in capacity will be achieved through Optimization and de-bottlenecking of existing equipment & processes, the proposal may be exempted for conduct of Public Hearing, provided the emission levels should be kept below 30 mg/Nm. A Commitment to this effect has been received from the PP vide letter No.JSWCL/MOEF/2015 dated 12.01.2015. Further, the PP has in the letter also committed that the total cement production will not exceed the permitted quantity of 4.80MTPA and the total OPC production will not exceed 1.10MTPA. Further the PP will also utilise more slag from steel plants to produce GGBS (ground Granulated Blast Furnace Slag) and PSC (Portland Slag cement), the total quantity of which (GGBS/PSC) will not exceed 3.70MTPA. Production of GGBS by utilising additional slag will result in conservation of natural resources such as limestone, iron ore, laterite, gypsum, coal, etc.

31.9.6 Modernisation and Expansion of Kumaraswamy Raja Nagar Cement Plant (clinker 2.5 MTPA to 2.8 MTPA and cement 2.60 MTPA to 3.65MTPA) of **M/s Ramco Cements Ltd.**, dist. Krishna, A.P. (Letter dated 10.12.2014 for Amendment of EC –J-11011/403/2006-IA.II(I) dated 07.02.2007 and 09.06.2009 for 1. Permission for usage of Pet Coke in Cement Plant upto 60% of coal mix, 2. Permission for use of Pet coke in Thermal Power Plant upto 30% in coal mix and 3. Permission to maintain a greenbelt area of 33% of a total area of 248.08ha within project site)

An environmental clearance was accorded vide letter No. J-11011/403/2006-IA-II (I) dated 07<sup>th</sup> February, 2007 to produce 2.50 MTPA Clinker & 2.60 MTPA Cement and Thermal Power Plant to produce 2x18 MW and Environmental Clearance for Modernization and Expansion of Cement Plant to increase Clinker

production from 2.50 million TPA to 2.80 million TPA and Cement production from 2.60 million TPA to 3.65 million TPA was accorded vide letter No. J-11011/403/2006-IA II (I) dated 09<sup>th</sup> June, 2009.

PP has requested for the following amendments:

- i. PP has proposed to use Pet Coke in the total Coal Mix with 60 % Pet Coke and 40 % Indian & Imported coal combination for Cement Plant use. The present Coal Mill Circuits are designed with 3 Nos. of hoppers each at the inlets of Coal Mills (2 Nos.), with which PP can feed Indian Coal, Imported Coal and Pet Coke. With the addition of Pet Coke in Cement Plant, there will not be any deviation in water requirement, waste water generation & noise levels and no additional land requirement.
- ii. It is proposed to use Pet Coke as alternative fuel in the 2 x 18 MW Thermal Power Plant, in addition to the present coal mix (Indian & Imported coals). To control the Sulphur Oxides emissions in the Thermal Power Plants stack (1 No. of stack attached to 2 Nos. of Boilers), it is proposed to add Limestone in the circuit. PP has proposed to use Pet Coke in their total Coal Mix with 30 % Pet Coke and 70 % Indian & Imported coal combination for Thermal Power Plant use. Dedicated system is designed to feed the Pet Coke parallel to coal mix feeding system for Boilers with weighing mechanism. In the coal handling circuit of Thermal Power Plant, PP has proposed to install limestone feeding system (with VFD) to absorb entire SO<sub>x</sub> emissions.
- iii. With respect to the greenbelt development, it is mentioned in the ECs that PP has to develop 172.75 ha (69.63 %) of total 248.08 ha area in and around the cement plant. PP mentioned that they have expanded the plant capacity in the years 2008 – 2010 and accordingly PP has built various structures for their administrative work in an area of 13.25 ha. It has been mentioned by the PP that so far they have developed greenbelt of 130.24 ha (52.5 % of 248.08 ha) as on 30.11.2014. By deducting the newly developed area in the total area their greenbelt area is 55.5 % (of 234.83 ha) which is higher than 33 % stipulated in general guidelines as per MoEF&CC. Therefore it has been requested by the PP that they should be permitted to maintain a greenbelt area of 33% of total area of 248.08 Ha, in and around cement plant.

After deliberation the Committee recommended the following:

- i. Permission for usage of Pet Coke in Cement Plant up to 60 % in coal mix.
- ii. Permission for usage of Pet Coke in Thermal Power Plant up to 30 % in coal mix with injection of limestone.
- iii. Permission to maintain a greenbelt area of 33% of total area of 248.08 Ha, in and around cement plant.

31.9.7 Internal Discussion on Model TORs prepared by IL&FS on CEMENT, METALLURGY, PULP & PAPER & TANNERY INDUSTRY

The Committee decided that the matter would be discussed in the next EAC(I) meeting.

31.9.8 Correction in the Minutes of the 29<sup>th</sup> Meeting of the EAC(I) held on 11<sup>th</sup>-12<sup>th</sup> December 2014 – Agenda Item 29.3.1 “ Proposed Expansion of Cement Plant (clinker from 3.30 to 4.5 MTPA and Cement from 4.48 to 6MTPA) of **M/s UltraTech Cement Ltd**, at vill. Awarpur, Taluka Korpana, Dist. Chandrapur, Maharashtra (EC) (J-11011/165/2013-IA.II(I) TOR dated 10.09.2013)”

PP vide letter dated 22.01.2014 has requested for corrections in the Agenda Item No. 29.3.1. The minutes are corrected as given below:

1.	Specific condition No. xii Total fresh water requirement after the proposed expansion of the cement and captive power plant shall not exceed 2800 m <sup>3</sup> /day which will be sourced from the Ground Water & Surface Water. A five year water management plan shall be made so as to achieve reduction in ground water withdrawal.	The words 2800m <sup>3</sup> /d will be replaced by "4465m <sup>3</sup> /d as stated in page 3 of the minutes.  Further, it will also add the following: The total water consumption of the plant and CPP would be 14681m <sup>3</sup> /d as per EC No. J-13011/12/97-IA.II(I)
2.	Specific Condition No. xxii P.H. held on 30.05.2013	The words "30.05.2013" is replaced by "16.06.2014"
3.	Specific Condition No. xviii. "The proposed cement plant kiln shall be provided with a flexible fuel feeding system to enable us of hazardous wastes such as oil sludge, cut tyres, etc"	The following sentence will be added: "The proposed cement plant kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes such as oil sludge, cut tyres, etc along with Non-Hazardous alternate fuels such as agro-wastes (biomass, rice husk, saw dust, scrap wood), tyre powder, etc."
4.	Specific condition No. x: The coal yard shall be lined and covered	PP has stated that covering the entire raw coal in a shed is not feasible. The sentence is modified as "The coal yard shall be lined."
5.	Specific Condition No.xi: The sentence "All the raw material including flyash shall be transported in closed containers"	The condition shall be amended as given below: Flyash and carbon powder/tyre powder (closed tanker/Bowser), Iron Ore, Laterite, Coal, biomass (trucks covered by tarpaulin), gypsum (rail/road).

The meeting ended with a Vote of Thanks to the Chair.

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**LIST OF PARTICIPANTS OF EAC (I) IN 31<sup>st</sup> MEETING OF EAC (INDUSTRY-I) HELD ON 8-9<sup>th</sup> JANUARY 2015**

S.N.	Name		
1	Shri M. Raman	Chairman	A
2	Shri R.K. Garg	Vice-Chairman	P
3	Prof. R.C. Gupta	Member	A
4	Dr. Prem Shankar Dubey	Member	P
5	Dr. R.M. Mathur	Member	P
6	Dr. S. K. Dave	Member	P
7	Dr. B. Sengupta	Member	P
8	Shri Rajat Roy Choudhary	Member	A
9	Dr. S.D. Attri	Member	P (1 <sup>st</sup> day forenoon)
10.	Dr. Antony Gnanamuthu	Member	P
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjana Raghunath Raje	Member	P
<b>MOEF Representatives</b>			
13.	Dr.T.Chandini	Scientist F & MS (Industry-I)	
14.	Shri Amardeep Raju	Scientist C	

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

1. Details of the EIA Consultant including NABET accreditation (including sector details and whether A/B and Accreditation No. shall be provided on the cover the EIA-EMP Report as well as in the Hard Copies of the presentation made before the Expert Appraisal Committee. Copy of NABET Accreditation for the period of preparation until submission of the EIA-EMP Report to MOEF and for presentation made before the EAC should be provided in the Annexures. If more than one consultant has been engaged, details thereof, including details of NABET accreditation as mentioned above.
2. Executive summary (*maximum 8-10 sheets in A4 size paper*) of the project covering project description, description of the environment, anticipated environmental impacts & its mitigation measures, environmental management plan, environmental monitoring programme, public consultation, project benefits, Social impacts including R&R.
3. **Site Details:**
  - i. Location of the project site covering village, Taluka/Tehsil, District and State on Indian map of 1:1000,000 scale.
  - 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.
  - iii. Co-ordinates (lat-long) of all four corners of the site.
  - iv. Google map-Earth downloaded of the project site.
  - v. A map showing environmental sensitivity [land use/land cover, water bodies, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc.] and from critically/severely polluted area(s) and Eco-sensitive Areas within 10km radius of the project site vis-à-vis shortest (aerial) distance from the project. If the project is located within 10km of CPAs/severely Polluted Areas, confirm whether moratorium has been imposed on the area.
  - vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. In addition, if located within an Industrial area/Estate/Complex, layout of Industrial Area and location of unit within the Industrial area/Estate/Complex, layout of Industrial Area.
  - vii. Photographs of the proposed and existing (if applicable) plant site. If existing, in addition to site map, provide photographs of plantation/greenbelt in the existing project. If fresh EC application, photographs
4. Landuse break-up of total land of the project site (identified and acquired) – agricultural, forest, wasteland, water bodies, settlements, etc shall be included.
5. A copy of the mutual agreement for land acquisition signed with land oustees.
6. Proposal shall be submitted to the Ministry for environment clearance only after acquiring at least 60% of the total land required for the project. Necessary documents indicating acquisition of land shall be included.
7. **Forest and wildlife related issues:**
  - i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department.
  - ii. Landuse 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
8. **Expansion/modernization proposals:**
- i. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30<sup>th</sup> May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.
  - ii. 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.

**Details of Industrial Operations**

- 9. A list of major industries with name and type within study area (10km radius) shall be incorporated.
- 10. Details of proposed raw materials and products along with production capacity. If expansion project, details for existing unit, separately for existing and new (proposed) unit.
- 11. Details of manufacturing process, major equipment and machinery. If expansion project, details of existing unit, separately for existing and new (proposed) unit.
- 12. List of raw materials required and its source along with mode of transportation shall be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
- 13. Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished
- 14. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site shall be included.
- 15. Manufacturing process details of all the plants including captive power plant if any along with process flow chart shall be included.
- 16. Mass balance for the raw material and products shall be included.
- 17. Energy balance data for all the components of the plant shall be incorporated.

**Environmental Status**

- 18. Geological features and Geo-hydrological status of the study area shall be included.
- 19. 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 river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of RL of the project site and mRL of the river shall also be provided.
- 20. If the site is within 1 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years.
- 21. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- 22. AAQ data (except monsoon) at 8 locations for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and HC (methane & non-methane) shall be collected. The monitoring stations shall be based on the NAAQM standards as per GSR 826(E) dated 16<sup>th</sup> November, 2009 and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- 23. Raw data of all AAQ data 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.
- 24. Determination of atmospheric inversion level at the project site and 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.

25. Surface water quality including trace elements of nearby River (60m upstream and downstream) and other surface drains at eight locations to be provided.
26. Ground water monitoring including trace elements at minimum at 8 locations shall be included.
27. Noise levels monitoring at 8 locations within the study area.
28. Coal Characteristics – of indigenous and imported coal to be used in the project in terms of Calorific value, ash content and Sulphur content.
29. Traffic study of the area for the proposed project in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
30. Detailed description on flora and fauna (terrestrial and aquatic) exists 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.
31. Emissions (g/second) with and without the air pollution control measures.
32. 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 modeling 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.
33. 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.
34. Details of water requirement, water balance chart for new unit or for existing unit as well as proposed expansion (in case of expansion).
35. Source of water supply and quantity and permission of withdrawal of water (surface/ground) from Competent Authority.
36. Details regarding quantity of effluents generated, recycled and reused and discharged to be provided. Methods adopted/to be adopted for the water conservation shall be included. Zero discharge effluent concepts to be adopted.
37. 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.
38. Action plan for control of ambient air quality parameters as per NAAQM Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>, etc as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
39. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
40. Action plan for solid/hazardous waste generation, storage, utilization and disposal. Copies of MOU regarding utilization of solid waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
41. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. A detailed plan of action shall be provided.
42. 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. All rooftops/terraces shall have some green cover.
43. 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. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
44. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

45. Details of Rehabilitation & Resettlement (R & R) involving the project. R&R shall be as per policy of the State Govt. and a detailed action plan shall be included.
46. Action plan for post-project environmental monitoring shall be submitted.
47. Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control needs to be addressed and included.
48. 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. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
  - v. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
49. 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
50. 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.
51. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.
52. 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.
53. The questionnaire for industry sector (available on MOEF website) shall be submitted as an Annexure to the EIA-EMP Report.
54. '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.

55. A tabular chart with index for point wise compliance of above TORs.
56. Name of the Consultant and the Accreditation details shall be printed on the cover page of the EIA-EMP Report in the Introduction as well as on the cover of the Hard Copy of the Presentation material for EC presentation as per requirements in TOR condition No. (1).
57. The TORs prescribed shall be valid for a period of two 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.

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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 generation of coal and iron ore from coal & iron ore mines and the projects they cater to
  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. Respirable Suspended particulate matter (RSPM) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements). The RSPM shall also be analysed for presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction, where applicable. Chemical characterization of RSPM and incorporating of RSPM data.
  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 must be prepared.
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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 generation of coal and limestone from coal & limestone mines and the projects they cater to;
  3. For large Cement Units, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
  4. 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.
  5. If the raw materials used have trace elements, an environment management plan shall also be included.
  6. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
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**ADDITIONAL TORs FOR PULP AND PAPER INDUSTRY**

- i. MRL details of project site and RL of nearby sources of water shall be indicated.
- ii. A note on pulp washing system capable of handling wood pulp shall be included.
- iii. 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
- iv. 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.
- v. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be abolished within 2 years of issue of environment clearance.
- vi. The Unit will follow CREP Guidelines for Pulp and Paper Industry. Chemicals including AOx will remain within limits as per CREP recommendations.

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