

**MINUTES OF 23rd RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY)
HELD ON 18th and 19th SEPTEMBER 2014**

- 22.1** Opening Remarks of the Chairman
- 22.2** Confirmation of the Minutes of the 22nd Reconstituted Expert Appraisal Committee (Industry) held during **28th – 29th August 2014**.

The minutes of the 22nd Meeting of the EAC was confirmed.

THURSDAY, 18th SEPTEMBER 2014

INDUSTRY-1 PROJECTS

22.3 Environmental Clearance

- 23.3.1 Expansion of Alumina Refinery (1 MTPA to 6 MTPA) and captive power plant of M/s Sesa Sterlite Ltd. (Formerly M/s Vedanta Aluminium Ltd.) at Dist. Kalahandi, Odisha (EC) (J-11011/406/2011.IA-II(I) vide TOR dated 02.02.2012 read with MOEF letter dated May 26th 2014.**

M/s Vedanta Aluminium Ltd. (originally M/s Sterlite Industries Ltd.) was granted an EC in 2004 for 1 MTPA Aluminum refinery with a 75 MW Captive Power Plant (CPP). In 2007, VAL submitted an application for TOR (form-I) for expansion from 1 MTPA to 6 MTPA and expansion of CPP from 75 MW to 285 MW. TOR was granted on 12.03.2008. VAL got a Public Hearing conducted on 25.04.2009 and a Final EIA-EMP was submitted on 22.06.2009. The proposal was placed in the EAC (I) meeting held in August 2009, which decided on a site visit and also sought additional information. A Site visit was conducted by a sub-committee of the EAC (I) on 09.07.2010 after receipt of additional inf. including a compliance Report of earlier EC. On the basis of the three reports- (i) Site Visit Report of EAC (I), (ii) Monitoring Report of MOEF RO, Bhubaneshwar and (iii) Saxena Committee Report, which found that the expansion project was already 50% completed without an EC the MOEF issued a Show-Cause Notice on 31.08.2010 and initiated a legal case based on MOEF Circulars dated 16.11.2010 for granting Environmental clearance to projects involved in violation of EIA notification 2006. The cancellation of the TOR dated 12.03.2008 and PH conducted on 25.04.2009 for the 6 MTPA expansion project of Alumina Refinery was upheld by the High Court of Odisha.

PP submitted a fresh amended application as per direction of MoEF on 22.07.2011 and a fresh ToR was issued by MoEF on 02.02.2012. The company submitted a revised draft EIA and draft EIA-EMP Report to SPCB on 28.2.2012 for Public Hearing. However, MOEF deferred the TOR in view of issue of presence of 'Gramya Jungal Jogya' land in the Refinery project for which FC was required and which was not reflected by PP. The project was further considered in the EAC meetings held on 18th November, 2013, 29th January, 2014 and on 18th March, 2014, wherein the EAC reiterated its earlier decision for conduct of Public Hearing for the expansion project and TOR granted on 02.02.2012 was revalidated vide MoEF vide letter dated 26th May, 2014 for a period of 22 months along with the following three additional compliance points as a part of TOR:

- a) Copies of Bauxite and Coal Linkage documents including status of their Environmental Clearances.

- b) Comprehensive CSR plan as per the recent directives under Companies Act, 2013 and,
- c) Status of compliance of the EC granted to the Existing Project along with Certified Monitoring Report of the Regional Office, Bhubaneswar.

On the basis of the TORs dated 02.02.2012 and additional TORs as above, PP, after collection of baseline data for the period of 1.3.2014 to 31.5.2015 and winter data of 1.11.2011 to 29.2.2012 2014, got a fresh a Public Hearing conducted on 30.07.2014 for expansion of existing Alumina Refinery at Lanjigarh from 1 MMTPA to 6 MMTPA. The EIA-EMP Report has been prepared by M/s Global Experts, Bhubaneshwar, accredited consultant for Metallurgy Sector. Certified monitoring report of RO Bhubaneshwar dated 16.06.2014 was also furnished as part of the EIA-EMP Report.

The proposal was taken up for consideration. PP and their consultant – Global Experts, Bhubaneshwar made the presentation.

Land requirement details for the existing and proposed expansion are given below:

S. No	Landuse details	Area covered by Existing Plant (ha)	Area after Expansion (ha)
1	Main plant (Including storages and green belt)	279.87	420
2	Red Mud including green belt	182.94	783
3	Ash pond including green belt	95.42	175.42
4	Township and miscellaneous including green belt	52.45	80.45
5	Railway line including green belt	53.81	93.81
	Total	664.49	1552.49

It was recalled that the PP had installed the expansion phase of the Alumina Refinery for a total cost of Rs 4000+ crores without an environmental clearance. Based on site inspection of a sub-committee of the EAC and based on RO (Bhubaneshwar) Monitoring Report, MOEF had directed the PP to stop all further construction of the project. It was clarified by PP that all construction activities have been stopped. For the expansion project, additional land may be required for red mud pond, ash pond, township and greenbelt beyond existing site. Total capital cost of the project is Rs 10,000 crores. The expansion project is planned to be executed in the following three phases:

Phase 1 - Increasing the capacity of the existing Alumina Refinery from 1 MMTPA to 2 MMTPA by implementing various Environmental related Improvement Projects as well as De-bottlenecking of the existing Refinery in-line with the latest technological development made but without increasing any Steam Generation cum Power Plant Capacity.

Phase 2 - Increasing the capacity from 2 MMTPA to 5 MMTPA by adding three lines each of 1 MMTPA capacity similar to debottlenecked streams in phased manner along with additional steam generation cum power plant of a capacity of 210 MW with a provision to export nearly 75 MW power to the grid to ensure uninterrupted power supply mainly in Kalahandi region.

Phase 3 - Increasing the capacity from 5 MMTPA to 6 MMTPA by incorporating further Improvement Projects for optimum utilization of natural resources.

In regard to bauxite linkage, it was informed that about 2.6-2.8 MTPA of bauxite is required to produce 1MTPA of alumina. It was stated that an estimated 800 million tonnes of bauxite are available within 50-60km of the plant in the Kalahandi-Lanjigarh area. In regard to assured long-term availability of bauxite for the expansion of the refinery, it was informed that M/s Sesa Sterlite has signed an MOU with Odisha Mining Corporation for supply of 150 MT of bauxite from the reserves in Odisha. In addition, the company has submitted 42 applications for PL/ML for captive bauxite mining with reserves in excess of more than 500 million tons. As and when the PL or ML is granted, necessary procedures shall be followed for obtaining the EC of the respective mines. Since, the Project execution will take nearly 2 years for full implementation and the capacity increase shall be achieved in phased manner, Bauxite availability may not be a constraint for the Project. Besides ample Bauxite is available in Gujarat, Madhya Pradesh, Chhattisgarh, Jharkhand, Maharashtra etc and shall be used during interim period to meet the Plant requirement. During the interim period, bauxite may be sourced from domestic market/import depending upon the need.

PP informed that the 6MTPA Expansion project will require 4MTPA of coal and the balance is obtained by heat recovery from steam generation. For the existing project of 1MTPA, 0.6 MTPA of coal is being sourced from MCL mines. PP informed that they have applied for coal linkage from the Ministry of Coal. However, further processing for FSA is held up for want of environmental clearance from the Ministry of Environment and Forests. On receipt of EC, the matter shall be taken up with the Ministry of Coal for enhancing the coal linkage quantity.

It was informed that for the existing 1 MTPA project, the State Government has sanctioned a total quantity of 30,000 m³/d from River Tel, of which the present project is utilising only 14,000 m³/d and the balance is being met by various water conservation measures. The Expansion project will require a total quantity of 56,250 m³/d for which an agreement is in place. The additional water requirement for the project is 26,250m³/d, which will be sourced from River Tel. It was stated that the State Irrigation Dept has prepared a Report as per which the total drawl of water from River Tel during lean season is less than 1% of the total flow of the river. It was stated that 4 surface water reservoirs have been created for harvesting rainwater. It was stated that the plant will operate on a zero-discharge concept and all treated water would be recycled and reused.

Material transportation will be by rail for which a dedicated railway line for transportation of both raw materials and products will be established. Material handling areas will have DFS.

Ash pond created for the existing project will be used for disposal of ash for the expansion project. Ash will be evacuated through HCSF. The company has developed a high pressure filtration system by which red mud slurry will be converted into red mud powder, which can be used by cement manufacturers. The stock piles will be stored in areas which are lined. Of the total project area of 1552.49 ha, a total of 190 ha has been developed into green belt. PP informed that the entire amount of red mud generated from the project would be sold to cement industry. It was clarified that the red mud will not be in a slurry form but in cake form. It was informed that 6 MTPA of bauxite will produce 7.2 MTPA of red mud. It was clarified that for storage of this enormous quantity of red mud a storage area of 783 ha is required. It was stated that Grama Sabha Resolutions have been passed in respect of acquisition of land of 3 villages required for storage of red mud.

Issues raised in the Public Hearing held on 30.07.2014 covered sectors/issues of education, provision of drinking water facilities, provision of electricity, health care, R&R issues, availability of bauxite for the refinery without having any captive mines and peripheral infrastructural development for the nearby

villages. It was stated that the total manpower requirement for the existing-cum expansion project is about 1500 persons for direct employment in the factory and about 4000 for the associated partners of the project. There were complaints on pollution due to red mud, however it was clarified that the nearest nallah is about 1 km away and is not being contaminated from the company's red mud generation. It was informed that an amount of Rs 51.32 crores has been spent on various activities during the period of 2010-2013-14. PP is committed to spend an amount of 2-3% of total project cost over a span of 10 years over and above the 2% of the net retain profits to be spent on CSR under the Companies Act.

Member-Secretary, EAC-I informed that an e-mail dated 17.09.2014 had been received from Shri Prafulla Samantara, President, Lok Shakti Abhiyan, Bhubaneswar along with a letter dated 17.09.2014, wherein issues such as bauxite linkage, water source from Tel River vis-à-vis competing users, illegal expansion of alumina refinery project, impact of TPP, flyash generation and land acquisition have been raised. Copies of the letter were given to Chairman and all members of the EAC present in the meeting. Copies of the letter were also given to the Company representatives in the meeting for responding on the issues raised in the representation of Lok Shakti Abhiyan. The Committee took note of the issues raised and requested PP to respond on the specific issues.

The Committee stated that coal linkage requires to be firmed up vide MOEF Circulars and details thereof furnished to Ministry as well as to the Committee. Details of coal characteristics also need to be furnished along with specific quantity from domestic market/linkage/imports. The Committee noted that the red mud will have moisture and will not be in powder form but in cake form. The Committee noted that the total land area of the project is 1552.49 ha of which 33% of the land area (512.32 Ha) is required for greenbelt. The Committee sought aerial photographs of the greenbelt development and Plan for Greenbelt Development for the 33% project area.

In addition, in order to store an annual production of 7.2 million tonnes of red mud, adequate storage areas are required. The Committee noted that red mud from the storage area shall not be let off along with the rainwater particularly during rainy season and an effective drainage plan has to be prepared to ensure that rainwater entering the project area is not contaminated with red mud.

The Committee observed that the Hard copy of the presentation with details of the project as per TOR compliance has not been provided by the PP for the meeting. TOR-wise compliance details of the TOR conditions need to be provided for reconsideration. The Committee noted that the issues raised during the public hearing have not been incorporated in the final EIA-EMP Report and submitted to MOEF dated 19th August 2014. The Committee also observed that details of bauxite and coal linkages have not been firmed up for the 6MTPA expansion project. In addition, the Committee after detailed deliberations, sought the following details for further consideration of the proposal:

- i. PP shall submit its response on the representation received from Lok Shakti Abhiyan with respect to issues raised in the letter.
- ii. Break up of land area for the existing project and proposed project in terms of agricultural, forest, water bodies, wasteland (as per revenue records), habitation (settlements), etc
- iii. PP shall submit the plant layout of the existing project along with the layout of the proposed expansion project (in a different colour). Each and every component of the plant (existing and expansion) including storage areas for red mud, water harvesting ponds, green belt areas, etc

shall be indexed on the layout plan. Along with the aforesaid figure, the same details shall be presented in a table indicating the break-up of the existing and proposed project –units and utilities in terms of area (acres).

- iv. Details of phase wise implementation of the project in terms of unit/facilities and their capacities. As Existing, proposed and Total (existing + proposed).
- v. Copies of agreement entered into with Odisha Mining Corporation for supply of 150 MT of bauxite from the reserves in Odisha exclusively for this project. In addition, details of the status of 42 applications made for captive bauxite mining. Long term MOU for the bauxite arrangement shall be submitted along with the details of the bauxite mines, their locations, number of mines and the arrangement for transportation from each of these mines. In addition, details of MOU entered with companies along with specific quantity of bauxite to be obtained from domestic market from various States/import during the interim period shall be submitted.
- vi. In this context, the Committee sought year wise alumina production for the last 5 years for the existing plant along from annual audited reports with state wise details of the mines which are supplying the raw material (bauxite and coal).
- vii. Plan for storage of red mud coming out of the plant in storage ponds in cake form. Broad Plan of Action for 100% utilisation of red mud generated over the next 5, 10, 15 and life of the project to be sold to cement industry and a Plan in this regard is required.
- viii. PP has to store the red mud cake till the time when proper linkage with the cement plants is developed. Details of land acquisition of 888 ha for storage of red mud generated over life of the project. An action plan for the storage of red mud cake generated over the next 5, 10, 15 and life of the project shall be submitted along with year-wise details of quantity of generation of red mud and land area available in the expansion project.
- ix. In case of supply to for cement manufacture, a clause shall be entered with potential cement manufacturers that the red mud cement so manufactured shall only be used for plastering and not for construction of load bearing structure.
- x. Details of MoU with cement manufacturers and other buyers for use of solid wastes including red mud shall be submitted to the Ministry.
- xi. Report of Irrigation department shall be submitted regarding water requirements for the project (existing and expansion) and measures for water recharge to be taken up. Copy of Agreement between the company and the State Irrigation Dept for quantity of water sanctioned for drawl of water from River Tel for the expansion project, providing details of quantity of water to be drawn from River Tel, including in lean season and clarification that the water abstraction is less than 1% of the total river flow during lean season.
- xii. Details of rainwater harvesting structures already constructed and proposed for storage of water for plant use (expansion) and to what percentage this would reduce water requirement from River Tel.

- xiii. Plan for the drainage of rainwater entering plant premises especially during monsoon and how the water will be collected from the red mud storage area and diverted to the treatment plant. The treated effluent shall be recycled in the plant premises. Details of plan for excess rainwater during monsoon season.
- xiv. Green belt development Plan for 33% of the project area which includes approximately 15-20m width which shall be developed all along the periphery of the plant. Details of greenbelt in ha for existing and expansion project to be provided.
- xv. Aerial photographs (along with details in ha area in a tabular form) of the plant showing the green portion/green belt of the existing plant in various facilities/unit of the existing and proposed expansion project.
- xvi. Coal linkage documents for the existing as well as proposed expansion project. Coal characteristics of the coal presently being supplied and details of quantity as well as coal characteristics in the MOUs entered with for the proposed project shall be submitted.
- xvii. Regarding funding for the CSR activities, the committee is of the view that a detailed CSR Plan providing village-wise and activity-wise details covering various sectors such as education, health and family welfare, drinking water & sanitation, infrastructure development, cultural and social issues, etc over the next 10 years. The Committee further decided that since the capital cost of the project is too large, an expenditure of about 2.5% of the capital expenditure shall be earmarked for CSR activity spread over the period of construction of project. After completion of the construction phase of the project, the CSR activity will be funded based on 2% of the net retain profit during operation phase of the project, including revenue expenditure for life of the project.
- xviii. Documents regarding change of name from M/s Vedanta Aluminum Ltd to M/s Sesa Sterlite Ltd.

The Committee decided to further consider the project upon receipt of the aforesaid details. The Committee also desired that videography of the Public Hearing shall also be shown during the next consideration. The PP is also required to submit hard copy of their presentation with detailed TOR-wise compliance during the next consideration of the proposal.

23.3.2 Expansion of Cement Plant from 0.066 MTPA to 1 MTPA of M/s South India Cements Ltd. at Dist. Gulbarga, Karnataka (EC J-11011/127/2011-IAII(I))

PP and their consultant - B.S.Envi-Tech Pvt. Ltd., Hyderabad made a presentation.

The proposal is for expansion of the Cement Plant of M/s South India Cements which has been in operation since 1986-87, in terms of production capacity from 0.066 MTPA to 1 MTPA in village Malkhed, Taluka Sedam, District Gulbarga, Karnataka. The Cement plant became sick and was registered with BIFR and was intermittently in operation until 2005. The cement plant is located in an area of 5.67 ha of Patta Land fully owned by SICL. The cement plant is located in the corner of its captive limestone mine. No additional area is required for expansion. The plant has a captive limestone which was in production for 0.12 MTPA to meet the cement production of 0.066 MTPA for the existing project. The plant has been taken over by a new management and SICL proposes to increase cement production from 0.066 to 1.00 MTPA by upgrading the existing kiln and cooler and installation of new crusher, raw

mill, coal mill, cement mill and packers. The cost of the project is Rs. 85 crores. Of this, an amount of Rs 5.12 crores is earmarked for EMP measures.

The Terms of Reference (TORs) to the aforesaid proposal was accorded by MoEF vide letter no. J-11011/127/2011-IA II (I) dated 05.05.2011, which was extended by a year by MOEF, i.e. until 05.05.2014. The Project Proponent (PP) vide letter No. SICL/MOEF/2013-14 dated 1.4.2014 requested MoEF to extend the validity of the TOR for one more year i.e until 04.05.2015. It was informed that Gulbarga DC had originally fixed the hearing on 29.03.2014 and the contents of the same were duly published in the newspapers on 27.02.2014. However, due to declaration of election Model Code of Conduct by the election commission, the Public Hearing had to be postponed by the Gulbarga DC and the matter regarding the postponement was published by KSPCB on 24.03.2014. The matter for extending the validity of TOR was considered in the 19th meeting of REAC (Industry) held during 28th and 30th May 2014. The Committee noted that as per the Ministry's O.M. No. J-11011/41/2006-IA.II(I) dated 22.3.2010, the validity of the aforesaid TOR has expired on 03.05.2014. The Committee further noted that the delay is due to the non-conduct of Public Hearing by the Karnataka State Pollution Control Board because of introduction of Model Code of Conduct. The MOEF agreed to extend the validity for conduct of Public Hearing. Fresh date for P.H. was published in the newspapers on 09.05.2014 and Public Hearing was held on 09.06.2014. Thereafter, the application for EC was submitted. EIA-EMP Report has been prepared by B.S.Envi-Tech Pvt. Ltd., Hyderabad. Baseline data was collected for the period of October 2013 to December 2013. Existing project is operating with a valid CTO of KSPCB dated 13.12.2013

There are no National Parks/Wild Sanctuaries within 10 km radius of project site. No R&R is involved. River Kagina flows at a distance of 5km at a high flood level of 410m MSL and the plant is at an elevation of 430m MSL.

Land requirement details for the existing and proposed expansion are given below:

S.N.	Project	Existing (ha)	Proposed Expansion (ha)
1.	Plant area	2	3.17
2.	Green belt	0.5	2
3.	Parking area	0.5	0.5
4,	Vacant land	2.67	--
	TOTAL	5.67	5.67

The details of raw materials required and mode of transportation are given below:

Raw Material	Quantity (MTPA)	Source	Mode of Transportation
Limestone	1.45	Captive Limestone Mine	Conveyor belt
Laterite	0.013	Belgaum Minerals, Belgaum	By Trucks
Gypsum	0.05	Coromandal, Sterlite (Chennai & Tuticorin)	By Trucks
Coal	0.099	Singareni Collieries Ltd.,	Either by road or Rail
		South Africa Coal from Chennai	By Rail
Fly Ash	0.29	RTPP, Raichur	By Trucks

The total water requirement is 215m³/day (cooling -150m³, dust suppression - 30m³/d, domestic 30m³/d and greenbelt -5m³/d), source will be Mine Pit water. Wastewater generation will be 24m³/d, which will be treated. The cement plant will operate on a zero discharge basis. The manpower at present is 140 and an additional 100 persons will be required for expansion project. All the flue gas outlets will be designed to maintain the particulate emission level below 50mg/Nm³. SICL will make provisions to utilise high calorific value hazardous wastes in their cement kiln.

AAQ monitoring carried out at 8 locations indicates that the 98% levels of PM₁₀, PM_{2.5}, SO₂ and NO_x are in the range well below prescribed limits. AQIP modelling indicates that the predicted GLC of PM₁₀, SO₂ and NO_x is 63.32, 13.9 and 22.98 ug/m³ against the limits of 100, 80 and 80ug/m³. Particulate emission levels from stacks will be kept below 50mg/Nm³.

The pollution control measures for the expansion project include the following:

- i. Bag filters for all transfer points for cleaning raw mill/kiln flue gases.
- ii. ESP will be installed in each cooler and bag house for the kiln.
- iii. Dust collected in various pollution control equipment will be recycled.
- iv. Covered sheds for raw materials such as gypsum and additives.
- v. Cement stored in silos.
- vi. Raw material transfer by closed conveyors.
- vii. Concreting of internal roads.
- viii. Strengthening of 1km approach roads.

SICL does not propose to install a WHRB, however, waste heat generated from the kiln and coolers would be used by upgrading 4 stage pre-heater to 6-stage pre-heater, wherein the raw material will be heated. A total of 33 % of the plant area i.e 2 ha will be developed under greenbelt. Rs. 100 lakhs will be spent for Social Welfare Measures. Rs. 5.12 crores will be incurred for environmental management plan

Public Hearing was held on 09.06.2014 and chaired by Dr. N. V. Prasad, IAS, Deputy Commissioner, Gulbarga District covered issues such as employment to locals, infrastructure development for villages, payment of dues of earlier company, health facilities, etc. The PP has committed to implement these issues in a phased manner.

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

- i. Expansion of the cement project shall not be taken up without obtaining an environmental clearance for the captive limestone mine.
- ii. The standards prescribed for Cement Plants vide the recent MOEF&CC Notification – GSR 612(E) dated 25.08.2014 shall be implemented.
- iii. Measures shall be taken to reduce PM levels in the ambient air. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP) ESP shall be installed in each cooler and bag house for the kiln, etc. shall be provided to keep the emission levels below prescribed 50mg/Nm³ and by installing energy efficient technologies. Covered sheds for raw materials such as gypsum and additives shall be constructed. Cement shall be stored in silos.

- iv. Dry Fog System shall be adopted to control fugitive emission in screening plant. Belt conveyors shall be closed and Wet system like water sprays / sprinklers shall be provided at transfer points of belt conveyors screen discharge locations, raw material handling areas and storage areas.
- v. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- vi. Work zone floor shall be made concreted/asphalted. The 1km approach road shall be strengthened and avenue plantation developed. Internal roads shall be black topped/concreted. Regular sweeping / cleaning of roads shall be carried out to avoid accumulation of fine dust. Closed conveyor belt shall be installed for transport of limestone to the plant. Dust collected in various pollution control equipment will be recycled.
- vii. All vehicles and construction machinery shall be properly maintained to minimize the exhaust emission as well as noise generation to meet the prescribed standards.
- viii. Green belt (3-tier) of approximately 15-20m width shall be developed all along the periphery of the plant and in vacant areas, transfer points covering a total area of 33% of total plant area. Tree plantation shall be in down wind based on the prevalent wind direction at the site. The details of these including photographs taken in time series consistent for the same season every year shall be submitted as part of six-monthly compliance report.
- ix. The Plant shall operate on a zero-discharge basis. Rain water harvesting shall be adopted and the extent of requirement of water for the project from mines would be reduced. The detailed rain water harvesting plan including regular desilting operations carried out during pre-monsoon season shall be submitted as part of the 6 monthly compliance reports.
- x. The proponent shall utilise fly ash and bottom ash generated from their own and from other projects in their cement plant as per Fly Ash Notification, 1999 and subsequent amendments in 2003 and 2010. In addition, the company shall explore the utilisation of hazardous materials generated as wastes in other projects in their cement plant. Details of Memorandum of Understanding entered shall be submitted to the Ministry's Regional Office.
- xi. All the issues raised during Public Hearing shall be addressed through constitution of Village Development Committee comprising of representatives of the company, village panchayats and district administration.
- xii. Details shall be submitted with 6 monthly compliance reports. In addition, conditions provided in CREP Guidelines for Cement Sector shall be followed.
- xiii. Disaster management plan shall be prepared and implemented.
- 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 regularly conducted amongst the employees of the Company and records maintained thereof.

- xv. A CSR Plan shall be prepared and implemented in consultation with the local villages and administration. Issues raised/covered during public hearing and incorporated in the EMP and CSR Plan. During construction phase of the project, an expenditure of about minimum 5% of the capital expenditure shall be earmarked for CSR activity spread over 5 years/period of construction of project. During operation phase of the project, the CSR activity will be funded based on 2% of the profit during operation phase of the project. 70% of the employment shall be made from the local population. The annual capital and recurring expenditure on CSR - village-wise and activity-wise shall be uploaded on the company website and also included in the Annual Report of the company.

23.3.3 Proposed Cement Manufacturing (Grinding) Unit of M/s Asian Fine Cements Pvt. Ltd., vill. Raigarh, Patiala, Punjab (EC) (J-11011/113/2013-IA.II(I))

M/s Asian Fine Cement Private Limited has proposed to establish a 1.50 MTPA stand alone Cement Grinding Unit at village Rajgarh, Tehsil Rajpura, District Patiala, Punjab. The land requirement for the project is 52710 m². No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. The nearest town is Ambala about 8-9 km away in Southeast direction. Rajpura town and railway station is approximately 12.5 km in southwest direction. Ambala-Ludhiana National Highway (NH-1) is 0.5 km in South direction. River Ghaggar flows approximately 1.8km in east direction. Site is at an elevation of 272-273m MSL, whereas River Ghaggar is at 269-271m MSL. Chandigarh-Rajgarh Highway is between the river and site. No National park and wildlife sanctuary present within 10 km radius of project site. Project cost: is Rs.127 crores. EMP costs for the project is Rs 4.85 crores. No court cases/litigation is pending against the project.

The project comes under Category (A) as it is located within 10 km distance of Haryana State. TOR for the above proposal was granted vide MOEF letter dated 13.04.2013. Public Hearing was conducted on 30.08.2013. EMTRC Consultants Pvt. Ltd. has prepared the EIA-EMP report.

The land of 5.271 ha (12.964 acres) is a fertilizer storage shed of M/s RSB Fertilizers, which has been abandoned for almost 12 years. This entire land has been purchased by AFCPL and in possession of AFCPL. The land is non-forest and non-agricultural land. Nearest railway sidings for unloading clinker are at Ambala and Rajpura at a distance of 11km and 12km respectively from project site. Nearest source of flyash is a TPP (1400MW) which is at Rajpura at 12km.

Total power requirement is 6.5 MW, from Punjab State Power Corporation. The power requirement is 7.5 MW which will be met from M/s PSPCL. D.G set of 1000 KVA will be installed as a standby power. The total water requirement is 25m³/day, of which process cooling is 11m³/d and domestic requirement is 15m³/d. Source of water requirement will be groundwater. Water is required only for equipment cooling and will be recycled through cooling towers. No water is required for the plant process. Domestic wastewater will be treated in a STP and the treated water recycled back for greenbelt development/plantation. The plant will operate on a zero discharge principle. A 30m wide green belt will be developed in 33% (1.85 ha) of the project area (5.271ha). No water will be discharged outside the plant premises.

The raw materials required are clinker, gypsum and fly ash. Bag filters will be installed at various points such as raw material storage, cement packing plant and storage silo.

AAQ monitoring carried out at 11 locations indicate that the levels of PM₁₀ (30-74ug/m³), PM_{2.5} (27-35ug/m³), SO₂ (5.4-7.5 ug/m³), NO₂ (11.8 – 17.3 ug/m³) are within prescribed limits. PM emission limits from various work places/transfer points will be kept below 50mg/Nm³. No solid wastes will be generated from the process. Dust collected from bag filters will be recycled.

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

- i. The standards prescribed for Cement Plants vide the recent MOEF&CC Notification – GSR 612(E) dated 25.08.2014 shall be implemented.
- ii. Measures shall be taken to reduce PM levels in the ambient air. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices and by installing energy efficient technologies
- iii. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50mg/Nm³. Air pollution control measures including provision of Raw material storage, Cement packing plant and storage silo will be provided with bag filters and dust extraction System with Bag Filters to capture and control fugitive dust from all points. Covered sheds for raw materials such as gypsum and additives shall be constructed. Cement shall be stored in silos.
- iv. Dry Fog System shall be adopted to control fugitive emission in screening plant. Belt conveyors shall be closed and Wet system like water sprays / sprinklers shall be provided at transfer points of belt conveyors screen discharge locations, raw material handling areas and storage areas.
- v. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- vi. Work zone floor shall be made concreted/asphalted. The 1km approach road shall be strengthened and avenue plantation developed. Internal roads shall be black topped/concreted. Regular sweeping / cleaning of roads shall be carried out to avoid accumulation of fine dust. Closed conveyor belt shall be installed for transport of limestone to the plant. Dust collected in various pollution control equipment will be recycled.
- vii. All vehicles and construction machinery shall be properly maintained to minimize the exhaust emission as well as noise generation to meet the prescribed standards.
- viii. Green belt (3-tier) of approximately 15-20m width shall be developed all along the periphery of the plant and in vacant areas, transfer points covering a total area of 33% of total plant area. Tree plantation shall be in down wind based on the prevalent wind direction at the site. The details of these including photographs taken in time series consistent for the same season every year shall be submitted as part of six-monthly compliance report.

- ix. The Plant shall operate on a zero-discharge basis. Domestic wastewater will be treated in STP. Treated water will be used for plantation/greenbelt development.
- x. Rain water harvesting shall be adopted and the extent of requirement of water for the project from mines would be reduced. The detailed rain water harvesting plan including regular desilting operations carried out during pre-monsoon season shall be submitted as part of the 6 monthly compliance reports.
- xi. The proponent shall utilise fly ash and bottom ash generated from their own and from other projects in their cement plant as per Fly Ash Notification, 1999 and subsequent amendments in 2003 and 2010. In addition, the company shall explore the utilisation of hazardous materials generated as wastes in other projects in their cement plant. Details of Memorandum of Understanding entered shall be submitted to the Ministry's Regional Office.
- xii. All the issues raised during Public Hearing shall be addressed through constitution of Village Development Committee comprising of representatives of the company, village panchayats and district administration.
- xiii. Compliance of the conditions stipulated shall be submitted with 6 monthly compliance reports. In addition, conditions provided in CREP Guidelines for Cement Sector shall be followed.
- 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 regularly conducted amongst the employees of the Company and records maintained thereof.
- xv. 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.

23.3.4 Expansion of Steel Melting Shop Unit (from 50,400 TPA to 90,000 TPA) of M/s BRGD Ingot Pvt. Ltd. at village Palitpur, Mouza & P.O Mirzapur, Dist Burdwan, West Bengal (EC) J-11011/258/2012.IA-II(I)

M/s BRGD Ingot Pvt. Ltd. has proposed for expansion of Steel Melting Shop Unit in the existing Steel Plant at Village Palitpur, District Burdwan, West Bengal. The proposal is for manufactureing M.S. Ingot with an annual capacity of 50,400 MT. The existing Induction Furnace is (2 x 7 T) (50,400 TPA) and the

proposed unit is Induction Furnace (1x10 T + 1x15 T) (90,000 TPA) with Ladle Refining Furnace & Continuous Casting Machine. Two induction furnace of capacity 1x 10 T & 1x 15 T with matching LRF & CCM (90,000 TPA Billet) to be installed in order to act simultaneously as the melting unit in the steel melting shop. Ingots from the existing as well as from the proposed expansion will be utilised in company own plant – M/s SUL Steel Pvt, Ltd. at Paharpur, 24 Parganas (S), WB.

The project is located at Palitpur, Mouza & P.O Mirzapur, P.S & District Burdwan, West Bengal. The geographical co-ordinates of the project site are latitude 23°17'15.02"N and longitude 87°51'44.15"E with mean sea level (MSL) 110 ft. Nearest Town is Burdwan (District H.Q) - 5.0 km from the project site. Nearest Railway Station is Burdwan Railway Station is 4.3 km from the project site. Total plant area is 5.83 acres. Project cost is Rs. 1500 Lakhs. No forest land is involved. No court case/ litigation is pending against the project. Ramnabagan Wildlife Sanctuary is located at a distance of 3.6 Km to the south –west direction of the project. An application dated 11.07.2013 has been made to PCCF wildlife for obtaining WL clearance from the NBWL. River Damodar is flowing at a distance of 7.5 Km. Existing project is operating with a CTO from WBPCB, which has been renewed on 21.04.2014.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA/EMP. The steel plants are 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.

TOR was granted vide MOEF letter dated 01.03.2013. EIA-EMP Report has been prepared by Envirotech East Pvt. Ltd., Kolkatta. Baseline data has been collected during March-May 2013. AAQ monitoring carried out at 8 locations indicate that the levels of PM10 (44-106ug/m³), PM 2.5 (16-46 ug/m³), SO₂ (4-15 ug/m³) and NO_x (6-29ug/m³) are generally (except for PM10 at one location) within prescribed limits. AQIP Modelling indicates that GLC of PM10, SO₂ and NO_x will be 1.08 ug/m³, 4.92 ug/m³ and 2.46ug/m³ respectively.

Bagfilter will be provided to induction furnace and raw material handling area to keep control particulate emissions within 50mg/Nm³. Dust from the bag filter would be used for filling up and development of plantation on the mound. Fugitive dust emissions from areas such as raw materials stockpile, loading/unloading systems, conveyor systems will be arrested by Dry Fogging System. Slag from induction furnace will be used for land filling, road construction, after removal of residual iron by slag crusher. Adequate control measures like bag filters, dust suppression system & Stack of adequate height at relevant point will be installed.

Raw materials such as sponge iron, pig iron, scrap and ferro alloys would be obtained from local market. Stockpiles of raw material will be stored in areas which have suitable limners to prevent leaching of metals. Induction Furnace slag (6500TPA) will be used as land filling / road construction purpose. End cuts from CCM (2200 TPA) will be used in IF.

Total water requirement will be 102m³/day using groundwater. Permission has been obtained from SWID. There will be no discharge of Industrial Effluent (zero discharge plant). The entire wastewater will be recycled for various purposes inside the plant. Domestic wastewater will be treated in Septic tank–Soak pit system. In regard to rain water harvesting, it is stated that 60% run off may be allowed to be drained through natural drainage system. For its sustenance and remaining 40% may be harvested and stored suitably. Around 0.0042 mcm (4240 cu.m) of water therefore can be conserved within the proposed plant. Considering the average depth of 2.5 m in storage tanks, area for surface storage

involves around 0.1696 ha (0.419 acres) which is 7.0% of the project area. The daily make up water requirement for the proposed project is 102 kld. Thus, on an average around 42 days daily make up water requirement for the proposed project will be fulfilled by the harvested rain water.

The total power requirement will be 10 MVA and sourced from DVC supply system. DG set (180 KVA) will be installed.

Public Hearing was conducted on 27th February, 2014 at the Meeting Hall of Burdwan-I Panchayat Samity, District Burdwan in West Bengal. Issues raised include air pollution from the project activities, skill development through training, utilisation of slag for road construction, local area development of community infrastructure.

Ramnabagan Wild life Sanctuary is approximately 3.6 KM from the project boundary. An application dated 11.07.2013 has been made by PP to PCCF wildlife, State Govt., for obtaining WL clearance from the NBWL. The committee advised the PP to provide details whether the ESZ of the Ramnabagan Wild life Sanctuary has been delineated and has been notified. The Committee also advised PP to submit the details regarding the distance of the ESZ fixed in the notification.

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

- i. The proponent shall obtain prior Wildlife clearance for expansion of the project. In case the project is located outside the ESA, a Notification of ESZ Ramnabagan Wild life Sanctuary of the State Government and a map with minimum distance of the project site from the boundary of ESZ authenticated by PCCF(WL) shall be furnished.
- 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 50mg/Nm³ and installing energy efficient technologies in the Plant.
- 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. 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 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- iv. 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.
- v. Water consumption shall not exceed as per the CREP standard prescribed for the steel plants. Additional water, if any, required for the plant project operations shall be met from rainwater stored in rainwater harvesting structures.
- vi. Rainwater harvesting scheme shall be prepared so that the rainwater can be collected, re-used and may be used for ground water recharge. 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. 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.

- vii. Greenbelt of approximately 15-20 meter width consisting of a 3-tier of trees consisting of species with thick canopy shall be developed all along the periphery of the plant, roads, vacant spaces, transfer points, etc as part of 33% of total plant area.
- viii. All the effluents shall be treated and reused for dust suppression/green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted.
- ix. 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 and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Bhubaneswar.
- x. Hazardous materials required during construction phase and in plant operations shall be stored properly as per the regulations and reused/recycled as per the E(P)A Rules.
- xi. Vehicles and construction machinery are properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.
- xii. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and implemented.
- xiii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.
- xiv. All the commitments made to the public during public hearing/public consultation shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xv. 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.
- xvi. 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, at 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.

23.3.5 Proposed MS Steel Ingots/Billets of M/s Jay Bharat Steel Corporation at Dist. Kutch, Gujarat (EC) [J-11011/349/2012-IA-II(I)]

M/s Jay Bharat Steel Corporation have proposed to expand their MS Steel Ingots/Billets along with a heat recovery based captive power plant of 10 MW capacity at Survey No. 405/3, 406, 407 Village Dhamdaka, Bhuj Bhachau Road, Taluka Anjar, District Kutch, Gujarat. Total plant area is 15.01 acres of which existing plant area is 54.90 acres and proposed expansion is 9.11 acres. The existing plant is located in an area of 21690.98 m². The additional land requirement for the proposed expansion is 36664.24 m². No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. Nearest village is Budhar Mora (2.2 km) and the Nearest Town is Gandhidham (26 km, SSW), Nearest Railway Station is Gandhidham Railway Station, 26 Km, SSW Bhachau Railway Station 15 Km, ESE , Nearest Airport is Kandla - 26.16 km. Total project cost is Rs. 90 crores (Existing – Rs 10 crores and Proposed – Rs. 80 crores). The Amradi lake and Tapar dam is located at a distance of 3.75 km and 9.5 km respectively.

The existing plant got Consent to Establish from Gujarat Pollution Control Board on 17.9.2011. The unit received NOC from GPCB for manufacture of steel ingots, billets and as per NOC Order No: 43157 dated 17.9.2011 which is valid up to 02.07.2016. The aforesaid expansion proposal was considered for TOR in the Reconstituted Expert Appraisal Committee (Industry) in its 6th meeting held during 5-7th March, 2013 and ToR was issued vide letter dated 7th March, 2013. Public Hearing for the project was conducted on 04.02.2014. EIA-EMP Report has been prepared by Anacon Laboratories Pvt. Ltd., Nagpur.

The details of existing and the proposed products are as given below:

Sr. No	Particular	Plant Configuration	Product Details	Production
Existing				
1	Induction furnace	1 x 5 Ton	MS Steel Ingots / Billets	27576 TPA
2	CCM	6 x 11 strand		
Proposed				
1	Induction furnace	7 x 15 Ton	MS Steel Ingots /Billets	6,00,000 TPA
2	CCM	6 x 11 strand		
3	Rolling Mill	2 x 30 Ton	MS Joists	2,00,000 TPA
			TMT Bars/ Angles/Channels	2,00,000 TPA
4	Electric Arc furnace	1 x 5 Ton	Silico Manganese	18,000 TPA
5	Power Plant	30+30 Ton AFBC	Power	10 MW
By product				
1	Slag			1,44,000 TPA
2	Coal Ash/fines			25,000 TPA

The power requirement for the proposed expansion is 40 MW which will be met from M/s Paschim Gujarat Vij Corporation Limited and the captive power plant. D.G set of 1000 KVA is proposed as a standby power. The raw materials required are steel scrap, sponge iron, ferro alloys, MS billets, Manganese ore, Limestone, sand and coal.

Details of raw materials used for the existing and proposed project are given below:

S.N.	Raw Material	Source	Quantity (tonnes)	Transportation
1	Steel scrap	Imported	600	Road
2	Sponge Iron	Mono steel	200	Road
3	Silico manganese	Indigenous	750	Road
4	MS Billets	Captive	400	Road
5	Managanese Ore	H.K.Traders	1000	Road
6	Limestone	Local suppliers	200	Road
7	Sand	H.K.Traders	200	Road
8	Coal	Imported	500	Road

AAQ in the range of monitoring of PM₁₀ (25.10-62.20ug/m³), PM_{2.5}(14.80-34.80ug/m³), SO₂ (6.90-19.60ug/m³) and NO_x (8.50-28.40ug/m³) shows that the levels are within prescribed limits. AQIP modelling shows that the GLC rise of PM₁₀, SO₂ and NO_x to be 38ug/m³, 6ug/m³ and 0.24ug/m³ at a distance of 1km in southern direction.

Air pollution control measures include stack of adequate height with air pollution control devices such as bag filter, pulse jet bag filter, ESP, water sprinkling, greenbelt. A total of 5.5 acre (33%) of the total land area of 17.84 acres will be developed as greenbelt.

The water requirement after the proposed expansion is 235 m³/day (cooling -185m³/d, boiler-10m³/d, D.M.Plant- 13m³/d, domestic – 20m³/d and others -7m³/d), which will be sourced from Narmada water. An estimated 25 m³/d of wastewater (8m³/d from existing and 17m³/d from proposed expansion) will be generated, which will be treated back for use in plantation. The Plant will operate on a zero discharge concept.

An estimated 66,000TPA of fly ash would be utilised in the CPP, considering 40% Ash. The total ash generation will be 25,000 TPA, out of which 20,000 TPA will be fly ash and 5,000 TPA will be bottom ash. The fly ash generated i.e. 20,000 TPA will be utilized for Bricks manufacturing & cement making. The bottom ash will be utilized for road construction. The total quantity of slag generated from the plant is estimated to be 1,44,000 TPA.

Provision will also made to use slag for road making and low land filling The ETP sludge (1.5 TPA) shall be collected from ETP and stored at designated place having impervious flooring with leachate collection system and covered shed. It shall be finally disposed at approved TSDF site.

An amount of Rs 525 lakhs will be spent on EMP, of which Rs 50 lakhs will be for greenbelt development. An amount of Rs. 17.5 lakhs will be provided for tree plantation and their management in the surrounding villages under CSR. These positive steps will serve to develop an ecological layout which will provide nesting, breeding ground and perching land for various birds in the area. An amount of Rs. 100 lakhs are allotted annually for community upliftment activities. The head wise segregation of the budget shows that the financial allocation made under seven head including provision of free medical camp, provision of instrument in schools, sponsoring sports activities, electrification of villages, contributing in local initiatives, tree plantation, enhancing the existing communication facilities.

Public Hearing was held on 04.02.2014. Issues covered include greenbelt development, activities proposed under CSR, employment for locals, air pollution due to ash/dust pollution from the unit

resulting in crop damage, water pollution. Provisions have been made in the EMP and CSR to address the issues.

The Committee noted that greenbelt is not adequate and a greenbelt Development Plan for developing a 3-tier 10-15m wide green belt along periphery using tree species with wide canopy shall be developed.

After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for 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. Prior approval from the Competent Authority of the State Government shall be obtained for usage of water of 235 m³/day for the expansion project to be sourced from River Narmada. The river water shall be supplemented by rainwater stored in rainwater harvesting structures. Ground water shall not be abstracted.
- 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. The total quantity of 1,44,000 TPA slag estimated to be generated from the plant shall be used/sent for road making and low land filling. The ETP sludge (1.5 TPA) shall be collected from ETP and stored at designated place having impervious flooring with leachate collection system and covered shed. It shall be finally disposed at approved TSDF site.

- ix. 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.
- x. All vehicles and construction machinery are properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.
- xi. 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.
- xii. 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.
- xiii. Disaster management plan shall be prepared and implemented. Regular drills thereof shall be conducted.
- xiv. All the commitments made to the public during public hearing/public consultation shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xv. 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.
- xvi. 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.

23.3.6 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)]

The proposal is for expansion of existing steel manufacturing unit with a capacity of 29,000 MTPA to 2,16,000 MTPA of M/s India Steels at vill. Palhori, Khasra No. 213/197/91/1, Paonta Sahib, H.P. The site lies on Shivalik foot hills with undulating terrain, near the State boundary of Haryana on the Southern side of H.P. Seasonal Boli Nadi is near the site. On both sides there are reserved forests. The area has

been declared as backward by the State Government. Communication facility is not very good. The project site is at a distance of about 3 kms from the pucca road from Haryana side and 25 km from Paonta Sahib (HP) on Paonta Sahib-Yamunagar National Highway (NH-73A). The nearest major city is Yamunanagar which is at a distance of about 45 kms from the site of the unit. Other towns are Paonta Sahib at a distance of about 25 Kms, Kala Amb at a distance of about 60 kms.

It was informed that two distinct processes are involved in the entire manufacturing as below:

(i) Preparing Ingots from the Scrap

MS Scrap is put into the Electric furnace pot through magnetic conveying system, where it is heated to 1800 OC. Scrap is melted and is heated for about 100 minutes. In the molten steel someferro alloys are added according to the carbon contents in the scrap. The molten steel is then put into the moulds with the help of hydraulic system where, after cooling, the product is taken out from the moulds and the same is ready for further use.

(ii) Producing Bars, Rounds and Flats

These are produced by heating the Ingots from the manufacturing process received in a separate oil fired furnace to about 1150 – 12000 C so that they can be converted into the desired sections through rolling. They are then cooled and cut into proper sizes for dispatch.

The unit requires about 20 MW of Electricity, which will be supplied by HPSEB. One D.G. set of 1000 KVA will also be installed as stand by for cooling of furnaces and running of auxiliary equipment during power failure.

The requirement of water in the unit is about 550m³/day, which will be drawn from underground through a tubewell within the premises where enough water is available. A tube-well has already been installed in the premises of the unit. Water is stored in an overhead tank which will feed the various user points. The capacity of overhead storage tank is about 250 m³. Another tank of about 100 m³ will also be provided for fire fighting which shall be kept always full.

It was stated that there will be no use and discharge of water in the manufacturing process. Some waste water from the toilets in the offices is expected which will be treated through STP and the treated effluent will be used within the premises for landscaping and irrigation. However, during rainy season this surplus treated water will be passed on to the nearest drain where ample dilution will take place. Similarly, water coming out from cooling system will be reused and only make up water shall be added.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 10th meeting held during 29th-31st July, 2013. As per the minutes of the meeting, the Committee deferred the consideration of the proposal and recommended that a site visit shall be undertaken by the Regional Office of the MoEF at Chandigarh to verify the existing plant (Manufacturing of Structural Rolled Products – 29000 TPA) including its compliance status and the report shall be submitted to the EAC for further consideration of the proposal. The RO, Chandigarh has submitted the compliance status of the existing unit vide his letter dated 21.03.2014. It has been mentioned in the report that the existing unit is complying with the environmental norms stipulated CTE/CTO issued under the Air and Water Acts by HP SPCB.

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 PM₁₀, PM_{2.5}, SO_x, NO_x. 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 and made the presentation has not been provided.

23.4 Further consideration Cases

23.4.1 Expansion of Sponge Iron Plant to Steel Plant (0.1 MTPA) and Captive Power Plant (16MW) of M/s Chintpurni Steel Pvt. Limited at village Indra & Jarba, Mandu, District Hazaribagh, Jharkhand (EC) [J-11011/300/2010-IA-II(I)]

M/s Chintpurni Steel (P) Ltd. at Village Indra & Jarba, Tehsil – Mandu, District - Hazaribagh, Jharkhand and their consultant Visiontek Consultancy Services (P) 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) during 13th meeting held on 26th - 28th August, 2010 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide letter no. F. No. J-11011/300/2010-IA-II (I) dated 15th September, 2010 for preparation of EIA/EMP report. M/s Chintpurni Steel (P) Ltd submitted the final EIA/EMP report vide letter no. CSPL/EC/09/15/11-12 Dated 15.11.2011 after conducting Public Hearing for grant of Environmental Clearance.

The matter was discussed in the 22nd EAC meeting held on 30th July – 1st August 2014. The Committee had sought information regarding revised layout plan, AAQ modelling shall be redone and the report; and at least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and village wise action plan with financial and physical breakup/details shall be prepared over a period of ten years. These have been received from PP and further considered in the present meeting.

After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for 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 below 100mg/Nm³ and installing energy efficient technologies in the Plant.
- ii. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices. 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 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.

- iii. 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.
- iv. Water consumption shall not exceed as per the CREP standard prescribed for the steel plants. Additional water, if any, required for the plant project operations shall be met from rainwater stored in rainwater harvesting structures.
- v. Rainwater harvesting scheme shall be prepared so that the rainwater can be collected, re-used and may be used for ground water recharge. 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. 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.
- vi. Greenbelt of approximately 15-20 meter width consisting of a 3-tier of trees consisting of species with thick canopy shall be developed all along the periphery of the plant, roads, vacant spaces, transfer points, etc as part of 33% of total plant area.
- vii. All the effluents shall be treated and reused for dust suppression/green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted.
- viii. Full 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 and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Bhubaneswar.
- ix. Hazardous materials required during construction phase and in plant operations shall be stored properly as per the regulations and reused/recycled as per the E(P)A Rules.
- x. Vehicles and construction machinery are properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.
- xi. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and implemented.
- xii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.
- 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. 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.
- xv. 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, at 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.

23.4.2 Expansion of Steel Plant (0.1 MTPA to 0.4 MTPA) and Captive Power Plant (12MW to 24 MW) of M/s Gagan Ferrotech Ltd. at Jhamuria Industrial Estate, vill. Ikrah, Dist. Burdwan, West Bengal (EC)[J-110011/232/2010-IA-II(I)]

The project authorities and their consultant, M/s Visiontek Consultants, Bhubaneswargave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 13th Meeting of the Expert Appraisal Committee (Industry-1) held on 26th - 28th August, 2010 for preparation of EIA/EMP. All the steel plants are 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-1) of MoEF.

M/s Gagan Ferrotech Limited have proposed for expansion of Steel Plant (0.1 MTPA to 0.4 MTPA) and Captive Power Plant (12 MW to 24 MW) at Jhamuria Industrial Estate, Village-Ikrah, Dist- Burdwan, West Bengal. Total existing project area is 46.59 acres and expansion would be done within the existing premises. Green belt will be developed in 33% of the area i.e 15.5 acres. No R & R is involved. No wildlife sanctuary/national park is within 10 km radius of the unit. Project site is located at 14 Km from the severely polluted area of Asansol. Total cost of the project is Rs. 104.33 Crores. Budget of Rs. 5.0 Crores and Rs. 1.0 Crores has been earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures.

The raw material requirement will be - Sponge Iron (2,26,700 TPA), Pig Iron (78,900 TPA) & Scrap (31,500 TPA) for billet production, Mn ore (58,600 TPA), Dolomite (10,400 TPA), Quartzite (9,600 TPA), Coke (19,200 TPA) & electrode paste (800 TPA) for Fe-Mn/Si-Mn production and Coal (58,700 TPA) for power generation. Total power requirement of 50 MW will be met from captive power plant of 24 MW and remaining 26 MW from DVC. The following is the existing and proposed plant configuration:

S. No.	Particulars	Plant Facilities	Product	Production Capacity in TPA
EXISTING				
1	Sponge Iron Plant	4 x 100TPD	Sponge Iron	1,20,000
2	Induction Furnace	2 x20T	MS Ingots	1,08,000
3	Rolling Mill	342 TPH re-heating furnace	TMT Bars	1,02,600
4	Captive Power Plant	12MW (8MW WHRB+ 4 MW FBC)	Power	12MW
PROPOSED				
1	Induction Furnace	1 X20T	Liquid Steel	60,000

2	Electric Arc Furnace	1 X35T	Liquid Steel	2,42,000
3	Laddie Refining Furnace	1 X35T	Refined Liquid Steel	2,42,000
4	AOD	1 x 30T	Refined Liquid Steel	2,41,000
5	CCM	2 X 3 Strand	Billet	2,40,000
6	Ferro Alloys Plant	2 X 9 MVA	Ferro Manganese/Silico Manganese	27,000
7	Power Plant	12MW (1 x 60TPH FBC Boiler)	Power	12MW

Ambient air quality monitoring was carried within the study area for PM₁₀, SO₂ and NO_x. The maximum values of these parameters are 77.4µg/m³, 15.43µg/m³ and 22.9µg/m³ respectively. The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 0.7 µg/m³ with respect to the PM₁₀, 3.58 µg/m³ with respect to the SO₂ and 2.51 µg/m³ with respect to the NO_x. The GLC predicted at all receptor locations after the proposed expansion are within the NAAQS. Electrostatic precipitator (ESP), bag filters and dust collectors will be provided for air pollution control. Pulse jet bag filters will be provided to steel melting shop (SMS) and ferro alloy plant. ESP will be provided to CPP and Sponge iron plant. Bag filters will be provided in coal crushing and coal handling area of FBC based power plant as well as blast furnace raw material handling area. Dust extraction system and water sprinklers will be installed in the plant. Dust extraction system such as dust cyclones, bag filters etc. will be provided at all raw material handling areas, transfer points, conveyor points, crushing and screening units, storage building etc.

Make up water requirement at final stage will be 202.5m³/hr (62.5 m³/hr -Existing and 140 m³/hr - Expansion). Application has been submitted to ADDA for supply of 5,000 KLD water for industrial use. Closed circuit recycling system will be adopted in the proposed plant. The wastewater generated from the power plant will be used for ash quenching, sprinkling in the coal yard and dust suppression. Treated wastewater from SMS and CCM will be recycled for washings and dust suppression etc. Guard pond will be provided for aeration and dosing for pH correction. Neutralizing pit for the treatment of DM Plant water will be provided. The treated water will be recycled for plant use and horticulture application. Domestic effluent will be routed to a STP and the treated effluent will be used for green belt development. No effluent will be discharged and zero discharge will be adopted. Fe-Mn slag would be reused for Si-Mn production. Slag from Si-Mn production will be stored in waste storage yard and used for road construction and low land filling. The IF/EAF slag will be disposed in engineered landfill. The flue dust will be sold to pellet making plant. Fly ash will be partly sold to brick manufacturers and balance will be stored in ash mound of area 5.09 Acre. Bottom ash will be disposed in ash disposal area.

Environmental Clearance was accorded to the Industrial Estate at Jamuria on 06.11.2008 for which a Public Hearing was conducted. In view of this, Public hearing has been exempted due to the location of project site in Notified Industrial Estate.

The aforesaid proposal was considered in the 37th Expert Appraisal Committee (EAC) Industry - I meeting held on 14-15th June, 2012. The EAC recommended aforesaid project for the grant of Environmental Clearance subject to the submission of compliance to the conditions stipulated in the existing environmental clearance/NOC from State Pollution Control Board (SPCB). The PP vide letter dated 13/08/2014 has submitted the compliance report, which were considered and found to be satisfactory.

After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for 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 below 50mg/Nm³ and installing energy efficient technology.
- ii. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices. 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 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- iii. In case, there is change in the fuel, a fresh reference shall be made to the MoEF for amendment to this condition.
- iv. 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. Water sprinkling as well as dry fog system to control fugitive emission. Water sprinkling at the raw material stockyard to control fugitive dust emission
- v. Water consumption shall not exceed as per the standard prescribed for the steel plants. Any additional water requirement shall be met from rainwater stored in rainwater harvesting structures.
- vi. A plan rainwater harvesting shall be prepared so that the rainwater can be collected, re-used/supplemented for plant operations and may be used for ground water recharge. The project shall prepare a drainage plan for discharge of rainwater from the plant area so that water logging may be avoided in general and near DRI plants in particular. 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.
- vii. Effluents shall be treated and treated water used for dust suppression and green belt development. No effluents shall be discharged and 'zero' discharge shall be adopted.
- viii. Hazardous materials required during construction phase and in plant operations shall be stored properly as per the regulations and reused/recycled as per the E(P)A Rules.
- ix. Char from DRI kilns shall be used in-house for power generation. Ash from the CPP shall be sold to cement units. Slag from IF will be sold to the metal recovery units. Mill scale from the rolling mill shall be used in the IF. Slag from the Ferro Alloy plant will be used in low land filling and road construction.
- x. 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 and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Bhubaneswar.
- xi. 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.

- xii. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and implemented.
- xiii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.
- xiv. Green belt of approximately 15-20 meter width consisting of a 3-tier of trees of species with thick canopy shall be developed all along the periphery of the plant, roads, vacant spaces, transfer points, etc as part of 33% of total plant area.
- xv. 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.

23.4.3 Proposed Iron ore Beneficiation Plant (1.5 MTPA), Pellet Plant (1.2 MTPA), Producer gas plant (480 TPD or 75,000 Nm³/hr) and Coke Oven Plant (0.225 MTPA) along with 15 MW WHRB based Captive Power Plant of M/s Orissa Metaliks Private Limited, located at Village Gokulpur, Tehsil Kharagpur, District Paschim Medinipur, West Bengal (EC based on TOR granted on 09.08.2012)[J-11011/182/2012-IA-II(I)]

The Proposal was considered for Terms of Reference (TOR) in the 37th meeting of the Expert Appraisal Committee (Industry-1) held on 14-15th June 2012 for preparation of EIA-EMP report. TOR was awarded by MoEF vide F. No. J-11011/182/2012-IA II (I) dated 9.8.2012 for preparation of EIA-EMP report. The PP had submitted the final EIA-EMP report vide letter dated 19.11.2013 after conducting Public Hearing for environmental clearance. The proposal was considered in the EAC(I) meeting held on 29th-30th January 2014, wherein the Committee had sought the following additional information for further consideration:

- i. Action Plan for transportation of iron ore and coal by rail and then to the plant site by conveyor. Undertaking from PAs stating that no road transportation will be done;
- ii. MoU with a sister concern M/s Rashmi Metaliks Limited for utilizing their railway siding;
- iii. Iron ore linkage documents along with the status of environmental clearance for the iron ore mines;
- iv. Specific agreement with the coal mines of South Africa for the long-term supply of coal along with details of coal quality and quantum;
- v. Socio-economic survey and R&R action plan
- vi. Action plan for the management of solid and hazardous waste;
- vii. Status of water intake approvals obtained by M/s Rashmi Metaliks Limited and clarification from the State Govt whether merchant sale of water to M/s Orissa Metaliks Private Limited is allowed;
- viii. Detailed CSR Plan with details.

- ix. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and village wise action plan with financial and physical breakup/details shall be prepared over a period of ten years and shall be submitted;
- x. Occupational Health and Safety action plan; and
- xi. Status of implementation of earlier Public Hearing proceedings on the project.

In regard to action plan for transportation of iron ore and coal by rail and then to the plant site by conveyor and undertaking from PP stating that no road transportation will be done, the PP has submitted the MoU with a sister concern M/s Rashmi Metaliks Limited for utilising their railway siding. It has been mentioned by the PP that Orissa Metaliks Private Limited Intends to set up proposed plant adjacent to the Mother company M/s Rashmi Metaliks Ltd. (RML). The proposed plant site is very close to Private Railway Siding of RML which is around 700 meters away. It has been mentioned that the proposed project Iron Ore (15,00,000 TPA) & Coal (4,20,000 TPA) will be required, which will be transported by rail from Orissa, Jharkhand and Haldia / Paradeep Port. The necessary Agreement has been executed with Rashmi Metaliks Ltd. to use their Railway siding for handling the Raw Materials. The raw materials will be stored initially on concrete Platform. Subsequently, they will be shifted to proposed plant through conveyer system.

Regarding iron ore linkage documents along with the status of environmental clearance for the iron ore mines PP submitted the details of mines and the date on which EC was obtained. PP also submitted specific agreement for supply of Indonesian Cooking Coal and supply of South African coal.

Regarding solid and hazardous waste 0.24 MTPA (80%), tailings will be disposed off in abandoned Murom khadan land of 3.05 acres area, 0.06 MTPA (20%) tailing will be used in brick making, tar will be stored in HDPE Drum & sold to the enlisted vendors of WBPCB. Organic Waste to be used as manner after Composting. Company has earmarked about 2.0 acres of land within plant premises for storage of solid wastes. The temporary storage shall be compacted with clay lining engineered as per CPCB guidelines.

Regarding water intake approvals obtained by M/s Rashmi Metaliks Limited and clarification from the State Govt whether merchant sale of water to M/s Orissa Metaliks Private Limited is allowed has been submitted.

Regarding CSR related activities, funds to the extent of Rs. 21 crores i.e., 5% of total project cost will be earmarked for Enterprise Social Commitment (ESC) activities based on a rapid survey carried out to identify the local needs in the study area. Special attention will be paid to Gokulpur village (the project site), Nandarchalk, Dhekeya, Barkola, Dangrapara, Pachuria, Malancho, Samraipur, Gokulpur, Amba, Bargai, Chaksanadhar, Niranjnabar, Bhagwanpur which are located in the close vicinity of the project site. However, the ESC activities will also be extended to other villages within the study area. It has been informed by the PP that as desired by the EAC committee during the 15th EAC meeting dated 29th January, 2014 the company will take initiative for construction of a road at the side of plant boundary, preventive measures will be taken to reduce the pollution load due to the discharge of the effluents from M/s. Orissa Metaliks (P) Ltd. and local people will be given preference in employment after proper training.

Regarding Occupational Health and Safety action plan, health check up will be conducted as per the pre-designed format which will include Chest X-rays, Audiometry, Spirometry, Vision Testing, ECG, Blood and Urine test etc. Medical records of each employee will be maintained separately and will be updated

as per finding during monitoring. Proper ventilation and exhaust systems at the shop floor will be made. Periodic monitoring of the factory atmosphere will be made. Good housekeeping will be maintained to control occupational hazards.

The status of implementation of earlier Public Hearing proceedings on the project has been provided by the proponent.

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

- i. 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 mg/Nm by installing energy efficient technology.
- ii. 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 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- iii. 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.
- iv. The entire transportation of iron ore (15,00,000 TPA) and coal requirement (4,20,000 TPA) shall be by rail using the railway siding in the adjoining plant site of M/s Rashmi metlalks, a sister concern, at a distance of 700m. Thereafter, transportation from railway siding to the plant site shall be by closed conveyor.
- v. Water consumption shall not exceed as per the CREP standard prescribed for the steel plants. A Plan for Rainwater harvesting shall be prepared. Only balance water requirement shall be met from other sources. Efforts shall be made to use rain water harvesting to supplement the water requirements of the Plant. Measures to reduce water consumption in plant operations shall be implemented. 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.
- vi. All the effluents shall be treated and recycled and reused including for dust suppression and green belt development. No effluents shall be discharged and 'zero' discharge shall be adopted.
- vii. Hazardous materials required during construction and for plant operations shall be stored properly and recycled/reused as per the regulations under E(P) A, Rules.
- viii. A plan for utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2010. All the fly ash generated shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understandings entered into shall be submitted to the Ministry's Regional Office.
- ix. An estimated 0.24 MTPA of the total solids and hazardous waste 0.30 MTPA in the form of tailings will be disposed off in abandoned Murom khadan land of 3.05 acres area and 0.06 MTPA (20%) tailing will be used in brick making. Tar shall be stored in HDPE Drum & sold to the enlisted vendors of WBPCB. Organic waste to be used as manure after composting in the earmarked 2 acres of land within plant premises for storage of solid wastes. The temporary storage shall be compacted with clay lining engineered as per CPCB guidelines.

- x. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and implemented.
- xi. Vehicles and construction machinery shall be properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.
- xii. Green belt of approximately 15-20 meter width consisting of a 3-tier of trees of species with thick canopy shall be developed all along the periphery of the plant, roads, vacant spaces, transfer points, etc as part of 33% of total plant area.
- 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.
- 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.

23.4.4 Proposed Expansion of Iron Ore Pelletisation plant (0.6 MTPA to 2.1 MTPA) by addition of Iron Ore Washery (3 MTPA), DRI Plant (1.2 MTPA), SMS (1.2 MTPA), Rolling Mill (1.2 MTPA) along with Power Plant (100 MW) of M/s Ardent Steel Ltd., at vill. Phuijhar, Block Bansapal, Tehsil Telkoi, Dist. Keonjar, Odisha (TOR) [J-11011/112/2013-IA-II(I)]

The proposal for expansion of Iron Ore Pelletizing Plant (0.6 MTPA to 2.1 MTPA) by addition of Iron Ore Washery (3.0 MTPA), DRI Plant (1.2 MTPA), SMS (1.2 MTPA), Rolling Mill (1.2 MTPA) along with Power Plant (100 MW) at village Phuljhar, Block-Bansapal, Tehsil Telkoi, District Keonjhar, Odisha by M/s. Ardent Steel Limited (ASL) was considered was considered by the Expert Appraisal Committee (EAC) - Industry in its 9th meeting held during 10-11th June, 2013 for the grant of Terms of Reference. While appraising the project, the EAC noted that proponent has already established and operating 0.6 MTPA Iron Ore Pelletization Plant without obtaining prior environmental clearance from the Ministry and this case is a violation of Environment (Protection) Act, 1986. EAC has recommended that the MoEF shall deal with the violation matter in accordance with its Office Memorandum dated 12.12.2012. PP filed a case in NGT and the NGT in its Judgement has stated:

“.....This Tribunal has no hesitation in holding that pelletisation is a process which squarely falls under the head “primary metallurgical industry”. As such the industries carrying out the process of pelletisation, even as a Stand-Alone project, would be required to seek environmental clearance in terms of the Regulations of 2006.” The Judgment further states *“Stand-alone pellet plants or part of a comprehensive*

expansion plan are to seek environmental clearance. **Such applications shall be filed within one month from today and shall be disposed off within 3 months after. Upon such clearance, the unit would operate in accordance with the law”.**

Further, “..... it will be open to the MOEF/State Pollution Control Boards to examine the possibility, whether such units shall be permitted to operate during the interregnum of applying for EC and grant/refusal of the same by the competent authorities in accordance with the law. **Needless to state that such request to operate during the interregnum shall be only considered if the units are complying with the concerned Boards for establishment/operation of such unit”**

MOEF has in this regard informed all SPCBs that a time limit of 3 months for applying for TORs and one year for obtaining EC has been given to all such stand-alone Pellet plant units. In compliance of the NGT Judgement dated 27.05.2014, the PP filed an application for TOR dated 10.06.2014 for the existing Pellet Plant in addition to the TOR application already filed with MOEF for the proposed expansion, which was considered by EAC(I) in its 9th meeting held during 10-11th June, 2013. A letter was also received from Odisha PCB that the existing unit has been compliant with CTO conditions. MoEF vide letter dated September 8, 2014 mentioned to the PP that it may not be necessary to separately consider the application for the existing unit and the application for expansion submitted earlier shall be considered for finalization of ToR for the existing unit.

The project details are as summarised below:

S. N	Particulars	Existing	Expanded Plant (Existing + Addition)
1	Project	Pellet Plant of 0.6 MTPA	Expansion of Pellet Plant form 0.6 MTPA to 2.1 MTPA Iron Ore Washery (3 MTPA), DRI Plant (1.2 MTPA), SMS (1.2 MTPA), Rolling Mill (1.2 MTPA) Power Plant (100 MW)
2	Total project area	36.781 ha	217.254 ha
3	Land Schedule	Industrial type	Agriculture land : 150.433 ha Forest Land: 21.246 ha Gochar : 6.224 ha Road: 2.57 ha
4	Technology Adopted	Grate Kiln Technology	Beneficiation: wet technology Pelletization: Kiln Grate tech Sponge Iron: DRI Route
5	Water requirement	500 KLD	16184 KLD
6	Power requirement	4.8 MW	93.8 MW
7	Manpower requirement	452	1640
8	Project cost	Rs. 133.96 cr.	Rs. 2040

The Changes in Plant Configuration are as given below:

S.N.	Plant/Facility	Existing Capacity (MTPA)	Proposed Expansion (MTPA)	Configuration	Total Plant Capacity (MTPA)
1.	Iron ore beneficiation Plant	-	3	--	3

2.	Iron Ore Pellet Plant	0.6 MTPA	1.50	One kiln of 0.6 (existing) & One Kiln of 1.5 MTPA (proposed)	2.1
3.	DRI Plant	-	1.20	500TPD x 8 No.s	1.2
4.	SMS/Arc Furnace	-	1.20	60T x 6 No.s	1.20
5.	Rolling Mill	-	1.20	-	1.20 MTPA
6.	Captive Power Plant (WHRB)	-	125MW	WHRB 25 MW x 4No. AFBC 25 mW x 1 No.	125

It was stated that the amount of 16184 KLD of water will be sourced from River Baitarni. Transportation would be by road. Nearest railway siding is 30km from project. Coal will be obtained from MCL mines. Dolochar would be used in captive Power plant.

The Committee noted that the total land area has been increased from 36.781 ha for existing unit to 217.2554ha for the proposed expansion, of which 21.246 ha is forestland. Since Stage-I forestry clearance is required for obtaining EC vide MOEF Circular, the PP would require to simultaneously initiate the process for obtaining FC within one year, as per the aforesaid decisions of MOEF vide the NGT Judgement. Alternately, PP could first initiate the process for obtaining an EC (including conduct of P.H.) for the existing unit and thereafter consider filing a separate application for EC for expansion of the existing unit. The third option is to carve out the forestland areas from the proposed expansion project and resubmit a revised TOR for the expansion (which includes the existing project) for TOR excluding the forestland. It was noted that in addition to forestland, the proposed land for the expansion project also contains 6.224 ha of gochar land (community grazing land).

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. Since the proposed site for the expansion project has a patch of forest area in it. In view of this, Stage-I forestry is required for granting EC for the expansion project.
- ii. Alternately, the PP may submit the revised layout plan excluding the forest area from the proposed site for the expansion project.

A decision taken by the PP regarding inclusion/omission of forest land shall be submitted to the Ministry through a formal letter for issuance of TOR.

23.5 Terms of Reference (TOR) Cases

23.5.1 Proposal for enhancement of production capacity from 94800 TPA to 150000 TPA of Ferro-Alloys of M/s Balasore Alloys Ltd. at Balasore, Orissa (TOR) [J-11011/247/2014-IA-II(I)]

The PP along with their EIA consultant 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. All Secondary metallurgical processing industry involving toxic and heavy metal producing units $\geq 20,000$ tonnes /annum is listed at S.No. 3(a) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MOEF.

The project proponent, namely M/s Balasore Alloys Limited, formerly known as Ispat Alloys Limited presently has 5 furnaces with total capacity of 57 MVA to produce 94800 TPA of Bulk Ferro Alloys. PP proposes to set up Enhancement of Production (Ferro Alloy) from existing 94800 TPA to 150000 TPA through Furnace Transformer Capacity Increase out at its plant at Balgopalpur Industrial Estate, Balasore, Odisha. The unit was started about 30 years ago on a capacity of 95,000TPA.

The project is located within the Balgopalpur Industrial Estate, Balasore, Odisha which is 6 KM from NH-5, Ferro Alloy is produced in Submerged Electric Arc Furnace. There are 5 existing Ferro alloys furnaces with total capacity of 57 MVA. The existing infrastructure facility of the Balasore Alloys Limited includes Plant build up with all the auxiliaries, Metal Recovery Area, Raw Material and product storage yard, Workshop, Oil Storage Tank, Laboratory, Canteen, Road, Colony, Administrative Building, Solid Waste Disposal Area, Drinking Water facility, Pump House, Horticultural Garden, Green Belt etc.

The Chromium Ore, Manganese Ore, Quartzite etc. are sourced from Sukhinda Valley and transported to the plant site by trucks. Low ash metallurgical coke used in basically imported from Ukraine and China. Indigenous Coke is sourced from Coal India Limited. About 2278 TPA of smelting furnace dust, 169106 TPA of slag will be generated from the process, which is being managed by the industry.

The raw materials required for the production of Ferro Alloys are Quartzite, Dolomite, Magnesite, LAM Coke & Chrome Ore. About 802 Cu.m/day water will be required for manufacturing. The transportation of raw material is mainly through covered trucks to the plant site. The power requirement will be 140 million units (kwh) per annum. Power will be supplied by North Electricity Supply Company as per OERC guideline and provisions under Electricity (supply) Act,. There is no additional manpower requirement for the proposed expansion in production.

The Committee noted that the EC dated 25.08.2008 for the existing unit has lapsed. The Committee requested the PP to submit the copy of the CTE and CTO obtained from the Odisha Pollution Control Board and compliance report from the RO, Bhubaneswar for the existing plant to the Ministry before the award of ToR.

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:

1. P.H. shall be conducted by the Odisha Pollution Control Board as per the generic TOR.
2. Compliance report from RO, MoEF for the existing CTE/CTO shall be provided along with the final EIA/EMP report.
3. One-season data (post monsoon) starting end of September 2014 can be collected for preparation of EIA-EMP Report.

The aforesaid TOR would be issued after furnishing of CTE and CTO obtained from the Odisha Pollution Control Board for the existing plant.

23.5.2 Proposed 0.74 MTPA Coal Washery, 0.46 MTPA Coke Oven Plant, 0.63 MTPA Iron ore Beneficiation Plant, 1x20m² , 1870 TPD Pellet Plant, 11x100TPD+2x350 TPD DRI Plant, 2x128m³ + 94 m³ MBF, 4x9 MVA Ferro Alloys, 2x35T & 4x25T Induction Furnace, 225m³ Oxygen Plant, 250 TPD Lime Plant, 2x26MW Power Plant, 45 MW (27 MW +18MW) WHRB

Power Plant, 600TPD Rolling Mill of M/s Shakambhari Ispat and Power Ltd., at vill Pavatpur, Radhamadhabpur, Madand, PO–Bortoria, dist. Purulia, West Bengal (TOR) [J-11011/201/2013-IA-II(I)]

The aforesaid proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) in its 11th meeting held during 26-27th August, 2013 for prescribing TORs for undertaking detailed EIA-EMP study.

2. As per the minutes of the meeting, the Committee deferred the consideration of the proposal as the proposal was incomplete in several technical aspects. The Committee asked the proponent to explore the possibility of setting up of 4x350 TPD DRI units instead of 6x100 TPD + 2x350 TPD DRI unit. The proponent agreed to set up the 4x350 TPD DRI unit instead of 6x100 TPD + 2x350 TPD DRI unit and also informed that the revised proposal in this regard (Form I application and Pre-feasibility Project Report) will be submitted to the Ministry for the grant of ToR. Further, the Committee recommended that a site visit shall be undertaken by the Regional Office of the MoEF at Bhubaneshwar to verify the existing plant details including its compliance status and the report shall be submitted to the EAC for further consideration of the proposal. The report shall include status of WHRB in present units, dolochar inventory with year wise production and kind of disposal.

Site compliance report by RO, Bhubneshwar has been submitted on 06.06.2014. The site visit to the plant was made on 31.05.2014 to verify the existing plant details including the status of WHRB and the dolochar inventory. The existing units in the plant premises included: (I) 100 TPD Rotary Kilns – 3 Numbers, (ii) Induction Furnace : 12 Ton Capacity – 2 Numbers, & 8 Ton Capacity – 1 Number and (Hi) 12 MW Captive Power Plant -1 Unit (10 TPH WHRB – 3 Numbers & 36 TPH AF8C – 1 Number). All the units were in operation during the visit. It was also observed that construction of Rolling mill was in progress and column construction was completed up to 50%. It was stated that the construction was initiated 3 month ago after receipt of 'Consent to Establish' (NOC) from WBPCB for manufacture of billets 1,18000TPA, and TMT bars – 120000 TPA vide Ir. No. 175- 2N-21/2012 (E) dated 21.03.2013.

The Committee decided that the proposal would require conduct of P.H. The Committee deferred the proposal for grant of TOR and advised the PP to submit the following information.

- i. Revised layout plan shall be submitted with site boundary and the plant layout superimposed on it. Green belt shall also be shown on the layout map.
- ii. It has been observed by the committee that the PP has not revised the installation of the furnaces as committed in the previous meeting (i.e. 4x350 TPD DRI unit instead of 6x100 TPD + 2x350 TPD DRI unit). The committee advised the PP to revise the project component and submit it again since it is not as per the earlier MOM
- iii. Submit the configuration with covering letter and fresh Form 1.

The matter shall be considered once the information is submitted by the PP.

23.5.3 Pellet plant (Stand-Alone) of 2.1 MTPA capacity (2 units: Unit-I of 0.6 MTPA and Unit-II of 1.5 MTPA) of M/s Godavari Power & Ispat (HIRA Group), located at Siltara Ind. Area, Dist. Raipur, Chhattisgarh (TOR) [J-11011/216/2014-IA-II(I)]

The proponent has applied for regularisation of their existing Pellet Plant of two units with a combined capacity 2.1 million TPA (one unit of 0.6 million TPA and other unit of 1.5 million TPA) situated in Industrial Area, Siltara, Dist. Raipur, Chhatisgarh, vide NGT Judgement dated May 27, 2014.

The Pelletising plant of 2,100,000 TPA capacity (with 2 kilns of 6,00,000 TPA & 15,00,000 TPA) is situated at its existing plant premises located at Siltara, Dist. Raipur, Chhattisgarh. The location of the current operational Iron Ore Pellet Plant is within the Survey of India Toposheet No. 64G11, 64G15 on a scale of 1:50,000 and it lies between latitude 22° 04'04.54" N and longitude 71° 54'30.14" E. The project is a backward integration for utilisation of iron ore fines as pellets in the sponge iron kilns, with no change in the overall capacity of the sponge iron capacity. Investment incurred for this Iron Ore Pellet Plant is 742.14 crores. The capital budget for environmental protection measure for the Year 2014-2015 is Rs. 112 lakhs. There is no National Park, Wildlife sanctuary, defence installation or sensitive area located within 15 km radius of this running plant.

PP and their consultant- Pollution and Ecology Control Services (PECS), Nagpur made a presentation. It was informed that presently, most of the coal based sponge iron plants in India uses iron ore lumps. The requirement is generally 1.8 t/T of sponge iron. This high requirement is mainly due to the fines generated in handling the purchased ore from the source to the plant. This reduces the kiln campaign length and increases ore fines loss. Use of pellets with better physical and metallurgical properties for sponge iron production reduces the accretion formation in the kiln and the pellets consumption is about 1.6 t/t. Further, the production from the kiln is expected to increase by 25% to 30%. Thus, the iron ore fines so generated are utilized through pelletising route to DRI. The techniques of pelletising process include: grate kiln, travelling grate and shaft furnace. The technique of Grate kiln technology is adopted by Godawari Power & Ispat Limited for 2.1 million TPA pellet project.

Current combined capacity of the Iron Ore Pelletising Plant is 2.1 Million TPA. This is a running plant in two parts having the capacities 0.6 and 1.5 Million TPA. CECB has granted Consent to Operate for both iron ore pellet plants. Iron Ore Pellet Plant of 0.6 Million TPA has received Consent to Operate viz letter no. 2347/TS/CECB/2011 Dated 25/07/2011 Under Water Act, 2349/TS/CECB/2011 Dated 25/07/2011 Under Air Act. Iron Ore Pellet Plant of 1.5 Million TPA has received Consent to Operate viz letter no. 6030/TS/CECB/2014 Dated 28/03/2014 under Water Act, 6032/TS/CECB/2014 Dated 28/03/2014 under Air Act. Both the pellet plants are located on the free hold land of M/s Godawari Power & Ispat.

The water requirement of the existing project is 1968 KLD/day; of which makeup water quantity is 1500 KLD/day. The power requirement is being met from Captive power plant of GPIL.

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 Chhattisgarh Environment Conservation Board as per the Generic TOR.
- ii. EC requires to be obtained within one year of grant of TOR.

23.5.4 Proposed project of 2 X 2,25,000 TPA DRI Plant, 3,10,000 TPA Steel Melt Shop, 19,800 TPA Oxygen Plant & 2 X 8 MW WHRB Power Plant through Tunnel Kiln of M/s Nachiketa Power & Steel Pvt. Ltd. at Silpaharai Industrail Area, Dist. Bilaspur, Chhattisgarh (TOR) [J-11011/112/2013-IA-II(I)]

PP and their consultant – M/s Visiontek Consultancy Services pvt. Ltd made a presentation.

M/s Nachiketa Power and Steel Pvt. Ltd (NPSPL) has proposed to setup 2 X 2,25,000 TPA DRI Plant; 3,10,000 TPA Steel Melt Shop; 19,800 TPA Oxygen Plant & 2 X 8 MW WHRB Power Plant at Silpahari Industrial Area (Notified IDA), Tehsil & District- Bilaspur, Chhattisgarh. TOR letter was granted for Proposed Steel plant at Shilpahari Industrial Area (Notified Industrial Area), village Silpahari, Tehsil & District Bilaspur, Chhattisgarh by M/s Nachiketa Power and Steel Private Limited., Vide office memorandum no F. No. J-11011/141/2013-IA-II (I) dated 10th September 2013. However, due to Techno-economic considerations, further action on the project had not been taken. The project proponent have now modified the project configuration and submitted revised proposal for consideration and approval of ToR.

SL	PARTICILARS	DETAILS	
1	Production Capacity	Unit	Capacity
		DRI Plant	2 X 2,25,000 TPA
		Oxygen Plant	19,800 TPA
		Steel Melting Shop Induction Furnace LRF CCM	3,10,000 TPA
		WHRB Power Plant	2 X 8 MW
2	Site Location	At: Silpahari Industrial Area, District-Bilaspur, Chhattishgarh	
3	Project Area	57.62 Acres (23.32 ha)	
4	Land Acquisition Status	Total required land has already been acquired.	
5	Water Requirement	90m ³ /hr, will be supplied by Chhattishgarh State Industrial Development Corporation.	
6	Power Requirement	40 MW, Supply from Chhattishgarh State Electricity Board Grid	
7	Project Cost	Rs 75600 Lakhs	
8	Cost of Pollution Control System	Rs 2794 Lakhs	
9	Fund of CSR	Rs 3780 Lakhs	
10	Man Power	During Construction-400 People During Operation-300 People	

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 Chhattisgarh Pollution Control Board as per the generic TOR.

23.5.5 TOR for Expansion of Integrated Steel Plant (existing: 0.7 MTPA Hot metal and 0.3 of Rolled Products to 1.4 MTPA of Crude Steel) of M/s Kalyani Steels Ltd., at Koppal, Tehsil Koppal, Dist. Koppal, Karnataka (TOR) J-11011/253/2014-IA.II(I) along with withdrawal of earlier TOR application vide letter dated 09.09.2014 –F.No. J-11011/172/2007-IA.II(I)

Kalyani Steels Ltd (KSL) is a part of Kalyani Group which has diverse business interests in engineering steel, forgings, auto components and infrastructure. KSL has an existing manufacturing facility at Koppal District, Karnataka under a Strategic Alliance with Mukand Limited. Considering present market demand and current export scenario for alloy and special steel worldwide, KSL now intends to set up independently a 1.4 MTPA integrated steel plant by expanding its existing facilities of 0.7 MTPA Hot metal and 0.3 of Rolled Products to an integrated steel plant of capacity 1.4 MTPA crude steel to produce engineering steel including carbon, alloy and Stainless Steel. Project is a part of 3 MTPA expansion project already approved by State High Level Clearance Committee (SHLCC).

PP and their consultant – M N Dastur & Co. (Pvt) Ltd made a presentation. The expansion project will be in the existing complex and area adjacent to the existing plant. The expansion has been considered due to (i) availability of raw materials – iron ore by e-auction, (ii) captive railway siding, (iii) road connectivity – NH-63 (close to project site and NH=13 is 6km east of project site), (iv) Tungabhadra Dam Reservoir is about 5.2km from site and connected by pipeline (capable of handling 40MLD of water) to site. Land requirement will be 548.90 acres, of which 442.90 acres are within KSL and Associated companies and 106 acres are additional land, for which MOU has been signed. Of the total land area of 548.90 acres, covered area will be 241 acres (44%), open area will be 123.90 acres and the balance 184 acres (33%) will be for greenbelt.

KSL has obtained EC for the 0.7 MTPA Hot Metal and 0.3 MTPA Rolled Products from MOEF vide letter No. J-11011/172/2007-IA.II(I) dated 27.12.2007. A certified Monitoring Report of RO, Bangalore dated 01.08.2014 has been furnished.

The details of existing and proposed facilities are as given below:

S.N.	Facilities	Existing	Additional facilities	After Expansion
1	Coke Oven Batteries with by-products recovery	-	2x45 ovens	2x45 ovens
2	Sinter Plant	1x33 sqm	1x130 sqm	1x130 sqm 1x33 sqm
3	Pellet Plant	-	1x1.2 MTPA	1x1.2 MTPA
4	DRI Plant	-	1x0.5 MTPA	1x0.5 MTPA
5	Calcination Plant	-	2x300 TPD	2x300 TPD 1x750 cum
		2x250 cum		
6	Blast Furnaces	1x350 cum	1x750 cum	2x250 cum 1x350 cum
7	BOF	-	2x60 tons	2x60 tons
8	IF	-	1x20 tons	1x20 tons
9	AOD	-	1x60 tons	1x60 tons
10	LF	-	3x60 tons	3x60 tons

11	EBF	-	1x60 tons	1x60 tons
12	VD/RH Degasser	-	2x60 tons	2x60 tons
13	Pig Casting Machine	40 tph	180 tph	180 tph
14	Billet cum bloom cum round caster	-	1X3 STRAND	1X3 STRAND
15	Billet cum bloom caster	-	1X3 STRAND	1X3 STRAND
16	Billet cum round caster	-	1X2 strand	1X2 strand
17	Oxygen Plant	-*	600 TPD	600 TPD
18	Bar & Wire rod mill	-	0.50 MTPA	0.50 MTPA
19	Heavy bar mill	-	0.32 MTPA	0.32 MTPA
20	Bar & Rod mill	0.3MTPA	Operational improvements	0.35 MTPA (augmented)

The details of raw materials required for existing and proposed project are as given below:

Sr. No.	Item	Existing (000 TPA)	After Expansion (000 TPA)	Source After Expansion	Transportation Mode (in order of preference)
Raw Materials					
1	Iron Ore (Lump)	327	484	Karnataka Iron Ore E-auction/Other Indigenous sources/Imported	Road/Rail
2	Iron Ore (Fines)	462	2,516	Karnataka Iron Ore E-auction/Other Indigenous sources/Imported	Road/Rail
3	Cocking coal	NA	800	Australia/China/S. Africa/Mozambique	Rail/Road
4	PCI Coal	20	177	Australia and Indonesia	Rail/Road
5	Anthracite coal		36	South Africa/Indonesia	Rail/Road
6	Limestone	81	575	Madhya Pradesh/Rajasthan /Imported	Road/Rail
7	Ferro Alloys	NA	83	Indigenous/Imported	Road/Rail
8	Other Additives	98	262	Indigenous/Imported	Road/Rail
9	Coke	330	197	Indigenous/Imported	Road/Rail

Note: All quantities are on net and dry basis.

10	POWER	23 MW	128,00 MW ¹	KPTCL
		8 MW	8.68 MW ¹	Captive (TRT of Blast Furnace & CDQ of Coke Oven Plant)

11	WATER	1.24 MGD	4.76 MGD	Tungabhadra Dam (4.8 MGD water drawal permission from Tungabhadra Dam available with KSL)
12	Cost			
9.1	Project cost	5531 crores		
9.2	Environmental Management cost	Approx. 300 crores		
9.3	Peripheral Development cost	Approx. 100 crores		
10	Project duration	60 months after receiving the EC from MoEF		

After deliberations, the Committee prescribed the following 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 as per the generic TOR.
- ii. Compliance report for the earlier EC from the RO, MoEF shall be submitted along with the EIA report.
- iii. Proponent can generate one-season baseline data for the post monsoon season starting from September-October 2014.

23.5.6 TOR for Proposed expansion of steel plant (Rolling Mill Capacity: from 300,000 TPA to 500,000 TPA) of M/s Kalyani Steels Ltd., at Koppal, Tehsil Koppal, Dist. Koppal, Karnataka (TOR) F. No. J - 11011/259/2014-IA-II(I) dated 26.12.2010)

PP had applied for TOR for expansion of Rolling Mill Capacity from 300,000 TPA to 500,000 TPA. However, during the meeting, PP requested that instead of the proposed expansion of the Steel Plant Rolling Mill capacity from 3,00,000 TPA to 500,000 TPA, an amendment of their existing EC dated 26.12.2010 for increase in Rolling Mill Capacity from 0.30 to 0.35 MTPA may be granted. All other conditions for the existing project will remain the same. In view of the aforesaid revisions made, PP requested for withdrawal of TOR application dated 06.06.2014 vide letter dated 09.09.2014.

The committee after deliberations agreed for the aforesaid amendment, however, they requested the PP to seek this amendment through a formal letter to the Ministry. The Committee also decided that the matter need not be referred back again to the EAC. The Committee also recommended for withdrawal of earlier TOR application dated 06.06.2014 sought vide PP's letter dated 09.09.2014.

23.5.7 Expansion of Sponge Iron Plant, Induction Furnaces, Installation of Ferro Alloys Unit, Alloy Steel Billet Plant, Alloy Steel Bar/TMT Rolling Mill, Light & Medium Section Mill, Heavy Section Mill of M/s Top Worth Urja & Metals Ltd., at vill. Heti, Mouza Ukkerwahi, PO Udasa, Tehsil Umred, Dist. Nagpur (TOR) [J-11011/283/2013-IA-II(I)]

TOR was granted for the aforesaid project vide MOEF letter No. J-11011/283/2013-IA-II(I) dated 30th April 2014. However, the proponent has thereafter submitted the revised Form-I along with the proposed changes/modifications in the overall configuration of the proposal and requested to issue revised ToR.

The proposal pertains to design, manufacture, shop testing, supply, erection and of Steel Melt Shop (SMS) Equipment, i.e., Electric Arc Furnace (EAF), Ladle Refining Furnace (LRF), called Ladle Furnace (LF), and Continuous Casting Machine (CCM) for 400,000 TPA Alloy Steel Complex, 3 Lakh TPA Alloy Steel Bars/Wire Rods & TMT Bars Mill, Light & Medium Section Mill of 1.5 lakh TPA, Heavy Section Mill of 2.5 lakh TPA Capacity, Expansion of existing capacity of Sponge Iron Division from 60000 TPA to 2.91 Lakh TPA by installing 2 x 350 TPD Sponge Iron Kilns to produce 2.31 lakh TPA Sponge Iron, 50000 TPA Ferro Alloys Unit, Expansion of existing capacities of Steel Billets from 240 TPD to 480 TPD and TMT Bars from 66000 to 1.5 Lakh TPA for Topworth Urja & Metals Ltd. at Nagpur, Maharashtra.

Raw Material Requirement

Sr. No	RAW MATERIAL REQUIREMENT	PRODUCTS			
		Existing Requirement	Proposed Expansion	Total Requirement After expansion	As per Amendment requested
1.	Manganese Ore	-----	7050 MT/M	7050 MT/M	7050 MT/M
2.	Ferro Alloy	100 MT/M	350 MT/M	450 MT/M	700 MT/M
3.	Pig Iron	-----	3500 MT/M	3500 MT/M	3500 MT/M
4.	Billets	5850 MT/M	34235 MT/M	40085 MT/M	76125 MT/M
5.	M. S. Scrap	1140 MT/M	2895 MT/M	4035 MT/M	7545 MT/M
6.	Sponge Iron	7200 MT/M	21000 MT/M	28200 MT/M	41850 MT/M
7.	Coal (DRI+ Power plant+ Rolling mill)	69300 MT/M	28875 MT/M	98175 MT/M	69300 MT/M
8.	Iron Ore/Pellets	7500 MT/M	28875 MT/M	36375 MT/M	36375 MT/M
9.	Dolomite	825 MT/M	3170 MT/M	3995 MT/M	3638 MT/M

Proposed units for the project are given below along with existing capacity and proposed expansion:

S.N.	Name of Unit/Facility	Existing Capacity	Proposed Expansion	Total after expansion as per MOEF letter dated	Changes in Revised TOR appl.
1.	Sponge Iron	60000TPA	231000TPA	291000TPA	291000TPA
2.	Steel Billets	240 TPD	240 TPD	480 TPD	480 TPD
3.	TMT Bar	66,000TPA	84,000 TPA	1,50,000 TPA	1,50,000 TPA
4.	Captive power plant	100MW	--	100MW	100MW
5.	Ferro Alloys Plant,	--	50000 TPA	50000 TPA	50000 TPA
6.	Alloy Steel melt shop	--	200000 TPA	200000 TPA	400000 TPA
7.	Alloy Steel Bar/Wire Rod/TMT Bar Mill (Stainless Steel, Alloy Steel, Carbon Steel & Wire Rods)	--	200000 TPA	200000 TPA	300000 TPA
8.	Section Mill For Rolling of Steel Sections	--	100000 TPA	100000 TPA	150000 TPA

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 as per the generic TOR.
- ii. Compliance report for the earlier EC from the RO, MoEF shall be submitted along with the EIA report.

23.5.8 Integrated Steel Plant (Sinter plant: 18,50,000 TPA, blast furnace: 10,05,000 TPA, DRI plant: 6,50,000, SMS:10,00,000 TPA, Rolling Mill:7,25,000 TPA, CPP:75 MW, Supporting utilities like RMH yard, Oxygen Plant, DM Plant, Lab, HVAC, Air compressor, DG sets, etc ha) of M/s Jindal Saw Ltd., near village Pur, tehsil and district Bhilwara, Rajasthan (TOR) [J-11011/293/2014-IA-II(I)]

M/s Jindal Saw Ltd. proposes to install a Greenfield integrated Steel Plant at village Pur, district Bhilwara (Rajasthan) through a combination of BF-BOF route and DRI route, with captive power generation using the waste heat and gases. The finished products planned in the project are Pig Iron (0.1 MTPA), Sponge Iron (DRI- 0.65 MTPA), Alloy Steel rounds of various grades (0.35 MTPA) and Re-Bar of various grades (0.725 MTPA). The integrated steel plant is a backward integration process where iron ore being mined out from JSL's adjacent Iron Ore Mines shall be used. Environmental clearance for 7 MTPA iron ore mining and 2.5 MTPA iron ore concentrate using Beneficiation Plant has been obtained from Ministry of Environment and Forests, Govt of India. Out of 2.5 MTPA iron ore concentrate available, 1.2 MTPA concentrate is being used to produce pellets using Pellet Plant and 1.3 MTPA concentrate shall be used in the proposed integrated Steel Plant.

The proposed project is for setting up of integrated steel plant and sponge iron manufacturing utilising available iron ore concentrate and pellet to produce pig iron, sponge iron and steel products (alloy steel round, Re-bars). The project is proposed at a location adjoining to existing mining lease area of JSL's Dhedwas Iron Ore, Copper and Associated Minerals Mine.

The details of units and production capacity of various production facilities proposed under this project are as below:

S. No	Name of Unit	Size & Production Capacity, Product
1	Sinter Plant	170 sq.m (1850000 TPA Sinter)
2	Blast Furnace	925 cubic m. (1005000 TPA Hot Metal)
3	DRI Plant	4 x 500 TPD (650000 TPA Sponge Iron)
4	Basic Oxygen Furnace (BOF)	100 tons (1000000 TPA Liquid Steel)
5	Steel Refining (LRF+VDA/OD)	100 tons (Matching capacity with BOF)
6	Continuous Casting Machine (CCM)	9/16, 5 strand combi-caster (1000000 TPA Steel Round and Billets)
7	Rolling Mill	725000 TPA (Rebar/ TMT)
8	Captive Power Plant	75 MW (through recovery of waste heat & gases)

9	Supporting Utilities	RMH Yard, DM Plant, Oxygen Plant, Laboratory, etc
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The various finished products envisaged in the proposed project are as below:-

Product	Capacity	Use of finished product
Pig Iron (MT/Annum)	50000 -100000	Captive use and sale to foundries
Sponge Iron (DRI) (MT/Annum)	600000-700000	Captive use and sale to small steel manufacturers
Alloy Steel Rounds(MT/Annum)	300000-350000	Stock transfer to Jindal saw Nasik unit for seamless pipe manufacturing
Re-bars (TMT) (MT/Annum)	725000	Sale for housing and infrastructure projects
Power (MW)	75	Captive utilization

The proposed project site is located adjoining to the Dhedwas Iron ore and associated minerals mine of JSL at village Pur, District Bhilwara, Rajasthan. No forest land is involved in the proposed project site. The transportation infrastructure is already available and maintained in the existing mining lease area. NH 79 is at a distance of 2 km from project site in East direction. Nearest railway station (Bhilwara) is at a distance of 9.1 km from project site in East direction. The total land requirement for the proposed integrated steel plant project is 76 acres. Jindal Saw Limited has already purchased 88.76 acres of industrial land. Out of 88.76 acres, 40.76 acres land has been utilised to establish the 1.2 MTPA Pellet Plant. 48 acres land is therefore available to establish the Integrated Steel Plant and JSL has applied to Government of Rajasthan for allotment of adjacent 28 acres waste land belonging to the government. The land allotment is under process and same will be completed before submission of final EIA report.

The water requirement of the proposed plant will be met from treated sewage in the Company's STP at Kewara, near Bhilwara Town. For drinking water, stored rainwater will be treated and used. The water consumption for the proposed project will be 14 MLD. This requirement will be met through the expansion of present company owned Bhilwara city sewage treatment plant (STP) from 10 MLD to 20 MLD. For drinking requirements of employees 40 KL water will be required per day.

Power for the proposed project will be available from RWNL, Rajasthan, by existing transmission line from GSS grid to the site. The total power requirement for the proposed project is 90 MW which will be fulfilled by adding two 50 MVA transformers in existing 220 KV substation. Also a captive power plant of 75 MW is proposed in this project utilising available surplus blast furnace and basic oxygen furnace (BOF) off gases and recovery of waste heat from flue gases of various processes.

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 Rajasthan Pollution Control Board as per the generic TOR.
- ii. Details regarding proposal of using the treated waste water from Bhilwara town through STP and used in the plant shall be submitted

- iii. Plan for greenbelt development for 33% of project area with a peripheral 3-tier greenbelt of 15-20m width.
- iv. Concrete plan for disposal of char to the nearby power plant along with MoU shall be submitted
- v. One season baseline data for October-December 2014 can be collected for preparation of EIA-EMP Report.

23.5.9 Iron Ore Pelletisation plant (4 MTPA) of M/s Brahmani River Pellets Ltd. at Khurunti, Kalinga Nagar, Jajpur, Odisha (TOR) [J-11011/295/2014-IA-II(I)]

The proposal is for regularising the existing Stand-Alone Pellet plant of M/s Brahmani River Pellets Ltd., vide NGT Judgement dated 27.05.2014 for obtaining EC. In response to NGT Judgement (details of which are given under Agenda Item No.23.4.4), OSPCB had, vide letter dated 06.06.2014, asked M/s BRPL to apply for EC for their existing Stand-Alone Pellet Plant and in compliance, a TOR application was submitted on 25.06.2014 for a 5MTPA Project for obtaining EC .

PP and their consultant- M/s Mecon Ltd. made a presentation. It was stated that BRPL is a 100% subsidiary company of Aryan Mining & Trading Corporation Limited. BRPL has set-up an iron ore pelletisation complex in Odisha comprising of:

- i. 4.0 MTPA Iron ore concentrate production at Beneficiation plant, Barbil.
- ii. 218Km long iron ore slurry pipeline from Beneficiation plant to Pellet plant.
- iii. 4.0 MTPA Iron ore Pellet plant at Kalinga Nagar notified Industrial Estate area, Jajpur.

It was informed that for setting up the existing pellet plant at Jajpur, Odisha, three different sites were considered. First was at BRPL's own iron ore beneficiation plant at Barbil which is located at the foothill of mines, second near to Paradip Port and the third at Kalinga Nagar notified Industrial Estate area. Kalinga Nagar notified Industrial Estate area is a steel manufacturing hub of eastern India. To encourage the supply of raw material requirement of nearby steel plants, BRPL's pellet plant is installed at Jajpur instead of at Barbil or Paradip.

It was informed that the existing Plant produces 4 MTPA pellets and the additional 1 MTPA pellets was proposed to be produced from the same plant by establishing a grinding unit inside the same plant premises of 90 acres. This would minimize the losses of iron bearing materials in the form of fines, utilization of very low grade iron ore in Blast Furnaces/Corex Units/DR Units after its beneficiation and agglomeration has been an established practice. It was informed that sintering is preferred if the ore size is (-) 10 mm to + 100 mesh and if it is (-)100 mesh, pelletising is generally adopted. Pelletising in fact requires ultra-fines of over 75% of (-)325 mesh. Emissions in sintering process are much higher than compared to pelletising process.

However, in view of MOEF's letter dated 08.09.2014 addressed to all SPCBs that all such units shall obtain EC within a year, PP has decided to obtain TOR for the existing capacity of 4 MTPA instead the 5 MTPA in the TOR application. The existing unit of 4 MTPA capacity is operating with a CTO from Odisha PCB and Odisah PCB vide letter dated 25.02.2011 which is renewed on 10.03.2014 and valid upto 31.03.2015. PP has informed that the consent conditions are being complied with.

Details of compliance of consent conditions of OSPCB were presented PP during the presentation stated that although an application for TOR has been made for 5 MTPA capacity, TOR may be granted for the existing plant of 4 MTPA capacity in view of the fact that EC requires to be obtained within a year. PP also sought exemption from conduct of P.H.

After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study for the existing Pellet Plant of 4 MTPA capacity 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 Odisha Pollution Control Board as per the generic TOR.
- ii. EC requires to be obtained within one year of grant of TOR.
- iii. As desired by PP, TOR is for 4 MTPA capacity instead of the 5 MTPA applied for.

PP may however submit a letter to MOEF requesting for revising the capacity to 4 MTPA instead of 5 MTPA capacity for record of the Ministry before issuance of TOR.

23.6 Any Other Items

23.6.1 Increasing production capacity (from 70 TPD to 150 TPD by using 100 TPD agro pulp and 50 TPD recycled waste paper) of M/s Rama Shyma Papers Ltd., Barielly, U.P. – Letter dated 21.01.2014 for Extn. of validity of TOR No.J-11011/51/2012- dated 26.04.2012) [J-11011/51/2013-IA-II(I)]

The proponent did not attend the meeting.

ToR for the above proposal was granted vide MOEF letter dated on 26th April, 2012. Proponent has vide letter dated 21.02.2014 sought extension of validity of ToR for a period of 36 months since the Public Hearing is yet to be conducted by the UP Pollution Control Board.

The committee recommended extension of validity of ToR for a period of 1 year with effect from 26th April 2014. The Committee also recommended that the MOEF may like to write to UPPCB for expediting the conduct of P.H. for the aforesaid project.

23.6.2 Modification of existing Mini Blast Furnace (MBF, 1,50,000 MTPA) to produce Pig Iron (2,00,000 MTPA) and installation of Ductile Iron Pipe (1,50,000 TPA) and Sinter plant (2,00,000 TPA) of M/s Aparant Iron & Steel Pvt. Ltd. at Dist. South Goa, Goa (Letter dated 04.02.2014 seeking Extension of validity of EC dated 02.04.2009 read with Corrigendum dated 23.12.2009 and amendment of EC condition) [J-11011/771/2013-IA-II(I)]

M/s Aparant Iron and Steel Pvt Ltd, a company promoted by the Dempo Group commenced the production of Pig Iron in the year 2001. The pig iron plant - Aparant iron and Steel Private Limited is located at village Costi, Taluka Sanguem, district South Goa. The project was setup in the backward area of Goa on the land identified by the Government of Goa.

An environment clearance for the expansion for "Modification of existing mini blast furnace (MBF, 1,50,000 MTPA) to produce pig iron (2,00,000 TP A) and installation of Ductile iron pipe (1,50,000 TPA)

and Sinter plant (2,50,000 TPA) at Village Costi, Taluka Sanguem, District South Goa, Goa was accorded by the Ministry vide letter F. No.J-11011/771/2007-IA H (I) dated 2-4-2009, with a condition to take prior approval from NBWL in view of its vicinity from Bhagwan Mahavir Wild Life Sanctuary and National Park.

PP has informed in letter dated 04.02.2014 that the proposal was put up in the 18th meeting of the Standing Committee of NBWL held on 12.4.2010 and again for review in the 20th Meeting of the Standing Committee of NBWL held on 13th October 2010. However, the approval of NBWL is still pending. PP has stated that the MOEF&CC, vide Office Memorandum No 25/35/2013/ESZ-RE dated 24-10-2013, has stipulated the Eco Sensitive Zone around Bhagwan Mahavir Wild Life Sanctuary and National park, North Goa as 1 km. However, the final Notification is yet to be issued by the Ministry.

Meanwhile, since the validity of the EC was expiring on 1/04/2014, the PP vide letter dated 4/02/2014 requested to extend the validity of EC for the period of 5 years.

The Committee recommended extension of validity of EC for the period of 5 years. The Committee however, advised that since the final Notification on the Eco Sensitive Zone around Bhagwan Mahavir Wild Life Sanctuary and National park is still not issued, the PP is not allowed to commence any activity at the site. In regard to PP's request to delete/waive the condition of obtaining prior approval of NBWL, the Committee decided that the PP may apply for waiver of the condition once the ESZ Notification is issued by the Ministry or obtains WL Clearance from NBWL.

23.6.3 Expansion of Integrated Steel Plant of M/s Prakash Industries Ltd. at Dist Jangir-Champa, Chhattisgarh (Letter dated 03.03.2014 with request for amendment in EC J-11011/522/200-IA-II(I) dated 03.11.2010 for retrofitting of Waste Heat Recovery Boilers attached with Rotary kilns for upgradation of technology in the Boilers.

The proponent did not attend the meeting.

MOEF&CC vide letter No.J-110H/522/2008-IA-(I) dated 3rd November, 2010 had accorded environmental clearance for installation of 10 No's, of Rotary Kilns having total capacity of 20 lakh Tons Per Annum along with Co-Generation of 100 MW Power through WHRB's attached with the Kilns. It has been informed by the PP that at present, Co-generation of Power from each WHRB is 10 MW.

PP has vide letters dated 03.03.2014 and 09.04.2014 has stated that they have been approached by M/s. Veasons Energy Systems Pvt. Limited, Trichy (Tamil Nadu) and submitted a proposal for Retrofitting of WHRB's attached with the Kilns to enhance generation of steam from the same quantity of flue gases being emanated from the DRI Kilns, resulting additional Co-generation of Power from WHRB. By retrofitting of these boilers, they will be able to generate 12 MW Power from each Kiln / WHRB Boiler instead of 10 MW. i.e. 120 MW from 10 Ns of kilns in place of 100MW as per table in EC dated 3rd November, 2010 given below:

Units	Existing Capacity	Proposed Capacity	Total Capacity
Co-generation power plant (WHRB)	37 MW	63 MW	100 MW

It has been further stated in the letter that the environmental clearance letter No.J-11011/522/2008-IA II(I) dated 3rd November, 2010 from MOEF & Consent to Establish as well as Consent to Operate issued by Chhattisgarh Environment Conservation Board are for Co- generation of Power from WHRB attached

with the Kilns is to the extent of 10 MW from each Kiln / WHRB Boiler. However, with the proposed retrofitting, it will be enhanced by 2 MW in each Kiln making it to 12 MW per Kiln, permission is required to go-ahead for the retrofitting of these Boilers. In view of this, PP has sought amendment in the EC dated 03.11.2010.

PP has also stated in the letter that there will be no addition of new Plant & Machinery to enhance Co-generation of Power. It is only the up gradation of technology in the Boilers which will change the temperature and pressure to generate more steam, resulting enhancement in generation of power.

After deliberations, the Committee desired that a calculation shall be submitted how the additional 20MW would be generated from existing project generating 37MW and from 63MW, based on which the amendment sought will be considered.

23.6.4 Proposed Integrated Cement Plant (Clinker:2.0MTPA, Cement – 2.5MTPA) along with 40MW coal based Captive Power Plant and WHRB 10 MW of M/s UltraTech Cement Limited at villages Tonki, Temberni, Sonudal & Gopalpura Tehsil Manawar, District Dhar in Madhya Pradesh (EC) (to Consider Site Inspection Report of RO, Bhopal) [J-11011/86/2012-IA-II(I) dated 24.07.2014]

The proposal was again considered by the Expert Appraisal Committee (EAC) in its 14th meeting held during 19-20th December 2013 wherein the Committee has recommended for the Environmental Clearance subject to environmental safeguards. Thereafter, Ministry received a complaint from the gram panchayat on 26.12.2013 against the aforesaid project. The gist of the issues mentioned in the complaint is as below:-

- i. There are 27 villages affected due to the proposal cited above. However, in the EIA-EMP report only 4 villages mentioned;
- ii. There are 20 villages who will be directly affected due to illegal land acquisition;
- iii. In the land acquisition document, PP has obtained signature of illiterate scheduled tribes;
- iv. Most of the land is related to the Narmada Valley Development Authority. The canal in the said land is being used for agricultural purposes;
- v. PP informed that the Public Hearing (PH) was held on 12.11.2012. However, most of the people in that region do not have the information regarding PH;
- vi. Second PH held on 30.5.2013 wherein very less people have attended i.e. 3% of the people of 27 villages were participated;
- vii. ST population and the farmers are dependent upon the aforesaid land;
- viii. Land acquisition has been done on the old rule and not by the Land Acquisition Act, 2013;
- ix. PP reported in the EIA-EMP that they are having water withdrawal permission from CGWA. However, PP is yet to obtain the permission from CGWA; and
- x. Chief Minister, Madhya Pradesh on 26.10.2010 had an agreement with the PP stating that most of the project work will be done within three years otherwise the agreement will be cancelled.

The Ministry had sought for the comments of PP on the complaint cited above. The Committee noted that the issues mentioned in the complaint do not have any merits as the proposed cement plant is being established in 4 villages and not in the 27 villages as mentioned in the complaint. After detailed deliberations, the Committee recommended the project for environmental clearance in the 14th EAC meeting.

Subsequently, an email communication dated 30.4.2014 enclosing the complaint dated 6.12.2013 was received. It was stated that project work have been commenced at the site without obtaining prior environmental clearance. It is mentioned that the entire process is being pushed ahead without Gram Sabha's consent, social impact assessment, options assessment, and violating the safeguard of minimal acquisition of irrigated multi-crop land etc. Almost all the villages proposed for the Plant fall within the command area of the Maan Irrigation Project on the Maan tributary of Narmada. This diversion of reservoir water and command area land illegally for industrial use is an utter violation and must not be permitted by the central authorities, both MoEF and the Planning Commission.

In view of the above, Regional Office of MoEF at Bhopal was requested to verify the veracity aforesaid complaint and submit a factual report to the Ministry. RO, Bhopal submitted its report dated 24.07.2014 to the Ministry, which stated that no work has been started at the site for mining as well as cement plant.

The Committee on the basis of the report of RO, MOEF, Bhopal recommended the project for environmental clearance subject to the specific conditions as stipulated in its 14th meeting held on 19-20th December 2013.

23.6.5 Proposed Expansion of Steel Plant in the existing Steel Plant of M/s Bhagwati Sponge (P) Ltd., at vill. Ikra, Jamuria, Jamuria Industrial Estate, Dist. Burdwan. W.B. request for Amendment in TOR dated 12.02.2013 [J-11011/223/2012-IA.II(I)]

M/s Bhagwati Sponge Private Limited is presently operating 2x100 TPD DRI Kilns for production of 60,000 TPA sponge iron at Jamuria Industrial Area, village Ikrah, Tehsil Jamuria, District Burdwan in West Bengal. A Captive Power Plant of 12 MW capacity (4 MW WHRB + 8 MW AFBC) is under construction in the existing project (for which NOC has already been obtained by SPCB).

The company now proposes to expand its existing manufacturing activities through setting up of Induction furnaces, DRI Kilns, Rolling Mill, Ferro Alloys Plant along with 18 MW Captive Power Plant in the existing plant premises. The existing as well as proposed units along with their capacities are presented below:

EXISTING PROJECT

S.N.	UNIT	EXISTING CAPACITY	PRODUCT
1.	Sponge Iron Plant (2x100 TPD)	60,000 TPA	Sponge Iron
2.	Captive Power Plant (Under Construction - for which NOC has already been obtained by SPCB)	12 MW (4 MW WHRB + 8 MW AFBC)	Power

PROPOSED PROJECT

SI. No.	UNIT	PROPOSED CAPACITY	PRODUCT
1.	Sponge Iron Kilns (1x200 + 1x350) TPD	1,65,000 TPA	Sponge Iron
2.	4x15 Tonne Induction Furnaces with matching LRF & CCM	1,80,000 TPA	Billets

3.	Rolling Mills	2,00,000 TPA	Structural Steel, TMT Bars, Angles, Channels, Wire Rod
4.	Ferro Alloys Plant (2x9 MVA Submerged Arc Furnaces)	20,460 TPA or 14,850 TPA or 6,600 TPA or 24,750 TPA	Ferro Manganese or Silico Manganese or Ferro Silicon or Pig Iron
5.	Captive Power Plant	18 MW(10 MW WHRB +8 MW AFBC)	Power

It has been observed by the Committee that the ToR for the above mentioned proposal was issued vide letter dated 12.02.2013. The company now decided to revise the project configuration with the installation of proposed Sponge Iron Plant, Induction Furnace, Ferro Alloys Plant, Rolling Mills along with Captive Power Plant in the existing plant area.

The Committee observed that the PP has not submitted the details regarding the earlier proposal for which the ToR was already granted vis-à-vis the proposed revised configuration of the project.

The Committee advised that a fresh Form-I shall be submitted mentioning the existing units, configuration of units for which ToRs already granted and proposed revised configuration of units for which the PP is seeking revised ToR, in a tabular form which the proponent wants to implement. Pre-feasibility report shall also be submitted along with the revised form-I. The proponent was advised to withdraw the earlier form-I submitted to the Ministry.

23.6.6 Existing DRI Kiln, Rolling Mill and Submerged Arc Furnace of M/s Raipur Power and Steel Ltd. at Borai Industrial Growth centre, Vill Rasmada, Tehsila nd Dist. Durg, Chhattisgarh (Amendment of ECs dated 17.04.2008 and 23.12.2011 for change of fuel in place of coal/Furnace Oil with Producer Gas) (letter dated 22.05.2014) (J-11011/1304/2007-IA.II(I))

Ministry has accorded Environmental Clearance for establishment of Steel plant vide letter no. J-11011/1304/2007 –IA-(I) dated 26.03.2008 and 17.04.2008. The Ministry further issued EC for expansion project vide letter dated 23.12.2011.

It has been mentioned by the PP that they are operating 3 nos. of DRI kilns and are being operated with coal as raw material. Now the PP propose to operate 3 nos. of DRI kilns with high pressure Producer gas (produced from Coal Gasifier) instead of coal.

The PP has sought the following changes:

- a) To convert 3 nos. of existing 100 TPD coal based DRI kilns (as per EC accorded in 2008) to 3 nos. of 100 TPD Producer gas based DRI kilns by establishing 3 nos. of gasifiers.
- b) Conversion of 90,000 TPA Furnace oil based Rolling Mill to Producer gas based Rolling Mill

Presently PP is operating 90,000 TPA Rolling Mill for production of Rolled products of 90,000 TPA by using Furnace oil. PP now proposes to use Bituminous coal in Producer Gas Plant. One ton of bituminous coal generates 3000 m³ of coal gas. Gross calorific value of coal gas is 1450 K.cal/m³. Amount of coal

requirement in gasifier will be 18 TPD which will be used to meet the heat requirements of the Reheating furnace.

To produce Producer gas, PP proposed to install extended shaft gasifier which is hot gas mode gasifier and the most suitable for re-rolling mill application. The gasifier which burns the coal inside the reactor and generates the producer gas which is directly used for reheating furnace in place of furnace oil. The details of hot gasifier are as under.

- To use producer gas (which is environmentally better fuel) in RHF instead of Furnace Oil.
- To produce HB wire product (re rolled product) of same capacity i.e. 90,000 TPA. At any given point of time either Rolled products or HB wire will be produced.
- To install gasifier to produce producer gas.

As per EC accorded, PP is operating a submerged Electric Arc Furnace to produce 28,500 TPA of Ferro Alloys with electricity. PP has requested for installation of a gasifier to produce producer gas and this will be utilised as fuel for Submerged Electric Arc Furnace. This will help in energy conservation. The total Ferro Alloys production will be 28,500 TPA only.

Following table shows the existing facility and proposed addition

S.No.	Manufacturing Unit	Product	Existing Capacity	Proposed Additions	Total Capacity
			EC??		
			TPA	TPA	TPA
1.	Iron Ore Beneficiation & Pelletization plant	Pellets		3,00,000	3,00,000
2.	DRI Kiln	Sponge Iron	90,000 (3x100 TPD)	90,000 (3x100 TPD)	1,80,000
3.	Induction furnace with concast	Ingots/ Billet /Slab	2x15 MT (90,000 TPA)	--	90,000
4.	Rolling Mill	Rolled Products	1x300 TPD	--	90,000
5.	Submerged Arc Furnaces (Fe-Si, Si-Mn & Fe Mn)	Ferro Alloys (Fe-Si, Si-Mn Fe-Mn)		2x12 MVA & (2x9 MVA)	29,568 TPA 66,486 TPA 86,333TPA
6.	Power Plant through				
	Waste heat recovery	Electricity	6	6 MW	12 MW
	AFBC		6	30 MW	36 MW
	TOTAL POWER		12	36 MW	48 MW

After detailed deliberations, the Committee recommended the project for amendment in environmental Clearance for

- To use producer gas (which is environmentally better fuel) in RHF instead of Furnace Oil.
- To produce HB wire product (re rolled product) of same capacity i.e. 90,000 TPA. At any given point of time either Rolled products or HB wire will be produced.
- To install gasifier to produce producer gas.

The terms and conditions as prescribed in the earlier Environmental Clearance letter shall remain unchanged. The PP shall comply with all the terms and conditions of the EC letter issued by the Ministry.

However, for the additional units proposed, the Committee decided that a separate TOR application shall be submitted by the proponent.

FRIDAY, 19th SEPTEMBER 2014

23.8 Consideration of EC cases

23.8.1 Establishment of Grinding Unit (4 MTPA) under 'Ash Utilisation Plan' within the premises of 3x660MW Thermal Power Project of M/s Prayagraj Power Generation co. Ltd., at vill. Jodh Khansemra, Tehsil Bara, Dist. Allahabad, U.P. (EC) [J- 11011/135/2012-IA.II(I)]

M/s Prayagraj Power Generation Company Limited (PPGCL), a subsidiary of Jaiprakash Power Venture Limited (JPVL), proposes to setup a cement grinding unit with a production capacity of 4.0 MTPA within the premises of thermal power plant of 3x660 MW, under implementation, at Jodh Khansemra village, Bara Tehsil, Allahabad district, Uttar Pradesh state, as part of "Ash Utilisation Plan". Prayagraj Power Generation Company proposes to setup a cement grinding unit to manufacture Portland Pozzolona Cement (PPC) with the state of the art modern High Pressure Roller Press with ball mill technology grinding system. The clinker will be brought from Jaypee's existing plant at Rewa/Bela/ Sidhi/Dalla and productively utilise flyash from Thermal Power Station within the premises. 20 ha of land will be required for the proposed grinding unit which will be located in the land allotted for Thermal Power Plant. The cost of the project is about Rs. 450 crores, which includes Rs. 54 Crores for environmental protection measures.

In 7th EAC meeting held on 4th - 5th April 2013, the subject project was reconsidered and EAC recommended the project for Environmental Clearance stipulating environmental/ pollution control conditions. However, MoEF directed the PP to conduct public hearing, as the project is located within 10 km radius of interstate boundary of Uttar Pradesh and Madhya Pradesh, vide letter no:J-11011/135/2012-IA.II(I) dated 17th February 2014.

Accordingly, as per the directions of MoEF, public hearing was conducted on 5th July 2014 and the EIA report was upgraded addressing the public hearing details.

The details of the proposed cement grinding unit are given in the table below:

Sr. No.	Title	Details	
1	Total plant capacity	4.0 MTPA of CGU	
2	Total Land	20-ha	
3	Process adopted	High pressure roller press with ball mills	
4	Raw materials :Cement Grinding Unit	CGU	
	Material	Qty (MTPA)	Source
	Clinker	2.48	Jaypee Group existing plants at Rewa/Bela/Sidhi/Dalla
	Gypsum	0.16	Mineral Gypsum from mines in Raiasthan

	Fly ash	1.36	Thermal power plant within the premises
5	Water requirement	700 m ³ /day for Cement Grinding Unit	
6	Water transmission	Pipeline transportation (under implementation for power plant)	
7	Total power requirement	30 MW which will be met from own thermal power plant	
8	Manpower	Construction : 1000 Operation 300	

The basic raw materials for cement grinding unit are Clinker, Gypsum and Fly ash. Based on the type of cement to be ground, the raw materials along with Clinker will be transported to the Feed hoppers through series of belt conveyors. As per the quality requirement all these materials will be extracted through high accuracy electronic weigh feeders to the cement Mill for grinding clinker & additives. All the ground material will be collected in high efficiency cyclones and transported through fluxo slides & bucket elevator and stored at designated product silos.

The power requirement of the proposed cement grinding unit will be about 30 MW. The power will be sourced from the power plant (under implementation) within the project site.

The total land requirement for the proposed cement grinding unit will be about 20-ha which is a part of 773.10-ha which is already in possession of PPGCL allotted for 3x660 MW power plant and the land is already in industrial use. No additional land is proposed to be acquired. Water pipeline being laid for power plant will be used to with draw water from raw water line / reservoir within the plant area.

The proposed cement grinding unit will require 1000 skilled and semi-skilled personnel during construction phase. Many of the people from neighbouring villages get opportunity for employment during construction phase. The total manpower of requirement for the plant will be 300 during the operational phase.

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

- i. The standards prescribed for Cement Plants vide the recent MOEF&CC Notification – GSR 612(E) dated 25.08.2014 shall be implemented.
- ii. The expansion project shall install adequate air pollution control system viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office, SPCB and CPCB as part of six-monthly compliance report.
- iii. The proponent shall provide an interlocking system to ensure that whenever the ESP is not in operation, the raw material feeder will automatically stop and restart only with the restart of ESP.
- iv. The proponent shall monitor the groundwater regime of the study area, by installing peizometers in and around the impact zone of the project site and collect data of groundwater (level as well characteristics) and the same shall be furnished as part of the Compliance Report to MOEF, RO, Lucknow. In case of declining levels, prior approval shall be obtained from the State Ground Water Board.

- v. Out of 2 million ton of ash, 1.36 is being utilized and the remaining ash shall be sent to the cement plant.
- vi. Silos shall be provided for storage.
- vii. A green belt of 50 to 100 meters width shall be provided all along the boundary of the plant. 3 to 4 layer of local trees shall be planted in the green belt.
- viii. 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 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- ix. Closed conveyor belt shall be installed for transport of limestone to the plant.
- x. The raw material handling and processing area and Transfer points shall be provided with Dust Suppression System. Wet system like water sprays / sprinklers shall be provided for dust suppression at Belt conveyor discharge & screen discharge locations.
- xi. Green belt (3-tier) of approximately 15-20m width shall be developed all along the periphery of the plant and in vacant areas, transfer points covering a total area of 33% of total plant area. Tree plantation shall be in down wind based on the prevalent wind direction at the site. The details of these including photographs taken in time series consistent for the same season every year shall be submitted as part of six-monthly compliance report.
- xii. Conditions provided in CREP Guidelines for Cement Sector shall be followed.
- xiii. The Plant shall operate on a zero-discharge basis. Rain water harvesting shall be adopted and the extent of requirement of water for the project from mines would be reduced. The detailed rain water harvesting plan including regular desilting operations carried out during pre-monsoon season shall be submitted as part of the 6 monthly compliance reports.
- xiv. Disaster management plan shall be prepared and implemented.
- xv. Work zone floor shall be made concreted/asphalted. Internal roads shall be black topped. Regular sweeping / cleaning of roads shall be carried out to avoid accumulation of fine dust. All internal roads shall be paved to prevent dust emission within the plant premises. Strengthening of 1km approach road shall be taken up and avenue plantation developed.
- xvi. Vehicles and construction machinery shall be properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.
- xvii. All the issues raised during Public Hearing shall be addressed through constitution of Village Development Committee comprising of representatives of the company, village panchayats and district administration.
- xviii. 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 regularly conducted amongst the employees of the Company and records maintained thereof.

- xix. A CSR Plan shall be prepared and implemented in consultation with the local villages and administration. Issues raised/covered during public hearing and incorporated in the EMP and CSR Plan. During construction phase of the project, an expenditure of about minimum 5% of the capital expenditure shall be earmarked for CSR activity spread over 5 years/period of construction of project. During operation phase of the project, the CSR activity will be funded based on 2% of the profit during operation phase of the project. 70% of the employment shall be made from the local population. The annual capital and recurring expenditure on CSR - village-wise and activity-wise shall be uploaded on the company website and also included in the Annual Report of the company.

23.8.2 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)]

M/s Tata Steel Limited (TSL) proposes capacity expansion of Cold Rolling Mill Complex at Bara from 0.3 Million Tonnes Per Annum to 0.8 Million Tonnes Per Annum (MTPA) at Jamshedpur, East Singhbhum, Jharkhand State. Project coordinates are Latitude: 22° 48' 44" N and Longitude: 86° 14' 20" E. Nearest town is Jamshedpur located at 3km W and Tatanagar is 5.9km SW. Dalma Wildlife Sanctuary is located at a distance of 2.7 km; however, the eco-sensitive zone of the Dalma WL Sanctuary is 2.7km. Nearest water bodies are: River han Chatani RF (5.3km), Bhelaipahar RF (5.9km), Barabanki RF (7.1km), Bonth RF (7.8km), Baridih RF (8km). Subarnarekha (0.5 km NE), Dimna Reservoir (4.9Km N) and River Kharkal (6.8km W). A number of Reserved Forests/Protected Forests exist within the 10km study area: Environmental Clearance (EC) was accorded for the existing CRM capacity of 0.3 MTPA vide MOEF letter No. J-11011/199/2007-IA.II(I) dated 07.08.2007. The cost for the proposed expansion is about Rs. 126 crores, which includes Rs 1.7crores for environmental protection measures. The project was granted a TOR by MOEF dated 10.09.2013. Subsequently the validity of the ToR was extended for a period of 1 year. PP has engaged Vimta Labs as environmental consultant for preparation of EIA-EMP Report. Base line data collection was done during March-May 2013. Public Hearing was held on 08.05.2014. Certified monitoring report on compliance of earlier EC was received from MOEF RO dated 24.01.2014.

The project site is generally plain with an average site elevation of about 133m MSL. No additional land required for the proposed capacity expansion. The land required 8.312 ha is available within the existing CRM Bara complex as per details given below:

S.N.	Description	Land area (ha)
1.	Plant facilities (under existing project)	2.83
2.	Plant facilities under proposed expansion	0.558
3.	Road	1.36
4.	Water reservoir	0.011
5.	Green Belt	2.76
6.	Future expansion (after achieving 0.8 MTPA)	0.796
	TOTAL	8.312

TSL proposes to increase the capacity of present pickling facility from 0.3 MTPA to 0.8 MTPA by:

- i. Installation of 2nd set of entry equipment consisting of Uncoiler, Leveller, Side Trimmer & Pinch Roll with Auto coil tracking.
- ii. Installation of one additional Pickling Tank with Acid Circulation facilities with adequate instrumentation
- iii. 2 nos. of 100 cu. M. FRP lined Acid Storage Tanks in Tank Farm Area of ARP
- iv. Separate PDB for Pickling line and ARP.

In this operation hot rolled (HR) strip is passed through a set of rolls to get 1% to 3% elongation. Fuel requirement of propane is about 4232TPA and will be sourced from IOCL/IPPL/any other approved supplier. The total water requirement of entire project will be 1723 m³/day, of which the additional water requirement will be 11m³/d. The water will be supplied from JUSCO (A Hundred percent subsidiary company of Tata Steel). After expansion TSL Bara plant will require 500- 700 skilled and semi-skilled personnel during operation, maintenance and administration. People from neighbouring villages, if found suitable, shall be employed during construction and operational phases. Raw material for the proposed expansion will be Hot Rolled Coils. This will be pickled and subsequently skin passed. The skin passing operation is to improve the quality with respect to strip flatness, elongation and surface roughness of the hot rolled pickled coils. The products are Hot Rolled Skin Passed Pickled and Oiled (HRSPPO) coils and Hot Rolled Pickled & Oiled (HRPO) coils.

SALIENT FEATURES OF PROPOSED EXPANSION PLANT

Sr. No.	Features	Details
1	Mill Type	4Hi Non-Reversing Skin Pass Mill
2	Material to be Skin passed	HR Pickled Low Carbon Steel
3	Incoming strip temperature	< 50°C uniform through coil length.
4	Tensile strength	90 kg/ sg.mm max upto 3.0 mm, 75 kg/sq.mm max above 3.0 mm
5	Yield Strength	20-80 kg/ sq.mm.
6	Strip Width	1650 mm max. / 700 mm min.
7	Thickness of strip	1.0 to 6.0 mm for Skin passing
8	Coil Weight	32,000 Kg max.
9	Specific coil weight	18 kg / mm.-20kg/mm
10	Incoming coil I.D.	762 mm
11	Incoming coil O.D	2200 mm max.
12	Outgoing coil I.D.	610 mm / 762 mm
13	Outgoing coil O.D	2200 mm max.
14	Work Roll	350 dia. x 2000 mm barrel ; 600 dia x 2000 mm barrel
15	Back-up roll	800 dia.-1200dia x 1950 mm barrel.
16	Mill speed	500mpm max

The Skin Pass Mill, sludge cake from WWTP, solid wastes generated from various processes include trimmings and scrap from PICKLING LINE, Reversing Mill which will be recycled back into the plant works. Used oils and oily scum would be sold to authorised recyclers and iron oxide from ARP will be given to Tata pigments or to paint manufacturers.

AAQ monitoring at 10 locations during March-May 2013 indicates that the range of levels (ug/m³) of PM10 (58.9-98.4ug/m³), PM2.5 (26.8 –48.2ug/m³), SO₂ (17.3-44.2ug/m³), NO_x (25.4–48ug/m³) is within

prescribed limits. Monitoring of PM for fugitive emissions from different section indicated that they are within prescribed limits of GSR 277 (E) dated 31 March 2012. Monitoring of Stack Emissions from existing unit indicates that the levels of are within 50mg/Nm³.

The details of compliance of EC conditions of earlier EC for existing project was presented, and were found to be compliant. With reference to condition No (v), PP has furnished a letter No. 2614 dated 02.09.2014 of the Office of PPCF (WL), Jamshedpur providing details of distance of the project from the nearest RFs and also stating that there is no impact of the proposed project on the RFs.

The total project cost is Rs 126 crores of which Rs 11.8 crores has been spent on Ph.I towards costs of EMP measures and recurring costs of Rs 1.46 crores.

Public Hearing conducted on 8th May 2014 and the public was generally supportive of the proposed expansion. The PP committed to address the issues of local needs such as road widening/improvement, and issues of dumping of wastes, discharge of effluents, employment to locals, skill development to locals, especially tribals, etc through a joint committee.

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.

23.8.3 Proposed Expansion of Induction Furnace and Installation of Ferro Alloys Plant, Foundry & Rolling Mill of M/s N.N. Ispat, in the existing Plant Area at vill. Diwandighi, P.O. & Mouza, Mirzapur, Palitpur Road, P.S. & Dist. Burdwan, West Bengal (EC)[F. No. 11011/280/2012-IA-II(I)]

M/s N.N. Ispat Pvt. Ltd. has proposed for expansion of induction furnace and installation of Ferro Alloys Plant, Foundry & Rolling Mill in their existing plant area at village Diwandighi, P.O. & Mouza-Mirzapur, Palitpur Road, P.S. & District-Burdwan in West Bengal. Total existing plant area is 10.05 acres and expansion will be done on the land of about 6.95 acres. No forest land is involved. No court case/litigation is pending against the project. The geographical co-ordinates of the project site are latitude 23°17 18.43 N and longitude 87°52 20.17 E with mean sea level (MSL) 110 ft. NH-2 is passing at around 5.0 km site in south direction w.r.t the Project Site. River Damodar flows at a distance of 8.5km south from the project site. Manpower requirement is 140. Capital cost of the project is Rs 58 crores.

TOR was granted on 01.03,2013. Public Hearing was conducted on 10th March 2014, EIA-EMP Report was submitted vide letter dated 5th May, 2014. EIA-EMP report has been prepared by Envirotech East Pvt. Ltd, Kolkatta. Baseline data has been collected for the period of March 2013 to May 2013.

Following are the existing and proposed units:

S.N.	Unit	Unit Capacity	Product
Existing Project			
1	Induction Furnace (2 x 8T)	48,000 TPA	Ingot
Proposed Project			
1	Induction Furnace (2 x 15 T)	90,000 TPA	Liq. steel
2	LRF	90,000 TPA	Liq. steel
3	Continuous Casting Machine	90,000 TPA	Billets
4	Rolling Mill	1,20,000 TPA	Structural Steels (Angels, Channels, TMT etc.)
5	Ferro Alloy Plants (2 x 9 MVA Submerged Arc Furnaces)	Ferro Manganese-20,460 TPA	
		Silico Manganese -14,850 TPA	
		Ferro Silicon-6,600 TPA	
6	Foundry Consisting of Cupola Furnace (2 x 5 T)	21,5000 TPA	Cast Iron
7	Induction Furnace	18,000 TPA	Ductile Iron
8	Green Sand Plant (2 x 20 TPH)	72,000 TPA	Mould
9	Sand Reclamation Plant (2 x 10 TPH)	80,000 TPA	Fresh Sand

The existing unit is operating with a CTE dated 30.11.2004 and a CTO dated 13.02.2012 from WBPCB.

The plant will be designed as a zero discharge plant as far as the process effluents are concerned. The water will be re-circulated through cooling and treatment. The entire waste water will be recycled for various purposes inside the plant. Domestic wastewater will be treated in Septic tank–Soak pit system. Slag from IF & Cupola Furnace will be used for land filling / road construction. Slag from Ferro-Manganese process will be used as raw material in the production of Silico Manganese. Slag from Silico Manganese process will be used for land filling / Road Construction purpose. Mill scale and Scraps from the Rolling Mill as well as End Cuts & Scales from Continuous Casting will be used as raw materials in Induction Furnaces.

Ramnabagan Wildlife Sanctuary is located at a distance of 4.0 Km to the south direction of the project site. PP has submitted an application dated 29.07.2013 to PCCF, Wildlife, Govt. Of West Bengal for clearance under the Wildlife (Protection) Act, 1972, from the Standing Committee of the National Board for Wildlife as the project is located within 10 Km distance of Ramnabagan Wildlife Sanctuary.

Raw Material requirement is as per details given below:

RAW MATERIALS	QUANTITY (IN TPA)	SOURCE
Induction Furnace (2x15 T) – 90,000 TPA		
Sponge Iron	75,600	Local Market
Pig Iron	13,200	Local Market
Scrap	10,360	Local Market
Ferro Alloys	622	Local Market
Ferro Alloys Plant (2x9 MVA)		
Manganese Ore	60,300	Orissa
Mill Scale/Scrap	5250	Local Market /In-House

Quartzite	17,600	Local Market
Dolomite	410	Local Market
Coke Breeze	28250	Local Market
CUPOLA FURNACE (2X5 T) – 21,500 TPA CAST IRON		
Pig Iron	15050	Local Market
Scrap	6450	Local Market
Hard Coke	3800	Local Market
Limestone	1075	Local Market
INDUCTION FURNACE (2X3 MT)– 18,000 TPA DUCTILE IRON		
Pig Iron	9000	Local Market
Scrap	9000	Local Market
Silico Manganese	275	In-House
Green Sand Plant (2x20 TPH)/Sand Reclamation Plant (2x10 TPH)		
New sand	720	Allahabad/Local
Bentonite	216	Rajasthan
Coal Dust	360	Chhattisgarh

AAQ monitoring carried out at 8 locations indicate that the levels of PM10 (44-106ug/m³), PM 2.5 (16-46 ug/m³), SO₂ (4-15 ug/m³) and NO_x (6-29ug/m³) are generally (except for PM10 at one location) within prescribed limits. AQIP Modelling indicates that GLC of PM10, SO₂ and NO_x will be 1.08 ug/m³, 4.92 ug/m³ and 2.46ug/m³ respectively. Adequate air pollution control measures such as bagfilter, dust suppression system & stack of adequate height at relevant point will be installed.

Details of Solid wastes generation and utilisation

S.N.	Type	Quantity (Tonnes/Year)		Utilisation
		Existing	Proposed	
1.	Slag from Induction Furnace	5000	8200	To be used for land filling and road construction after segregation of residual slag by Slag Crusher installed in the existing Plant
2.	End Cuts, Scale & Scarap from CCM	-	1500	To be used in IF
3.	End Cuts, Scale & Scarap from Rolling Mill	-	3000	To be used in IF
4.	Slag from Ferro Alloy Plant	-	Ferro-Manganese Slag – 20,000	To be used as raw material for silico Manganese Production/for land filling and for road construction.
			Silico Manganese Slag -15,000	To be used for land filling and road construction.

Slag of IF & cupola furnace will be used for landfilling /road construction. Slag from Ferro-Maganese process will be used for production of silico manganese. Mill scale and scraps from rolling mill as well as end cuts and scales from continuous casting will be used as raw materials in induction furnaces. Total power requirement will be 37 MW and sourced from DVC supply system.

Fresh water requirement from ground water source will be 81m³/day. Daily Make up Water requirement:71 kld. Water Source will be borewell (permission has been obtained from SWID). Plant is designed on a zero-discharge basis. There will no discharge of industrial effluent. Treated effluents will be recycled for greenbelt. Domestic wastewater will be treated in septic tank.

A total of 37 MW of Power shall be obtained from Damodar Valley Corporation (DVC).

The Committee noted that greenbelt development is poor. The PP may initiate steps for development of greenbelt and photographs thereof provided. The company must also submit aerial photographs of the site indicating annual progress in development of green belt.

Ramnabagan Wild life Sanctuary is approximately 4 KM from the project boundary. An application dated 11.07.2013 has been made by PP to PCCF wildlife, State Govt., for obtaining WL clearance from the NBWL. The committee advised the PP to provide details whether the ESZ of the Ramnabagan Wild life Sanctuary has been delineated and has been notified. The Committee requested PP to submit the copy of the Notification fixing the distance of the ESZ from the Project site.

The EAC after deliberations recommended the project for environmental clearance subject to stipulation of the following conditions and other additional safeguards:

- i. The proponent shall obtain prior Wildlife clearance for expansion of the project. In case the project is located outside the ESA, a Notification of ESZ Ramnabagan Wild life Sanctuary of the State Government and a map with minimum distance of the project site from the boundary of ESZ authenticated by PCCF(WL) shall be furnished.
- 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 50mg/Nm³ and installing energy efficient technologies in the Plant.
- 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. 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 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- iv. 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.
- v. Water consumption shall not exceed as per the CREP standard prescribed for the steel plants. Additional water, if any, required for the plant project operations shall be met from rainwater stored in rainwater harvesting structures.
- vi. Rainwater harvesting scheme shall be prepared so that the rainwater can be collected, re-used and may be used for ground water recharge. 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. 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.
- vii. Greenbelt of approximately 15-20 meter width consisting of a 3-tier of trees consisting of species with thick canopy shall be developed all along the periphery of the plant, roads, vacant spaces, transfer points, etc as part of 33% of total plant area.
- viii. All the effluents shall be treated and reused for dust suppression/green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted.
- ix. 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 and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Bhubaneswar.

- x. Hazardous materials required during construction phase and in plant operations shall be stored properly as per the regulations and reused/recycled as per the E(P)A Rules.
- xi. Vehicles and construction machinery are properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.
- xii. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and implemented.
- xiii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.
- xiv. All the commitments made to the public during public hearing/public consultation shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xv. 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 thereof maintained.
- xvi. 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, at 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.

23.8.4 Expansion of Integrated Cement Project - Cement (2.75 to 6.75 MTPA), Clinker [2.2 to 6.75 MTPA (Line I - 2.2 MTPA to 2.75 MTPA, Proposed Line II - 4.0 MTPA)], CPP (50 MW to 100 MW), DG Set (18 MW to 30 MW) and WHRB – 15 MW of M/s UltraTech Cement Ltd., at Hirmi Works, vill. Hirmi, Tehsil Simga, Dist. Balodabazar-Bhatpara, Chhattisgarh (EC)

M/s Ultra Tech Cement Ltd has an existing Cement Unit- Hirmi Cement Works (HCW) at village Hirmi, Tehsil Simga, Dist. Raipur, Chhattisgarh. The existing Cement Plant has a production capacity of 2.75 MTPA, Captive Power Plant 50 MW (2 x 25 MW), Coal Washery 300 TPH and D.G. Set 18 MW (3 x 6 MW) at Village: Hirmi, Tehsil: Simga, District: Balodabazar - Bhatapara (Chhattisgarh). The cement unit is operating with a CTE/CTO of MPPCB No. 19987/TS/MPPB/2000 dated 17.11.2000 which was renewed vide dated 03.06.2014 and valid upto 31.05.2015. The Captive Power Plant (50 MW of 2x25MW) and Coal Washery (500TPH) obtained an EC vide J-11011/43/2006-IA.II(I) dated 07.02.2007. The captive

limestone mine obtained an EC vide MOEF letter J-11011/55/2012-IA.II(I) dated 02.01.2014. In addition, TOR for another captive limestone mine Proposed Moharenga Limestone mine has been granted vide letter dated J-11011/55/2012-IA.II(I) dated 28.03.2013.

The project coordinates are Latitude 21°32'21.51" to 21°32'55.07"N/Longitude 81°56'31.14" to 81°57'27.56"E. There is no National Park, Wild Life Sanctuary, Biosphere Reserve, Tiger Reserve, Wildlife Corridor, Reserved / Protected Forest etc. within 10 km radius. There are six water bodies at a distance of 1.5 km to 8.5km in the study area, however no river/drainage passes through the project site. No RF exist within the study area, there is no forestland within project area.

Terms of Reference (ToR) to the above proposal was accorded by MoEF vide letter no. J-11011/586/2011-IA.II(I) dated 14.2.2012. Subsequently, a Corrigendum was issued by the Ministry on 27.9.2012 regarding change of subject matter of project proposal. The Project Proponent (PP) vide letter dated 18.12.2012 again requested MoEF for the change of subject matter of project proposal keeping capacities same as per the ToR letter but to include the present plant capacity as it is a Brownfield project. The aforesaid proposal was considered in the Reconstituted Expert Appraisal Committee (Industry) in its 7th meeting held during 4-5th April, 2013. After detailed deliberations, the Committee recommended for the revision in the subject as "Expansion of Integrated Cement Project - Cement (2.75 to 6.75 MTPA), Clinker [2.2 to 6.75 MTPA (Line I - 2.2 MTPA to 2.75 MTPA, Proposed Line II - 4.0 MTPA)], CPP (50 MW to 100 MW), DG Set (18 MW to 30 MW) and WHRB – 15 MW". Public Hearing was conducted on 8th February, 2013. EIA-EMP report has been prepared by J.M.Environment Pvt. Ltd. Baseline data for the EIA-EMP report was collected for March to May 2012.

The proposal is for expansion of Integrated Cement Project (including plant and colony) and all the land (i.e. 167.1 ha including plant & colony) has already been acquired. No additional land is required for the proposed expansion; as the same will be done within the existing plant premises. No R & R is involved. Total cost of the expansion project is Rs 2000 crores- Line I is Rs 30 crores and Line II is Rs 1970 crores. An amount of Rs 90 crores and Rs 3.5 crores have been earmarked as capital and recurring costs for the proposed expansion.

Total project area is 167.1 ha including plant (120.10 ha) and colony (47 ha) area; and the proposed expansion will be done within the existing plant premises. Area Break-up land for existing & proposed expansion project of Hirmi Cement Works is given as under:

S. No.	Area Details	Existing Area (ha)	Area to be utilized for Expansion (ha)	Total Area (ha)
A. Plant Area				
1.	Cement Plant	29.77	16.6	46.37
2.	CPP	3.6	2.49	6.09
3.	Coal Washery	1.46	Nil	1.46
4.	Greenbelt/Plantation	37.7	2.1	39.8
5.	Open Area	36.57	- 23.69	12.88
6.	Railway & Others	11.0	2.5	13.5
Total		120.1	-	120.1
B. Township				
1.	Colony	32	-	32
2.	Greenbelt/Plantation	15	-	15
Total		47	-	47
TOTAL AREA		167.1	-	167.1

Raw Material Requirement

S. No.	Name of Raw Material	Quantity (MTPA)			Source	Distance / Mode of Transportation
		Existing	Additional for proposed expansion	Total after proposed expansion		
1.	Limestone	3.3	6.825	10.125	Captive Mine (Limestone mine & Proposed Limestone Mine)	Existing: 1.5 km; Proposed Mine: 13 km/ Covered Conveyor Belt
2.	Laterite / Iron Ore / Flue Dust	0.04	0.06	0.1	Open Market	120 km / Road
3.	Gypsum	0.148	0.22	0.368	Fertilizer Plant/ Gypsum Mines	600 km / Rail
4.	Fly ash	0.62	1.2	1.82	CPP/ TPP from nearby areas	20 km / Road
5.	Domestic coal/Petcoke/ imported coal	0.44	0.66	1.1		

The total water, power and manpower requirement at the existing and expansion project are given below:

S.N.	Parameter	Existing	Additional	Total
1.	Water req. (KLD)	3640	3400	7040
2.	Source of water	Bore well and Mine pit water		
3.	Power req. (MW)	40.1	54	94.1
4.	Source	CPP, WHRB and DG Sets (back-up)		

The CPP of 50 MW will have one Circulating Fluidised Bed Combustion (CFBC) boiler using coal as primary fuel, one condensing steam turbine and generator by installing Waste Heat Recovery Boiler of 15 MW capacity at Hirmi Cement Works. The WHRB will utilise waste heat from cement plant for generating electric power. The project will contribute to the more efficient use of energy at Hirmi Cement Works and will reduce reliance on exhaustible fossil fuel. Also, use of WHRB will reduce the green house gas emission, thus will be environment friendly.

In order to utilise solid wastes, the company has applied for trial run for spent pot lining, plastic wastes, tyre, and tyre chips with the permission of CECB. It has also applied for use of wastes from pharma industries, liquid and solid spent solvents, paint sludge, grinding dust, ETP sludge, bio-wastes, acid tar, etc. Further, the unit has also applied for use of agro-waste, wood chips, poultry waste, coir waste, cashew peel. Saw dust, etc.

AAQ monitoring of baseline and incremental indicates that the levels of PM, So₂ and NO_x are within prescribed limits as given below:

Parameter	Baseline	Incremental	Total
PM	78.20	4.02	82.28
SO ₂	12.45	10.24	22.69
NO _x	22.42	8.86	31.28

The proposed air pollution control equipments include bag house for the Raw Mill/Kiln, ESP for Cooler, Bag House for Coal Mill and Cement Mill and ESP for the CPP.

Of the total water requirement of 7040m³/d, 1334m³/d will be sourced from groundwater and the balance from nine pit water. Permission for drawl of 1334 m³/d has been obtained from CGWA vide letter no. 21-4 (42) NCCR/CGWA/2009-2613 dated 15.04.2009 for the existing project. Permission for additional 2000m³/d has been applied for. Water harvesting structures of a total capacity of 658164cu.m are proposed in the plant and colony area. In addition, water harvesting structures such as check dams at Saklor and Paraswani villages, recharging pits and contour bund in mines area would further enhance the rainwater recharge.

No wastewater would be generated from plant as dry process technology would be used. Domestic wastewater from plant and colony would be treated in an STP and reused for greenbelt. Of the total plant area of 167.1 ha, a total of 52.7ha has already been developed as greenbelt. An additional 2.1ha will be developed as plantation.

Of the total project cost, an amount of Rs 100 crores (5% of the project cost) has been earmarked for CSR over the next 10 years covering activities of sectors of education, infrastructure, health and family welfare, social welfare and sustainable livelihood.

Public Hearing was conducted on 08.02.2013 at village Hirmi, by Addl. DM, Bhatapara. Issues raised include water, air pollution from the plant and CPP, plantation and rainwater harvesting and facilities for school and hospital. These issues are being addressed through a Comprehensive CSR Plan prepared for the area over the next 10 years.

Compliance of EC for the CPP has been received from MOEF RO vide letter dated 28.02.2013.

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

- i. The standards prescribed for Cement Plants vide the recent MOEF&CC Notification – GSR 612(E) dated 25.08.2014 shall be implemented. Additional new kiln shall meet new legislation.
- ii. Measures shall be taken to reduce PM levels in the ambient air. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP) ESP shall be installed in each cooler and bag house for the kiln, etc. shall be provided to keep the emission levels below 50mg/Nm³ and by installing energy efficient technology. Covered sheds for raw materials such as gypsum and additives shall be constructed. Cement shall be stored in silos.
- iii. 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 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- iv. All internal roads shall be paved to prevent dust emission within the plant premises. Strengthening of 1km approach road shall be taken up and avenue plantation developed.

- v. Closed conveyor belt shall be installed for transport of limestone to the plant. Work zone floor shall be made concreted/asphalted. Internal roads shall be black topped. Regular sweeping / cleaning of roads shall be carried out to avoid accumulation of fine dust.
- vi. Green belt (3-tier) of approximately 15-20m width shall be developed all along the periphery of the plant and in vacant areas, transfer points covering a total area of 33% of total plant area. Tree plantation shall be in down wind based on the prevalent wind direction at the site. The details of these including photographs taken in time series consistent for the same season every year shall be submitted as part of six-monthly compliance report.
- vii. Dry Fog System shall be adopted to control fugitive emission in screening plant. Transfer points shall be provided with Dry Fog System. Enclosures shall be provided for belt conveyors and transfer points of belt conveyors. Wet system like water sprays / sprinklers shall be provided for dust suppression at Belt conveyor discharge & screen discharge locations. The raw material handling and processing area shall be provided with Dust Suppression System. Water sprinkling arrangement shall be provided at raw material heaps.
- viii. Conditions provided in CREP Guidelines for Cement Sector shall be followed.
- ix. Efforts shall be taken for meeting the requirement of additional 2000m³/d of water applied to CGWA from rainwater. Water harvesting structures of a total capacity of 658164cu.m proposed in the plant and colony area shall be constructed and only balance required shall be applied for from CGWA. In addition, water harvesting structures such as check dams at Saklor and Paraswani villages, recharging pits and contour bund in mines area shall be constructed to further enhance the rainwater recharge.
- x. The Plant shall operate on a zero-discharge basis. All the effluents shall be treated and reused for dust suppression/green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted.
- xi. Rain water harvesting shall be adopted and the extent of requirement of water for the project from mines would be reduced. The detailed rain water harvesting plan including regular desilting operations carried out during pre-monsoon season shall be submitted as part of the 6 monthly compliance reports.
- xii. Hazardous materials required during construction phase and in plant operations shall be stored properly as per the regulations and reused/recycled as per the E(P)A Rules.
- xiii. 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. The Company shall also utilise hazardous wastes generated from other units for use of wastes from pharma industries, liquid and solid spent solvents, paint sludge, grinding dust, ETP sludge, bio-wastes, acid tar, etc. in their cement kilns after obtaining necessary approvals from competent authorities and with the permission of State Pollution Control Board.
- xiv. The proponent shall utilise fly ash and bottom ash generated from their own and from other projects in their cement plant and/sold brick manufacturers for further utilization as per Fly Ash Notification, 1999 and subsequent amendments in 2003 and 2010 and Memorandum of Understanding in this regard shall be entered into and submitted to the Ministry's Regional Office at Bhopal.

- xv. All vehicles and construction machinery are properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.
- xvi. All the issues raised during Public Hearing shall be addressed through constitution of Village Development Committee(s) comprising of representatives of the company, village panchayats and district administration.
- xvii. The PP shall conduct a study on impact on the crop productivity due to existing and the proposed expansion project within 5 km radius to address the concerns raised by the local population in regard to the crop damage of dust emitting from the plant. The Report shall be submitted within 2 years as a part of compliance report.
- xviii. Disaster management plan shall be prepared and implemented.
- xix. The Company shall adopt 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 regularly conducted amongst the employees of the Company and records maintained thereof.
- xx. 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, 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.

23.9 Further consideration Cases

23.9.1 Proposed expansion of integrated cement plant (Clinker from 10.4 MMTPA to 11.2 MMTPA) of M/s Shree Cement Ltd. at Dist. Pali, Rajasthan (EC) [J-11011/343/2012-IA-II(I)]

The proposal is an integrated expansion project for enhancement of clinker production from 10.4 Million TPA to 11.2 Million TPA and WHRB plant capacity from 45 MW to 66 MW and limestone production from 17.2 Million TPA to 19.6 Million TPA by open cast mechanized method. To achieve the required clinker production of 11.2 MMTPA, Shree Cement Limited is planning to install an advance technology which will not only enhance the clinker production but will also increase the waste heat recovery capacity from 45 MW to 66 MW.

EC was granted for the exiting integrated project was granted vide letter No. J-11011/400/2010/IA-II(I) dated 27.08.2012. ToR for the expansion project was granted vide letter No. J-11011/343/2012/IA-II(I) dated 23.08.2013. Public Hearing for the project was conducted on 18.02.2014. EIA-EMP Report has

been prepared by Enkay Enviro Services Pvt. Ltd, Jaipur. Monitoring Report of RO, Lucknow has been furnished vide letter dated 29.08.2014. Project for the captive limestone mine will be considered by the MOEF&CC's Mining EAC.

Existing cement plant area is 187.56 hectare and proposed expansion project is coming up within the same existing land area. The lease area comprises of 741.0 ha Govt, waste land and 9.00 ha private agriculture land.

The total estimated cost of proposed expansion project is Rs. 145 crores (capital cost of existing project is Rs 1315 crores and that of expansion project is Rs 1447.3 crores). About Rs.15 crores are proposed for the capital cost of environment protection program and Rs. 0.2 crore as recurring cost. The expected life of the mine is 36 years. Project is interlinked to an Integrated Cement Plant of Shree Cement Limited near villages - Nimbeti and Ras, Tehsil - Jaitaran, District - Pali (Rajasthan). There are no National Parks/Wildlife Sanctuaries within 10km study area. There is one RF and 2 PFs existing within the 10km study area at a distance of 4.25km, 8.9k, and 9.6km respectively.

S.N.	Unit/Facility	Existing	Expansion
1.	Clinker (MTPA)	10.4	11.2
2.	Cement (MTPA)	8.8	8.8
3.	WHR (MW)	45	66
4.	CPP (MW)	180	180

The proposed expansion will be undertaken by the following measures:

S.No.	Modifications required in existing in each 1.6 Million TPA Clinker unit.	Proposed clinker production capacity of each 2.0 Million TPA Clinker (In 9th and 10th Unit)	Remark
1	Increase of Kiln inlet riser area from 5.17 m ² to 7.03 m ² (35.93 %)	Expected increase in clinker production capacity by 0.4 MTPA	Increase in Kiln main firing from present 30% to about 40% with maintaining kiln inlet air velocity between 17-19 mps
2	Installation of triplet cyclone at pre-heater top stage in both string		Reduction in rpressure drop across PH to create margin in PH fan.
3	Enlargement of clinker cooler area from 110m ² to 135 m ²		Maintaining 48 TPD/m ² clinker cooler loading.
4	Removal of Dust Settling Chamber	Gain in clinker production	Reduction in pressure drop across PH to create margin in PH fan.
5	Increase of Kiln effective volume by decreasing refractory thickness from 250 mm to 200 mm	Gain in clinker production	Increase of Kiln effective volume from 897 m ³ to 942 m ³
6	Installation of additional chamber for Rverse air Bag House (RABH)	Additional chamber will be added to maintain air to cloth ratio.	To achieving PM emission level below 50 mg/Nm ³

The raw material requirements for existing and expansion project are given below:

S.N.	Raw Material	Quantity (MTPA)			Source	Dist & Mode of Transportation	No. Of trips per day
		Existing	Proposed	Total			
1.	Limestone	17.2	2.4	19.6	Captive limestone mine	Conveyor belt from mine adjoining the plant	-
2.	Pet coke/coal	1.04	0.08	1.12	Indian and imported	800km By rail/road	107 + 9

					pet coke and coal		
3.	Laterite/Lead Zinc slag	0.468	0.036	0.504	Laterite from Bhilwara, Lead, zinc slag from Chittorgarh	Bhilwara -190km Chittorgarh -250km By rail/road	27 + 3
4.	Gypsum	0.6	Nil	0.6	Nagaur and synthetic gypsum (Raj.)	Nagaur- 200km Bikaner – 400km By rail/road	90
5.	Flyash	3	Nil	3	STPS Suratgarh, KTPS, Kota, Chabra and other Power Plants	Suratgarh -400km Kota – 250km, Rail/road	260

The major air pollution control measures include:

- i. Silo for clinker storage, flyash, cement wind breakage wall for storage of gypsum and laterite.
- ii. Water sprinkling facility is provided at coal/pet coke storage area and at limestone crushing system
- iii. Bag filter at material transfer points.
- iv. Green belt development.

AAQ monitoring carried out at 8 locations indicates that the 98% levels of PM10 (48.3–57.3 ug/m3), PM2.5 (25.1–30.1ug/m3), SO2 (5.1-5.6ug/m3), NOx (48.3–57.3ug/m3) are within prescribed limits. AQIP modelling indicates that the incremental GLC is 5, 2.9, 11.5 for PM10, PM2.5 and NOx with the proposed expansion project.

The total water requirement for the proposed expansion project for plant, colony and mine will be 310 KLD. Thus, after expansion the water demand will be 4380 KLD as per details below:

S.N.	Unit	Water consumption (KLD)		
		Existing	Proposed Expansion	Total
1	Cement	1820	100	1920
2	Power	1150	130	1280
3	Drinking & Utility at Cement & Power Plant	770	30	800
4	Mines	320	60	380
	TOTAL	4060	320	4380

Groundwater level ranges from 25-30m bgl during pre-monsoon and 20-25m bgl post-monsoon. CGWA vide letter no. 21-4(12)/ WR/ CGWA/ 2005-616 dated 23rd May, 2011, 21-4(12)/ WR/ CGWA/ 2005-1220 dated 12th July, 2013 and 21-4(12-B)/ WR/ CGWA/ 2005-255 dated 11/02/2014. Additional 380 KLD will be sourced from the rain water collection in mines pit and earthen ponds developed in plant area. No wastewater will be discharged from the plant premises. The unit will operate on a zero-discharge basis. – cement manufacturing is a dry process, RO rejects will be used for flyash quenching and for synthetic gypsum plant, treated water from STP will be used for green belt and sludge used as manure in horticulture and used oil sold to CPCB authorised recyclers.

The company is already using hazardous wastes such as paint sludge, automobile ETP sludge, phosphate sludge, CETP sludge at Pali.

The proposed CSR Plan for life of the project will be for an estimated Rs 76.29 crores covering the sectors/areas of health and family welfare, education, women empowerment, social & cultural activities and community infrastructure dev. Projects.

Public Hearing conducted on 18.02.2013 was chaired by Addl. District Collector. Issues raised include pollution from clinker dust, provision of health care facilities, employment, were raised. An additional fund allocation of Rs 13.5 lakhs has been made over and above EMP costs and CSR costs.

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

- i. Standards prescribed for Cement Plants vide the recent MOEF&CC Notification – GSR 612(E) dated 25.08.2014 shall be implemented.
- ii. Project shall not start without EC for expansion of captive limestone mines.
- iii. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled within 50 mg/Nm³ 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_x burners shall be provided to control NO_x emissions. Regular calibration of the instruments must be ensured.
- iv. 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.
- v. Third Part Monitoring of air pollution shall be carried out and furnished as part of compliance report.
- vi. Hazardous materials required during construction phase and in plant operations shall be stored properly as per the regulations and reused/recycled as per the E(P)A Rules.
- vii. 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 as per regulations under E(P)A Rules.
- viii. All the fly ash generated shall be fully utilised 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).
- ix. The number of vehicles used transport of the raw materials and end products shall be reduced to minimise impacts of road transport 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 to meet prescribed standards.

- x. All internal roads shall be paved to prevent dust emission within the plant premises and avenue plantation developed.
- xi. Work zone floor shall be made concreted/asphalted. Internal roads shall be black topped. Regular sweeping / cleaning of roads shall be carried out to avoid accumulation of fine dust.
- xii. 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. Water requirements for the plant operations shall be supplemented by use of rainwater stored in rainwater harvesting structures. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement.
- 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.
- xv. Greenbelt of about 15-20 meter width shall be developed all along the periphery of the plant. Apart from that an area of 33% of total plant area shall be provided for development the green belt. 3 layers of plantation shall be provided. Tree plantation shall more on the prevalent wind direction based upon the outcome of windrose at the site. 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 Cement Sector shall be implemented.
- xvii. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.
- 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
- 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.

23.9.2 Change in Production capacity of existing steel Plant from 3.25 MTPA to 3.60 MTPA of M/s Jindal Steel & Power Limited through Renovation & Modernisation at Raigarh, Chhattisgarh (Amendment in EC)

The aforesaid proposal was considered in the 18th EAC(I) meeting held on 28th-30th April 2014, wherein the Committee had sought following additional information from the PP for further consideration of the proposal cited above:

- i. Detailed report on CSR undertaken in the existing plant
- ii. Certified copy of EC compliance from RO, MOEF shall be submitted as per MOEF Office Memorandum dated 30-05-2012.

The certified Monitoring report of RO, Bhopal has been received vide letter dated 21.07.2014. PP had provided the aforesaid details vide letter dated 19.07.2014 and was taken for further consideration.

PP made a detailed presentation of the initiatives taken up by M/s Jindal Steel Ltd. under CSR in various sectors such as education, health, water & sanitation, increase in capita through skill development, SHG, creation of linkages, etc, augmenting infrastructure, promoting social and cultural activities, empowerment of differentially abled, etc around the project area.

The Committee noted that the increase in production would be in the range of about 10%. The Committee recommended that a CSR Plan shall be prepared and the company earmark 2% of their net retain profits for CSR initiatives (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. 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.

After detailed deliberations, the Committee recommended the project for amendment of EC as proposed above.

23.10 Terms of Reference (TOR) Cases

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

The proposed augmentation of Tata Steel Works from 9.7 MTPA to 11.0 MTPA crude steel production would be undertaken by augmenting the production capacities of few plant units; namely, Sinter Plant, Pellet Plant, LD shops & the Mills, revamping of BF 'D' & 'E' and installation of a new LCP module and Continuation of Battery #3.

The plant area of Tata Steel is located in Jamshedpur, east Singhbhum district of Jharkhand, ranging between 22°40'47" and 22°53'21" North latitude and 86°05'21" to 86°18'50" East longitude. The city is

located in the basin areas of two principal surface streams, namely, the River Subarnarekha River and its tributary, River Kharkai. Jamshedpur City is well connected with NH#33 passing through north-eastern direction of Tata Steel Plant. The coke requirement for enhanced hot metal production would require increased coke supply, which would be fetched from HMC Division, Haldia as well as purchased coke. All the other batteries, COB#5-11 would be operating at their rated capacity. Charge sinter requirement would be about 9.0 MTPA for 12.5 MTPA hot metal productions, where sinter is taken to be 46% of total blast furnace burden. The requirement of product sinter would be around 10.56 MTPA, for 15% undersize is considered. The present production level of existing sinter plants is 7.7 MTPA of charge sinter.

The augmented requirement of sinter would be met by debottlenecking the present capacity of sinter plant by necessary technological upgradation such as Extension of grate width, Increase in bed height, Improvement in sinter feeding, Modification of burners, Increase in fan capacity of sinter cooler etc.

The requirement of Charge pellet would be about 8.0 MTPA for 41% of Blast furnace burden. Considering 3% undersize through screening in the stock house, requirement of product pellet would be around 8.25 MTPA. The present production level of existing pellet plant is 6.0 MTPA of charge pellet. The augmented requirement would be met by debottlenecking the present capacity of pellet plant by necessary modification like Enhancement of raw material conveyance capacity, Installation of additional mixer, Improvement of product conveyor capacity, reliability and availability, increase in green ball bed level in induction furnace to achieve higher production, Modification/ upgradation of pellet screening system, etc.

The enhanced production of hot metal of 12.5 MTPA would be derived from 'C', 'F', 'G', 'H' and 'I' blast furnaces and revamping 'D' and 'E' blast furnaces. The present production capacity of hot metal is around 10.55 MTPA. The enhanced level of hot metal requirement would be met by the stretching the present capacities of 'H' & 'I' blast furnaces by improving operating parameters & burden ratio and operationalize 'D' & 'E' blast furnaces after necessary revamping for enhanced production. All other facilities like hot metal handling, slag handling and other auxiliaries like power, water and utilities would be checked and upgraded, as required, for enhanced hot metal production.

The crude steel production would increase to 11.0 MTPA from 9.7 MTPA following the higher production of hot metal. At 11.0 MTPA stage the crude steel production would be approximately 3.5 MTPA in LD #1, 4.5 MTPA in LD #2 and 3.0 MTPA in LD#3. The production capacities of the rolling mills would be stretched with considerations like increase of net rolling hours and adjustment of product-mix to obtain higher average strip width & thickness in hot strip mill & higher average diameter of the finished product in long mills.

The annual requirement of SMS grade lime at 11.0 MTPA production stage of crude steel is 9.13 MTPA for BOF at the Steel Melt Shop. For the increased crude steel production, the shortfall of lime is 578 TPD taking the rated production of the existing 9 Nos. of lime kilns into account. An additional vertical shaft kiln of 600 TPD is proposed to be installed to meet the additional requirement at 11.0 MTPA crude steel production stage.

For the increased production of hot metal, the total raw material requirement would be around 35.98 MTPA at 12.5 MTPA hot metal production stage, compared to 28.7 MTPA raw material required at 10.55 MTPA. It is envisaged that the existing raw materials supply sources of Tata Steel would largely continue to act as raw materials linkages for meeting the estimated requirements for the 11.0 MTPA expansion stage.

Receiving Substation (BPRS), Tata Power Company Limited (TPCL), Jojobera Power Plant and DVC substation at Golmuri. Total make-up water for the proposed expansion has been estimated as 700 cu m per hour. The additional make-up water required for the proposed expansion would be made available from the plant water system. No additional make-up water would be required to draw water from River Subarnarekha. Installation of a central Effluent Treatment Plant (CETP) and review of capacity of clarified make-up water system network would be done to meet the additional water requirement.

The Committee after deliberations 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.

23.10.2 Revised TOR Application for Installation of a 2 MTPA Pellet plant at the Integrated Steel Plant (3 MTPA) of M/s NMDC Limited at District: Bastar, C.G (Revised TOR appl. for change of site location from Madpal village to Kasturi and Chowkawada at District: Bastar, C.G) [J-11011/300/2013-IA-II(I)]

The project authorities and their consultant (M/s J.M. EnviroNet Private Limited, Gurgaon) 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 integrated project activity is covered under Category (A) and listed at S.N.3(a) of the Schedule of the EIA notification 2006 and have to be appraised at the Central level.

M/s NMDC Limited has proposed for expansion of their Integrated Steel Plant (3 MTPA) by installation of 2 MTPA Pellet plant adjoining the existing plant at village Mandpal, near Nagarnar, District Bastar, Chhattisgarh. The existing plant obtained an environmental clearance from MoEF vide letter no.J-11011/681/2008-IA.II(I) dated 15.9.2009. The land requirement for the proposed expansion is 48.74 ha. The latitude and longitude of the project site is 19⁰ 05'N and 82⁰ 09' E respectively. No forestland is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. Amaguda railway station is located at a distance of 1.5km from the project site. Kanger RF and Kakadapasar RF are found at a distance of 5km and 2.5km respectively from the project site. River Indravathi flows at a distance of 3.5km from the project site. No court cases/litigation is pending against the project. Project cost is Rs. 572 crores.

ToR for the setting up of a pellet plant was granted on 05.01.2014. It was mentioned in the ToR letter that the proposal shall only be considered when the total land is in the possession of the proponent. Since the land has not been acquired so far, PP intends to shift the location of pellet plant to Kasturi & Chowkawada village where the land is already in possession of NMDC. The PP has requested to accord revised ToR for the revised site.

Raw materials required are Iron ore concentrate 20.06 LTPA, Bentonite – 0.14 LTPA, Coke breeze – 0.36 LTPA, Limestone / Dolomite – 0.40 LTPA. The reclaimed water from filtering the slurry would be 130 m³/hr which will be used for process needs. About 65 m³/hr will be make up water requirement which will be met from the Integrated Steel Complex. The power required (17.22MVA) will be taken from 33kv switchboard of 230/33kv of MRS GIS of NISP, which is approx. 3km from the site. Furnace Oil / LSHS (43,517 KLPA) shall also be used as fuel for process for Indurating the Pellets. The fuel will be received by the road through fuel tankers.

It is proposed to install Bag filters / scrubber type dust extraction system for Pellet conveying system. Cyclone separators, wet scrubbers, fabric bag filters, ESP would be installed for Process gas cleaning plant. Dry fog DSS would be installed at stockpile area. Adequate stack height will be provided for process de-dusting unit and plant de-dusting unit. Waste water discharge from Pellet plant can be divided into two parts, non –contact water discharge and contact water discharge. Due to repeated re-circulation and high temperature concentration of these salts starts getting built up necessitating bleeding off some part of circulating water. Water is also used for contact cooling (e.g spraying), mixing of ores, etc. The treated water will be re-used in the process.

Sewerage Treatment Plant will be constructed within site for treatment of domestic effluents generated from Canteen, Toilets, surface run off, etc. The provision of acoustic lagging for the equipments and suction side silencers, selection of low noise equipments, etc would be installed for noise pollution control measures.

The Committee decided that since there is only a change of the location of the site from one side of the project to another side of the existing project and the land is already under possession, the same TOR granted earlier was valid for this revised TOR, which will be effective from 05.01.2014.

The Committee also noted that as per decisions of the EAC(I) meeting of Dec. 2013, since Public Hearing for the existing project was conducted on 27.2.2009, the Committee had exempted the proposed project for installation of Pellet Plant within the project area from public hearing under Clause 7 (ii) of the EIA Notification 2006.

23.10.3 New primary Metallurgical SSI Unit of M/s Tirupati Metals & Minerals, Buti Bori Industrial Area, Dist. Nagpur, Maharashtra (TOR)

PP and their consultant – Asian Consulting Engineers Pvt. Ltd. (ACE), New Delhi made a presentation.

It was informed that M/s Tirupati Minerals and Metals (TMM) was established in 2011 for processing of manganese and other ores. It is registered as an SSI. TMM has proposed to set up a Ferro Alloy and Manganese Oxide Production & Manganese Ore Beneficiation Unit of 17,520 MTPA capacity at MIDC, Butibori, Nagpur, Maharashtra.

The products to be manufactured are:

S.N.	PRODUCT	Proposed Capacity (MT/Month)
1.	Low carbon Ferro Manganese	200
2.	Medium Carbon Ferro Manganese	200
3.	Low Carbon Ferro Titanium	50
4.	Low Carbon Ferro Chrome	50
5.	Low Carbon Ferro Molybdenum	50
6.	Low Carbon Ferro Vanadium	10
7.	Manganese Oxide	500
8.	Grinding of Manganese Ore	400
	TOTAL	1460

Total capital cost of the project is Rs 138.26 lakhs. Total area of the plot for the project is 1 acre in Butibori Industrial Area, MIDC Hingna Division, Nagpur, Maharashtra.

Details of Raw Materials and their source and mode of transportation are given below:

Raw Material and Its Source					
Product	Product Quantity/Month	Raw Material Major	Raw Material Quantity	Source	Mode of Transport
Low Carbon Titanium	50 MT	Elmenite Rutile Aluminium Iron Ore Lime	90 MT 10 MT 40 MT 10 MT 8 MT	From Local market	By road
Low Carbon Ferro Chrome	50 MT	Chromite Ore Sodium Nitrate Aluminium Iron Ore Lime	100 MT 8 MT 40 MT 10 MT 8 MT	From local market	By road
Low Carbon Ferro Molybdenum	50 MT	Roasted Molybdenum Ferro Silicon Aluminium Mill Scale	50 MT 25 MT 7 MT 30 MT	From Local market	By road
Low Carbon Ferro Vanadium	10 MT	Penta Oxide Con. Ferro Silicon Aluminium Iron Turning Lime	20 MT 9 MT 1 MT 1 MT 0.4 MT	From Local market	By road
Medium Carbon Ferro Manganese	200 MT	Manganese Ore Silico Manganese Aluminium	225 MT 180 MT 40 MT	From local market & mine	By road

		Lime	30 MT		
Low Carbon Ferro Manganese	200 MT	Manganese Ore L.C Silico Manganese Aluminium lime	225 MT 120 MT 55 MT 35 MT	From local market & mine	By road
Manganese Oxide	500 MT	Manganese Ore Coke & Coal	650 MT 150 MT	From Local market & mine	By road

Alumino Thermic process is to be used to manufacture Low Carbon Ferro Manganese, Medium Carbon Ferro Manganese, Low Carbon Ferro Titanium, Low Carbon Ferro Chrome, Low Carbon Ferro Molybdenum and Low Carbon Ferro Vanadium. In this process aluminum is the source of energy which provides immense quantum of heat (say 1600-2000 degree centigrade) by Exothermic Reaction which is not possible by any other means of energy.

It was stated that for grinding, a Three roller Raymond mill is used (and not a pulverizes) which is a closed circuit grinding system with a totally enclosed dust collector. No dust is emitted in the atmosphere on account of fine grinding. The water requirement of the unit is 4 million liters per day (approx.) and will be obtained from M.I.D.C. The dust collected in the dust collector is also sold as a main product. The water used in washing is 500 liters per day on an average and the spent water is not drained outside the premises but is collected in a settling tank and is recycled. The sediments in the settling tank are scooped periodically and stacked separately which on accumulation is also sold for different purposes. The water used for cooling the kilns (quenching) is also collected in tanks and passed through cooling towers and is re-used. There is no solid as well as liquid waste generation in the production. No significant noise is generated in the plant & machineries envisaged and the total noise generated will not exceed to hamper normal conversations between two persons within entire premises of the plant area. The total power requirement of the unit is 90 H.P (100 KW) approx and will be obtained from M.S.E.D.C. Ltd.

The Committee noted that the process proposed is highly hazardous and the use of the technology requires approval/NOC from the Explosives Dept. After detailed deliberations, the Committee prescribed the following specific TORs for undertaking detailed EIA-EMP study in addition to the Generic TOR enclosed at Annexure I

- i. License from explosive department shall be obtained for processing plant since the process is explosive in nature.
- ii. P.H. shall be conducted by the Maharashtra Pollution Control Board as per the generic TOR.

23.10.4 Expansion proposal for Up-gradation & Modernization in Agro Pulping Capacity 165 Ton Bleached Pulp per day and Expansion in Hard Wood Pulping Capacity (from 60 Ton to 200 Ton Bleached Pulp per day), Conventional Chemical Recovery Plant (from 230 Ton to 580 Ton Black Liquor solids per day) & Co-generation Power (from 17.5 MW to 28 MW) ha of M/s Kuantum Papers Ltd., at village Saila Khurd, Tehsil Garhshankar, Dist. Hoshiapur, Punjab (TOR)

The existing unit got environmental clearance vide letter F.No. 11011/344/2008-IA-II(I) dated 1st January 2009. Regional Office, Chandigarh has provided a Monitoring report vide letter dated 25/07/2014.

PP and their consultant – J.M.EnviroNet pvt. Ltd, Gurgaon, Haryana made a presentation.

Kuantum Papers Ltd (Earlier ABC Paper Ltd) was set up in 1980 to manufacture Writing and Printing Paper. Kuantum Papers Ltd. has its operations at Sailakhurd in Punjab in North India, adjacent to the main State Highway SH-24, and is spread in an area of 257 acres. The plant is a fully integrated facility to make Paper from Agro and Wood based pulp. Pulping is done from various kinds of agricultural residues like Straws and Baggasse, and Wood apart from using purchased hardwood and Soft wood pulp. Current capacity of plant is to produce 148500 tonnes per annum (450 TPD) of Writing and Printing Paper. In view of the strong fundamentals of the paper business and its growth potential, the management, in the year 2008-2009, had undertaken a strategy to expand the paper business and sustain its competitiveness through capacity enhancement and cost reduction initiatives. The management implemented the Mill Expansion Programme covering setting up of: Chemical Recovery Plant, Co-Generation Power Plant, Wood Pulp Street, Paper Machine IV, Waste Paper/Purchased Pulp Pulping Street after obtaining necessary Environmental Clearance from Ministry of Environment and Forests (MoEF), New Delhi. The above expansion tripled the capacity of plant from 150 TPD to the existing 450 TPD, and enabled Kuantum to achieve economies of scale, reduce cost of production, enhance paper quality and employ an eco-friendly manufacturing process. Presently, Kuantum Papers limited is operating at a capacity of 300 TPD using both wood and agro- residues due to negative cost implications of using imported/purchased pulp for additional 150 TPD capacity.

After having established stable operations and having become a large player in the domestic Paper industry, Kuantum Papers Ltd is currently planning implementation of following upgradation, modernization and expansion plan to enhance the profitability and improve the ecological footprint of the company. The total estimated project cost of the project is Rs 337 Crores. More than 45% of this estimate will be spend towards implementation of Environmental Management Plan.

Tables below summarise the Plan for Upgradation, Modernization and Expansion of the Existing Project:

S.No.	Particulars	Existing Installed Capacity EC No: J- II01/344/2008-IA-II(I) dated Jan 1, 2009	Proposed Expansion in Installed Capacity	Total Installed Capacity after Proposed Expansion
1	Paper	450 TPD	0	450 TPD
2	Agro-Pulp	165TPD	0	165TPD
3	Hard Wood Pulp	60 TPD	140TPD	200 TPD
4	Pulper for Waste Paper/ Purchased Wood Pulp	20 m3	0	20 IT13
5	Conventional Chemical Recovery Plant	230 T Black Liquor Solids per day for Caustic Soda Recovery, FBR Soda Ash Recovery Plant with capacity of 100 T Black Liquor Solids per day, Lignin Precipitation System (LPS) Plant to recover 25 MT Lignin Per day	350 T Black Liquor Solids per day	580 T Black Liquor Solids per day, Existing FBR Soda Recovery Plant will be kept as stand by plant for planned and unplanned shuts of CRP. LPS Plant will be operated based on marker demand of Lignin.
6	Co-generation Power	17.5 MW	12 MW	28 MW (Existing 1.5 MW Turbine will be abandoned)

The main highlights of the upgradation and modernization plan are:

- i. Addition of Oxygen Delignification (ODL) stage in the existing agro-pulping Street. Modification in the agro street bleach plant to upgrade the bleaching sequence from existing XCEopHH to XC/DEopHH for substitution of elemental chlorine with chlorine dioxide.
- ii. Elemental chlorine free (ECF) wood pulping street. The existing bleaching sequence is XCEopHH. After up gradation, the bleaching sequence will be ODL followed by EDoEopDi. Existing 60 TPD wood street will be utilized to debottleneck agro-pulping washing street.
- iii. One more Chemical Recovery plant with 350 MT Black Solids/day Capacity will be installed enabling the mill to process entire black liquor in conventional Chemical Recovery Plant. Existing 230 MT/day capacity conventional CRP and proposed new 350 MT /day capacity conventional chemical recovery plant will be operated after expansion to regenerate white liquor. FBR Soda Ash Recovery Plant will be kept as a stand by plant.

In addition to the aforesaid modification, PP has also requested for the change of company name

The Committee decided that since the capacity of plant is nearly doubling, Public Hearing is required for the proposed expansion along with preparation of an EIA-EMP Report. 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-4.

- i. P.H. shall be conducted by the Punjab Pollution Control Board as per the generic TOR.
- ii. Details of Phasing out of Chlorine and Plan for chemical recovery of black liquor.
- iii. Advanced odour control measures and plan for Odour Control
- iv. Sulphite Recovery
- v. Baseline data for post-monsoon could be started in September 2014.

The aforesaid TOR would be issued after completion of the process of change of name from ABC Paper Ltd to Kuantum Papers.

23.11 Any Other Items

23.11.1 Extension of validity of EC for the proposed Integrated Steel Plant (3 MTPA) of M/s NMDC Limited at District: Bastar, C.G (Extn. of validity of EC - J-11011/681/2008.IA.II(I) dated 15.09.2009)

NMDC is constructing 3 MTPA Integrated Steel Plant at Nagarnar, Bastar Dt, Chhattisgarh after receipt of all statutory clearances. The project is located at 16 km away from Jagdalpur town in North East direction at Nagarnar, Dt: Bastar, C.G. The total acquired area is 721.58 Ha. Private land is 536.29 Ha, Government land is 155.82 Ha and Forest land is 25.72 Ha. Land acquisition completed in the year Aug'2010 and entire land is in possession of NMDC. The approved Project Cost is Rs.15,525 crores. Total value of work awarded till date is Rs.13,716 Cr. Total Expenditure up to Aug- 2014 is Rs.5,057 crores.

NMDC received Environmental Clearance from MoEF for setting up of 3.0 MTPA Integrated Steel Plant at Nagarnar, Bastar Dt, C.G. vide letter no: J-11011/681/2008.IA.II(I) dated 15/9/2009. Consent for Establishment (CFE) from CECB, Raipur was obtained vide letter no: 3047/TS/CECB/2010 dated

28/8/2010. The project area involves 25.72 Ha forest land. Final Forest clearance was obtained from MoEF, RO, Bhopal vide letter dated 6/5/2011.

The Capacity (Liquid Steel) of the plant is 3 MTPA and that of Finished Steel Products 2,896,000 t/yr (HR coils/sheets/plates). Coke Oven & CDCP is 7 Mtr Tall Batteries, 2 nos. Sinter Plant is 460 Sqm, 1 no. The Blast furnace has a capacity of 4500 Cum useful volume, 1 no. Pig Casting Machine of 1700 tpd, 3 machines. Steel Melting Shop 2 x175 T BOF Converters.

The Committee recommended the extension of validity of EC for the further period of 5 years. The Committee advised the proponent to start plantation at the site all along the periphery of the site wherever possible.

23.11.2 Expansion of Sponge Iron Plant into Mini Steel Plant (Sponge Iron Plant 100 TPD; Induction Furnaces 2x10 TPD; Ladle Furnace 1x12 TPD; Continuous Billet Casting Machine 70,000 TPA, Bar & Rod Mill) and Captive Power Plant (10 MW) of M/s Dhruvdes Metasteel Pvt. Limited at Hirenbangal, Koppal, Karnataka (Amendment in the capacity of Production by use of pellets instead of lumps) (Letters dated 14.07.2014 and 18.08.2014) for correction in minutes of 20th EAC meeting held in June 2014)[J-11011/391/2007-IA-II(I)]

The project proponent did not attend the meeting.

The Committee discussed the two letters dated 14.07.2014 and 18.08.2014. After deliberations, the Committee sought the production details of the past 3 years of operation for the aforesaid project for which amendment in EC is being sought. The Committee decided to consider the proposal as and when requested by the proponent, in which PP is requested to attend.

23.11.3 Expansion of IISCO Steel Plant (ISP) (0.55 MTPA to 2.50 MTPA), Rebuilding of Coke Oven Battery No. 10 and setting up of a Captive Power Plant (87.5 MW) and other facilities of M/s Steel Authority of India, at Burnpur, Asansol, West Bengal (Further consideration of Amendment in EC) [J-11011/348/2006-IA-II(I)]

Environmental Clearance to the aforesaid proposal was accorded vide F.No.J-11011/348/2005-IA.II(I) dated 7.8.2007. Thereafter, Ministry vide letter dated 14.11.2013 extended the validity of the EC dated 7.8.2007 for a period of five years with effect from 6.8.2012 subject to the environmental safeguards. PP vide letter dated 9.6.2014, has sought minor changes in the EC dated 07.08.2007. The proposal was considered in the 22nd EAC(I) meeting held on 30th July -1st August 2014.

2. PP made a presentation before the Committee. The changes sought by the PP are as summarised as below:

SN	Facilities	As per the EC Granted	EC amendment proposed	Remarks
1	Crude Steel	2.5 mtpa	2.5 mtpa	No change
2	Finished Steel	2.28 mtpa	2.30 mtpa	No change in input. Increase in output due to better yield
3	Existing Heavy Structural Mill	To increase production to 150,000 TPA	Phased out (Production stopped from 01.04.2014)	Obsolete Energy intensive unit phased out. (Commissioned - 1939)

SN	Facilities	As per the EC Granted	EC amendment proposed	Remarks
4	Existing Merchant and Rod Mill	To increase production to 180,000 TPA	Phased out (Production stopped from 01.04.2014)	Obsolete Energy intensive unit phased out. (Commissioned - 1960)
5	Existing Light Structural Mill	To increase production to 100,000 TPA	Phased out (Production stopped from 01.04.2014)	Obsolete Energy intensive unit phased out. (Commissioned - 1939)
6	New Heavy Section Mill	A new mill of capacity 600,000 TPA	New Universal Section Mill to produce 850000 TPA	Capacity of phased out unit have been built in without increasing total input. Output increases due to better yield.
7	New Wire and Rod Mill	A new mill of capacity 1,250,000 TPA producing both Wire and Bars	Wire Rod Mill: 550000 TPA Bar Mill: 900000 TPA	Capacity of phased out unit have been built in without increasing total input. Output increases due to better yield.
8	Existing Oxygen Plant	Oxygen Plant of 1x50 TPD	Phased out (Production stopped from 21.12.2008)	Obsolete Energy intensive unit phased out.
9	New Oxygen Plant	Oxygen Plant of capacity 2x750 TPD on BOO basis	Oxygen Plant of capacity 2x750 TPD by SAIL-ISP	No change in capacity. Change in ownership
10	Gross Coke Production	1.5517 mtpa	1.5517 mtpa	No Change
	A) Existing Coke Ovens	Rebuild Battery No. 10 Coke oven Battery No.8 (half Battery operation as per EIA)	Rebuild Battery No. 10 Coke Oven Battery No. 8 (full Battery operation)	No change in production
	B) New Coke Ovens	New Battery No. 11 (7 m tall Battery with Coke Dry Quenching)	New Battery No. 11 (7 m tall Battery with Coke Dry Quenching)	No Change

It was submitted by the PP that the proposed changes will lead to overall improvement in quality of products, environmental performance, yields and energy efficiency. The total Crude steel production shall be within 2.5 MTPA as per the EC granted.

After detailed deliberations, the Committee had sought specific details with respect to the following:

- (i) Extent of changes in pollution load due to the proposed changes in configuration.
- (ii) Changes in input characteristics of the products
- (iii) Changes in effluents characteristics
- (iv) Solid waste generation details
- (v) Fuel and power consumption details

PP has vide letter dated 14.08.2014 responded with details, which were taken up for consideration.

a. Total and Specific Power Consumption (as accorded EC vis-à-vis after proposed amendment)

SN	Units as per the Requested Amendments in EC	Power Consumption (MVA)					
		As Considered at EC Stage		As per the Requested Amendments in EC		Net Change	
		MVA	MW	MVA	MW	MVA	MW
	Power Consumption						
1	Sinter Plant	22	18.7	22	18.7	-	-
2	Oxygen Plant	-	-	34*	28.9*	+34*	+28.9*
3	Blast Furnace +CDI+GCP	22	18.7	22	18.7	-	-
4	Centralised Compressed Air Station	14	11.9	14	11.9	-	-
5	CO+BP+BOD	7	5.95	7	5.95	-	-
6	BOF + CCP	40	34	40	34	-	-
7	USM	22	18.7	26	22.1	+4	+3.4
8	Wire Rod + Bar Mills	24	20.4	30	25.5	+6	+5.1
9	RMHS	7	5.95	7	5.95	-	-
10	WTP, RMHS Office	7	5.95	7	5.95	-	-
11	LDCP RMHS Intake Water	12	10.2	12	10.2	-	-
12	Existing Plant+Township	31	26.35	19	16.15	-12	-10.2
13	Auxiliary	6	5.1	6	5.1	-	-
	Total	214	181.9	246	209.1	32	27.2
	Specific Power Consumption KWH/TCS		583 (excluding Oxygen and Township)		679 (including Oxygen Plant but excluding Auxiliary and Township)		
The power requirement for New Oxygen Plant was not considered under ISP scope at EC stage, as the plant was considered to be operated on BOO basis. ** specific power consumption excluding oxygen plant is 577.5 KWH/TCS							

b. Total and specific water Consumption (as per accorded EC vis-à-vis after proposed amendment)

SN.	Water Requirement	As Considered at EC Stage	As per the Requested Amendment in EC	Net Change
1	Total Water requirement (MGD)	23	22.945	Reduced
2	Specific Water Consumption (m3/tcs)	4.8	4.7	2% reduction

	CREP Guidelines for Specific Water Consumption (m3/tcs)	5.0	5.0	
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- c. **An undertaking by ISP in respect of change in ownership of new oxygen plant stating that ISP shall be responsible for complying all conditions liabilities & legal provisions contained in EC.**

Details of undertaking taken has been provided

- d. **Handling and disposal of the residual of the RO Unit**

All RO rejects will be collected and treated for recovery of water and the rejects will go to evaporator and dried salt will be disposed at TSDF facilities at Haldia, West Bengal.

After detailed deliberations, the Committee recommended the amendments sought by PP as above.

23.11.4 Expansion of Bokaro Steel Plant (from 4 MTPA to 7 MTPA) of Crude Steel production, of M/s Steel Authority of India (Amendment of EC J-11011/99/2007-IA.II(I) dated 16.10.2008)

Environmental Clearance (EC) for the above proposal was accorded by MoEF on 16.10.2008 for Expansion of Bokaro Steel Plant from 4.0 MTPA to 7.0 MTPA crude steel production vide memo no. J-11011/99/2007-IA II(I) dated 16.10.2008. Extension of the EC was accorded by MoEF for a period of 5 years w.e.f. 15.10.2013 vide memo no. J-11011/99/2007-IA II(I) dated 24.01.2014 until 14.10.2018.

PP has requested for an amendment of EC for upgradation of Sinter plant #1 and addition of one new Sinter plant and continuation of existing SMS-I with reduced capacity and state of art pollution control facility at Bokaro Steel Plant for production of crude steel within the provisions of the EC already accorded by MoEF.

The modifications sought are given below:

Facilities	As per EC Granted	EC amendment proposed	Remarks
Hot Metal	7.5 MTPA	5.77 MTPA	Reduction
Crude Steel	7.0 MTPA	4.606 MTPA	Reduction
Steel Melting Shop Complex	7.2 MTPA	4.606 MTPA	Production will be less than for which EC was granted. Pollution load will reduce
	SMS-I (cap.1.5MTPA) will be phased-out	SMS-I will be modified to produce 1.306 MTPA	
	SMS-II, capacity will be augmented to 3.3 MTPA	No Change	
	New SMS-III of capacity 3.9 MTPA will be installed	Installation of new SMS-III deferred	

Sinter Plant Complex	<p style="text-align: center;">8.9 MTPA</p> <p>By up-gradation of existing 3 nos. of Sinter M/Cs to 3x312² m² from 3x252 -working area</p>	<p style="text-align: center;">8.7 MTPA</p> <p>By up-gradation of only 1 no. of Sinter M/c to 312 m² and installation of new 3.7 MTPA Sinter Plant(1x 360m²)</p>	Production will be less than for which EC was granted. Pollution load will reduce
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PP has stated that the aforesaid modifications in the environmental clearance conditions will help improve with installation of new Sinter Plant with state-of-the-art technology and modern pollution control facilities including Waste Heat Recovery, instead of up-gradation of the existing Sinter Machines. Up-gradation of only one sinter machine instead of all the three existing sinter machines (as proposed at EC stage) implies lesser impact on the environment due to comparatively lesser environmental performance of retrofitted units.

Installation of following pollution control facilities in the modified unit of SMS-I:

- i. New convertor with recovery of BOF gas, to be used as fuel.
- ii. No stack emission in normal operation.
- iii. Secondary emission
- iv. control facility
- v. Energy efficient slab casters

After up-gradation and stabilization of SMS-I, the energy inefficient ingot route will be phased out.

After detailed deliberations, the Committee recommended the project for amendment of EC as proposed above.

23.11.5 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

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

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

**LIST OF PARTICIPANTS OF EAC (I) IN 23rd MEETING OF EAC (INDUSTRY-I) HELD ON
18th-19th SEPTEMBER 2014**

S.N.	Name		
1	Shri M. Raman	Chairman	A
2	Shri R.K. Garg	Vice-Chairman	P
3	Prof. R.C. Gupta	Member	P
4	Dr. Prem Shankar Dubey	Member	A
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 st Day Forenoon)
10.	Dr. Antony Gnanamuthu	Member	P
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjan Raghunath Raje	Member	A
MOEF Representatives			
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 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 NABET accreditation.
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 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB 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 and AAQ data (except monsoon) at 8 locations for PM₁₀, PM_{2.5}, SO₂, NO_x, 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 16th November, 2009 and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
22. 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.
23. Surface water quality including trace elements of nearby River (60m upstream and downstream) and other surface drains at eight locations to be provided.
24. Ground water monitoring including trace elements at minimum at 8 locations shall be included.
25. Noise levels monitoring at 8 locations within the study area.
26. Coal Characteristics – of indigenous and imported coal to be used in the project in terms of Calorific value, ash content and Sulphur content.

27. 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.
28. 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.
29. Emissions (g/second) with and without the air pollution control measures.
30. 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.
31. 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.
32. Details of water requirement, water balance chart for new unit or for existing unit as well as proposed expansion (in case of expansion).
33. Source of water supply and quantity and permission of withdrawal of water (surface/ground) from Competent Authority.
34. 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.
35. 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.
36. Action plan for control of ambient air quality parameters as per NAAQM Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x, etc as per GSR 826(E) dated 16th November, 2009.
37. 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 30th May, 2008.
38. 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.
39. 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.
40. 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.
41. 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.
42. 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.
43. 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.
44. Action plan for post-project environmental monitoring shall be submitted.
45. Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control needs to be addressed and included.
46. 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.
47. 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
48. 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.
49. 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.
50. 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.
51. The questionnaire for industry sector (available on MOEF website) shall be submitted as an Annexure to the EIA-EMP Report.
52. '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 the form of 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.
53. A tabular chart with index for point wise compliance of above TORs.
54. 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).

55. 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 4th August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

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. For major Pulp and Paper Units, 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.
- 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/Casurina 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. A commitment that no extra bleaching chemicals (more than being used now) will be employed and AOX will remain within limits as per CREP for used based mills.
