

**Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)**

SUMMARY RECORD OF THE NINTH (9th) MEETING OF EXPERT APPRAISAL COMMITTEE HELD ON 27TH JULY TO 29TH JULY, 2016 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The ninth meeting of the Expert Appraisal Committee (EAC) for Industry-I Sector in terms of the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held on 27th – 29th July, 2016 in the Ministry of Environment, Forest and Climate Change. Dr. Jagdish Kishwan, Member informed that due to prior commitment he could not attend the meeting. The list of participants is annexed herewith.

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

Confirmation of the minutes of the 8th Meeting

The minutes of the 8th meeting, as circulated were confirmed.

9.3 ENVIRONMENTAL CLEARANCE (EC)

9.3.1 Expansion of Cement Plant (clinker – 4.06 MTPA to 5.30 MTPA, Cement 6.10 MTPA to 9MTPA, Power (35 to 52.5MW) of M/s Mangalam Cement Ltd. at vill. Morak, Tehsil Ramganj Mandi, Dist.Kota, Rajasthan. [F. No. J-11011/30/2007-IA.II(I) Pt.]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/s B .S. Envi – Tech Pvt. Ltd) gave a detailed presentation on the salient features of the project. The application was initially received in the Ministry on 15.10.2014 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC (I)] during its meeting held on 14.11.2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment and Forests had prescribed TORs to the project on 31.12.2014. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 06.06.2016.

The project of M/s Mangalam Cements Limited, located at Village Morak, Tehsil Ramganj Mandi, District Kota, State Rajasthan is proposing to increase the clinker production from 4.06 MTPA to 5.30 MTPA and cement production from 6.10 MTPA to 9.0 MTPA by optimization of unit I& II and upgrading capacity of Unit III and increase of power generation from 35 to 52.5 MW. The entire Cement Plant is located in an area of 167 ha. No additional area will be required for expansion. The land is already in possession of MCL since long and hence no R&R is involved or required. No Forest area is involved. Darrah Wildlife Sanctuary (also known as Game Sanctuary) is located at a distance of 7.5 to 8.0 km in NE direction.

The topography of the area is Flat terrain situated between 24°43'21.73" to 24°42'51.76" N latitude & 75°56'32.29" to 75°57'32.78" E longitude in Survey of India topo sheet No. 45/P/4, at an elevation of 350m AMSL. The ground water table is reported to be 3m to 8m below the land surface during the post-monsoon season and 15m to 22m below the land surface during the pre-monsoon season. Based on results of hydro geological survey conducted in the area, it appears that ground water occurs in water table condition in weathered sedimentary rock and the area is designated as critically exploited area. No Schedule-I species was sighted in the core zone. It has been mentioned by PP that all the direct sightings of the peacock were located near the human dominated and forest areas. Following table shows the existing and the proposed facility:

Cement Plant	Present Consented Capacity as per MoEF&CC (EC Obtained)			Capacity after proposed enhancement (EC Requested)		
	Clinker (MTPA)	Cement	Power (MW)	Clinker (MTPA)	Cement	Power (MW)
	Unit –I	0.99		1.70	35	
Unit –II	1.32	2.30	1.40	2.37		
Unit –III	1.75	2.10	2.00	3.41		
Total	4.06	6.10	5.30	9.00		

The targeted production capacity of the Clinker is 5.30 million TPA and cement is 9.0 Million TPA. The limestone for the plant would be procured from the Captive mines. The limestone transportation will be done through Conveyor. The present water requirement of the plant including colony is about 3192 m³/day. Additional water requirement for proposed expansion is 500 m³/day. Water for the plant is sourced from Mine pit. No ground water extraction is proposed for the existing and the proposed facility.

Cement plant is having a dedicated 132 KV overhead line from Rajasthan State Electricity Board (RSEB) power grid and 35 MW Captive Thermal Power Plants with in the cement plant for uninterrupted power supply. Same power is being supplied to the mine also. A new Power Plant of 17.5 MW will be installed with all necessary infrastructure.

Ambient air quality monitoring has been carried out at 8 locations during Summer Season – 2015, covering the months of March - May 2015 and the data submitted indicated: PM10 (64.5µg/m³ to 70.1µg/m³), PM2.5 (34.1 to 38.3 µg/m³), SO₂ (10.2 to 11.4 µg/m³) and NO_x (13.5 to 14.5 µg/m³). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 7.7 µg/m³ with respect to the PM10, 12.5 µg/m³ with respect to the SO₂ 13.6 µg/m³ with respect to the NO_x.

It has been reported that there are no habitation in the core zone of the project. No/ R&R is involved. It has been envisaged that no families to be rehabilitated, which will be provided compensation and preference in the employment.

There is no waste generation from the project. Flyash generated from the proposed power plant will be utilized for Cement production. 57.40 ha has been developed as green belt around

the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

It has been reported that the Consent to Establish from the Rajasthan State Pollution Control Board had been obtained.

The Public hearing of the project was held on 06.04.2016 at the office of Sub Divisional Officer, Ramganjmandi, District Kota chaired by Additional District Collector (Adm) Kota. The issues raised during public hearing are on CSR activities to be continued & employment provision for locals.

The capital cost of the project is Rs 637.5 crores and the capital cost for environmental protection measures is proposed as Rs 65 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 38.82 crore. The proponent has mentioned that there is no court case to the project or related activity.

The Committee took a note that the high volume sampler for collecting the air quality data were not kept near the Wildlife Sanctuary which is within the 10 km radius of the plant boundary. The Committee advised that while granting the final EC, a specific condition should be prescribed that two High Volume Samplers should be installed at the boundary of the wild life sanctuary suitably to continuously monitor the parameters and maintain records. These records shall be submitted along with the 6 monthly compliance report submitted to the Ministry's Regional Office.

Based on the presentation made and discussions held, the Committee desired additional information on the following for further consideration of the proposal:

- i. A detailed green belt development plan indicating the exact location for plantation and plant species should be submitted. In the Public Hearing, the PP committed that they will identify the land outside the project area, however, identification of such land has not been taken up by PP. They should identify the land and submit the details.
- ii. All capacities shown in the presentation for cement and clinker should be indexed and linked with the EC letter clearly indicating what capacity has got clearance w.r.t. which EC letter.
- iii. Power consumption per unit ton of clinker and cement production should be estimated and submitted.
- iv. Environment Management Plan related to proposed expansion proposal is vague and quantitative details about the environmental control measures were not given by the PP. Therefore it was not possible to take a view as to whether their proposal is environmentally sound or not. Therefore the PP was asked to submit the revised EMP for the proposed project.
- v. The present level of PM₁₀ is already very high in the air. The PP informed that they are the only industry in radius of 10 kilo meters. On further discussions the PP informed that there are number of small stone crushers and marble grinding unit in the area probably the high level of PM₁₀ is due to these crushing and grinding activity. The committee however felt that the existing ESPs should be upgraded and number of existing bag-filters should be reviewed through an adequacy analysis and the

shortcomings in the pollution control measures arrived from the analysis should be immediately acted upon.

9.3.2 Expansion of Metallurgical Unit at MIDC, Ph-II, Aurangabad, Daregaon, Jalna Maharashtra by M/s Om Sairam Steel and Alloys Pvt. Ltd. [F. No. J-11011/57/2015-IA.II(I)]

Consideration of the proposal was deferred on the request of the Project Proponent.

9.3.3 Regularization of existing 6,00,000 TPA Iron Ore Pelletization Plant and expansion by adding 10 Nos Coal Gasifier Plant (Fuel Replacement for Pellet Plant) – 27,46 Nm³/Hr. and Expansion of Iron Ore Grinding Unit to Iron Ore Grinding & Beneficiation Plant – 10,00,000 TPA”, Chhattisgarh by M/s Sarda Energy & Minerals Ltd. [F. No. J-11011/45/2012-IA.II(I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/S Pollution and Ecology Control Services (PECS), Nagpur) gave a detailed presentation on the salient features of the project. The application for the proposal was initially received in the Ministry on 03rd December 2014 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during 35th Meeting held on 26th-27th March 2015 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining Environmental Clearance. Accordingly, the Ministry of Environment and Forests had prescribed TORs to the project on 7th July 2015. Based on the TORs prescribed to the project, the project proponent submitted an application for Environmental Clearance to the Ministry online on 4th June 2016.

The project of M/s Sarda Energy & Minerals Limited located at Phase 1 of Siltara Industrial Growth Centre, Village – Mandhar, Raipur is for regularization of their 0.6 MTPA Iron Ore Pellet Plant (operational) along with installation of 10 numbers Coal Gasifier to produce 27,046 Nm³/Hr of producer gas (Fuel replacement for pellet plant) and Expansion of 7,00,000 TPA Iron Ore Grinding to 10,00,000 TPA Iron Ore Grinding & Beneficiation Plant. The existing and expansion project is located on 24.024 ha land out of the total 204.452 ha which is in industrial area. No forestland involved. It has been reported that no water body exist around the project. The topography of the area is flat and fall between 21^o20'42.57" N to 21^o20'36.22" N Latitude and 81^o41'10.57" E to 81^o41'48.24" E Longitude in Survey of India topo sheet No. 64 G/11, at an elevation of 282m MSL. The pre-monsoon ground water level in the district varies from 1.69 to 13.97 meters below ground level with an average value around 5 to 8 meters below ground level and the post-monsoon water level varies from 0.87 to 7.05 meters below ground level with an average around 2 to 5 meters below ground level.

No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located within the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The list of flora and fauna is provided in Chapter 3 of the EIA Report.

The proposed project is for regularization of their 0.6 MTPA Iron Ore Pellet Plant (operational) along with installation of 10 numbers gasifier to produce 27046 Nm³/Hr of producer gas(Fuel replacement for pellet plant) and Expansion of 7,00,000 TPA Iron Ore

Grinding to 10,00,000 TPA Iron Ore Grinding & Beneficiation Plant. The ore for the plant would be procured from 30% Captive Mines Rajnandgaon, 70% NMDC (Bacheli, CG)/Local Market. The ore transportation will be done through by road & rail.

The water requirement of the project is estimated as 1582 m³/day which will be obtained from Kharoon River (2 MGD + 1.25 MGD water has been allocated by Water Resources Dept, GoCG). The power requirement of the project is estimated as 8614 KW, which will be obtained from the CSPDCL & Captive Source.

Ambient air quality monitoring has been carried out at 8 locations during 07th November, 2014 – 06th February, 2015 and the data submitted indicated: PM₁₀ - 36.2 to 69.4 µg/m³, PM_{2.5} - 17.9 to 35.9 µg/m³, SO₂ - 8.1 to 23.8 µg/m³ and NO_x - 10.4 to 33.3 µg/m³. The result of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.522 µg/m³ with respect to the PM₁₀, 0.604 µg/m³ with respect to the SO₂, 0.555 µg/m³ with respect to the NO_x.

The major solid wastes for existing Pellet Plant is ESP & Bag filter collected dust and for proposed expansion it will be Ash, Tar, and Tailings etc. The fines collected from the material handling and dust collected in the pollution control equipment is recycled as raw material in the pellet plant. The tar Generated from Coal Gasifiers will be sold in the market to Authorized Vendors, whereas the generated ash will be utilized in brick plant. The proponent has informed the committee that the tailing generated from Iron Ore Grinding and Beneficiation plant will be utilized for making bricks Blocks, Tiles, Pavers, etc and also sold to Cement Plant.

It has been reported that the Consent to Establish and Consent to Operate for 0.6 MTPA Iron Ore Pellet Plant along with grinding unit is obtained from the Chhattisgarh State Environment Conservation Board.

The capital cost of the project is Rs. 31665 Lakhs and the capital cost for environmental protection measures is proposed as Rs. 1550 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 150 Lakhs. The proponent has mentioned that there is no court case to the project or related activity.

The Committee is of the opinion that, as per NGT order, the court has directed the existing pelletization units to apply for regularization of their units. However, the present proposal is for regularization of the existing pellet plant as well as expansion by adding 10 Nos Coal Gasifier Plant (Fuel Replacement for Pellet Plant) – 27,46 Nm³/Hr and expansion of Iron Ore Grinding Unit to Iron Ore Grinding & Beneficiation Plant – 10,00,000 TPA. The Committee advised the PP that a separate application should be made for expansion proposal. Presently the committee will provide its recommendations for the existing pellet plant.

Based on the presentation made and discussions held the Committee recommended the project of regularization of existing 6,00,000 TPA Iron Ore Pelletization Plant for environment clearance subject to stipulation of the following specific conditions and any other mitigative measures, as prescribed by the Ministry for environmental protection:

- i. The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.

- ii. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology.
- iii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- v. The PP shall install scrubber or upgrade the existing scrubbers within one year to reduce SO_x emission which will be verified by the regional office.
- vi. Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- vii. The internal roads should be designed such that the fire tenders should reach upto 10 meters of any unit.
- viii. 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
- ix. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent.
- x. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.
- xi. A time bound action plan shall be submitted for reduction in solid waste, its proper utilization and disposal.
- xii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Chennai.
- xiii. A Risk and Disaster Management Plan 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.

- xiv. Green belt shall be developed in at least 33% of the project area by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines. The green belt should be developed within 1 year time form the date of grant of Environmental Clearance.
- xv. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.
- xvi. The proponent shall prepare a detailed CSR Plan for every year for the 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. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company. The plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included.
- xvii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xviii. The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xix. The project proponent shall provide for LED lights in their offices and residential areas.
- xx. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

9.4 FURTHER CONSIDERATION

9.4.1 Expansion from 3,45,000 TPA of Pig Iron Production to 5,00,000 TPA Hot Metal production and 10 MW waste heat recovery power plant of M/s Tata Metaliks Limited at Gokulpur village, PO Samraipur, Tehsil Kharagpur, District Pashchim Medinipur, West Bengal. - [J-11011/377/2013-IA.II(I)]

The proposal was initially considered in the 33rd EAC meeting held on 10th – 11th February, 2015 and the Committee recommended the proposal. However, the Ministry decided that a site visit should be conducted by the regional office and a compliance report should be submitted to the Ministry.

The proposal was considered in the 43rd meeting of the Expert Appraisal Committee held on 2nd – 3rd July, 2015 and again in the 1st meeting of REAC held on 18th – 20th November, 2015. It was decided that since the site visit was recommended in the meeting, the regional office should conduct a site visit afresh and the report of compliance should be submitted to the Ministry for further consideration of the proposal.

Accordingly a site visit was conducted on 18th May, 2015 and the Regional Office submitted the report to the Ministry.

Based on the presentation made and discussions held on the compliance report submitted by the regional office of the Ministry, the Committee recommended the project for environment clearance subject to stipulation of the specific conditions and other mitigative measures, as prescribed by the Committee in the 33rd EAC meeting held on 10th – 11th February, 2015.

9.5 ANY OTHER ITEM

9.5.1 Ferro Alloys and Steel Plant of M/s Sarda Metals & Alloys Ltd. at Sy.No. 179, 181-183, 185-203 of APIIC Industrial Area, Village Kantakapalli, Mandal Kothavalasa, Dist. Vizianagaram, A.P.- Extension of validity of EC[J-11011/164/2009-IA.II(I)]

The above proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) in its 29th EAC meeting held during 11th -12th December, 2014. It was noted that environmental clearance for the above proposal was granted on 26.11.2009 for the following three phases of implementation. PP has implemented phase – I of the project however phase – II and phase – III of the project is yet to be implemented. It has been mentioned that phase – II shall be completed by 2017 and phase – III by December, 2019.

S.No.	Facilities	Phase-I	Phase-II	Phase-III
	Unit-I			
1	Ferro Alloys	1 x 33 MVA (75,000 MTPA)	1 x 33 MVA (75,000 MTPA)	—
2	Sinter Plant	1 x 24 m ² (1,25,000 MTPA)	—	—
	Unit-II			
3	Thermal Power Plant	1 x 60 MW	1 x 60 MW	2 x 60 MW
	As per revised configuration of Power Plant MEF Letter dtd.04.05.2010	1 x 80 MW	1 x 80 MW	1 x 80 MW

	Unit – III			
4	Coke Oven with Stamp charging	2,00,000 MTPA	---	2,00,000 MTPA
5	Spong Iron Plant	--	2 x 500 TPD (3,00,000 MTPA)	
6	Blast Furnace (1 x 350 m ³)	--		2,50,000 MTPA
7	Steel Melting Shop Induction furnace (5x15 T) Arc Furnace (1x40 MT)			2,50,000 TPA 2,50,000 TPA
8	Rolling Mills	--		4,50,000 MTPA
9	Iron Ore crushing Plant	--		6,00,000 MTPA
10	Pellet Plant	--		6,00,000 MTPA
11	Railway Siding	--		

Phase-III is proposed in the next 5 years. PP has sought extension of EC for completion of Ph.III of the project. It was informed that 100% of the land is in possession. Cost of the project is Rs 1000 crores.

The Committee after deliberations recommended for extension of validity of EC for a period of 5 years with effect from 26.11.2014; however copies of CTO for Phase-I and Phase-II should be provided. The Committee also recommended for calibration of AAQ stack emission analyser to be checked and data to be furnished. The Committee observed that green belt has not been adequately developed and a green belt of 15-20 meters wide should be developed all along the periphery of the plant. The Committee desired that 2.5% (Rs 50 crores) of the total cost of the project be implemented for Phase.II and Phase-III of the project and a detailed CSR Plan are prepared in consultation with the villagers and the district administration for the Phase-II and III of the project.

The Ministry has accepted the recommendation of the REAC (Industry). However, it has been decided to extend the validity of the EC dated 26.11.2009 for period of two years at present with effect from 26.11.2014 subject to the environmental safeguards. Accordingly a letter was issued on 5th March, 2015

The Committee after detailed deliberation recommended the proposal for extension of validity of EC for the further period of 3 years w.e.f 26.11.2016

9.5.2 Integrated Steel Plant 6 MTPA capacity of M/s Tata Steel Ltd. located at Kalinganagar, Insuarial Complex, Duburi, Dist. Jajpur, Odisha. – Extension of time for compliance to Specific Condition [J-11011/7/2006-IA.II(I)]

The Environmental Clearance for the 6 MTPA Integrated Steel Plant, at Kalinganagar was accorded by the Ministry vide letter no J- 11011/7/2006-IA.II (I) on 7.11.2006 & amended vide letter dated 10.10.2012 for setting up the plant in 2 phases. Further, the Ministry extended the validity of Environmental Clearance letter No. J-11011/7/2006-IA-II(I) dated 07.11.2006 for a period of 5 years with effect from 7.11.2011 i.e. upto 6.11.2016 with the following amendments in the EC letter:

- i. For Wet quenching: permission to start the coke ovens with wet quenching till the CDQ is stabilized by June 2016, thereafter maintain wet quenching as a standby and use for 20 days (3 weeks) in a year or per annum for maintenance or operational exigencies.
- ii. For LDO: Use of LDO for generation of power in power plants and DG till Blast Furnace gas is available for power generation in power plants and thereafter maintain LDO as "Standby" and use for a 15 days (two weeks) per annum for maintenance or operational exigencies.

It has been mentioned by the PP that subsequent to the above approvals, individual units of steel plant were commissioned after obtaining SPCB permission from Sept. 2015 starting with Coke Plant, then HSM, Sinter Plant, Blast Furnace, Air Separation Units, Steel Melting Shop. Commercial production started in June 2016. Construction for balance facilities for 6 MTPA are in progress.

Regarding installation of CDQ the proponent mentioned that the wet quenching system for Coke Ovens is in operating condition. Coke Dry Quenching unit construction is 95% complete and is being expedited. However, the PP could not get equipment supply from China in time which caused delay in completion of CDQ.

It was mentioned that the CDQ equipment are sourced from China through Japanese technology supplier (M/s. Nippon). A series of major explosions occurred at Tianjin seaport in China on 12th August 2015 killing over one hundred people and injuring hundreds of others. Tianjin port was closed and immediate resumption of the normal operations became uncertain. Which has resulted in delay of more than 6 months. Therefore the PP requested to extend the date of installation of CDQ upto November, 2016.

After detailed deliberation, the Committee recommended the proposal for installation of CDQ by November, 2016, i.e. before 6.11.2016.

9.5.3 Expansion of Cement plant (1800-6300 TPD) by Madras Cement Limited at Village Alathiyur, Taluk Sendurai, District Ariyalur, Tamil Nadu- Proposed Addition of 3rd and 4th Packer for Operational Advantage by M/s The Ramco Cements Ltd [F. No. J-11011/104/2016-IA II (I)]

The proposal was considered in the 5th EAC meeting held on 30th – 31st March, 2016. Based on the presentation made and discussions held, the Committee was of the opinion that setting up of 4th Packer of 180TPH capacity is only proposed to improve the dispatch schedule as well as supply networks. There is no increase in Clinker or Cement Production capacity of Alathiyur Cement Plant due to the addition of 4th Packer Proposal. Setting up of 4th Packer do not leads to capacity enhancement therefore the Committee decided that the proposal would not attract the provision of EIA Notification, 2006. Therefore, no clearance under Clause 7 (ii) of EIA Notification 2006 is required for the project.

The matter was examined in the Ministry and it was noted the general condition of Environmental Clearance letter mention that “no further expansion or modifications in the plant

shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC)". Therefore, the above proposal requires approval from the Ministry.

In view of the above the Committee appraised the proposal for the addition of 3rd and 4th Packer for Operational Advantage and recommended the proposal under Clause 7(ii) for amendment in the existing environmental clearance.

9.6 CASE FOR TERMS OF REFERENCE (TOR)

9.6.1 Proposed upgradation and modernisation of existing Coated Duplex Board/Kraft Board mill having 550 TPD capacity, by the way of installation of new De-Inking machine for the purpose of generating Secondary Grade Fibre using waste paper. Also Proposed usage of 100% coal as fuel in the existing 15MW Biomass based Co-gen Power Plant (CPP) of M/s Senthil Papers and Boards Pvt Limited, Village Ikkaraithapalli, Sathyamangalam Taluk, District Erode, Tamil Nadu. [J-11011/207/2016)-IA-II(I)]

The proposal was considered by the Expert Appraisal Committee to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 5(i), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s Senthil Papers & Boards Pvt Ltd. Ikkaraithapalli Village, Sathyamangalam Taluk, Erode District, Tamil Nadu has proposed upgradation and modernisation of existing coated duplex board/kraft board mill having 550 TPD capacity, by the way of installation of new de-inking machine for the purpose of generating secondary grade fibre using waste paper. Also proposed usage of 100% coal as fuel in the existing 15MW Biomass based Co-gen Power Plant (CPP) and as applied for obtaining ToR.

This unit has been started during the year 2004 and was operated in the name of M/s. Vaikunth Paper Boards Pvt Ltd, by the old Management with one paper board machine plant. In the year of 2006, the present Management had taken over this plant and operated in the name of M/s. Saradha Papers and Boards Pvt Limited. Subsequently in 2014, the name of the unit has been changed as Senthil Papers & Boards Pvt Ltd.

Senthil Paper and Boards manufactures different grades and types of paper boards based on the availability of the raw materials. As there is a shortage in the availability of raw materials, the company has decided to install a De-Inking Plant (120 TPD) consisting bleaching & colouring to sustain in the market and also all the bio mass fuels are seasonal and its arrivals are keep on changing by and large and supply level and also very inconsistent. Therefore to avoid plant shut due to fuel shortage and to offset it, the pp has proposed to have a cushioning of 100% coal usage option in 15MW biomass based Co-gen power plant. Therefore, it is proposed to utilize the 100% coal (630 TPD) in 15MW biomass based power plant. The present and the proposed capacities are mentioned in the following table:

Paper Machine	Existing Installed Capacity (TPD)	Proposed Installed Capacity (TPD)
Paper machine-1	15	No Change
Paper machine-2	250	No Change
Paper machine-3	285	No Change
De-inking Plant	-	120
Total	550	No Change

The plant water requirement will be met by River Bhavani and Groundwater. The additional water requirement of 500m³/day will be sourced from River Bhavani after obtaining separate consent letter from the PWD. The total water required for the plant after installing DIP will be 2875 m³/day.

The Committee deliberated on the issue of use of 100% coal in the CPP. It was decided by the Committee that the change of fuel should not be allowed for the existing bio-mass fuelled CPP.

After detailed deliberations the Committee recommended the proposal for grant of ToR for de-inking plant only and prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TORs enclosed at Annexure I read with additional TORs at Annexure-2 and Annexure - 11:

- i. Public Hearing to be conducted by the Tamil Nadu Pollution Control Board.
- ii. MOU signed between the company and the farmers should be submitted for the use of effluent for irrigation purpose.
- iii. Specific proposal for use of effluent water utilization
- iv. Contour map for the study area should be submitted.
- v. For de-inking sludge disposal, either MoU with the cement plant should be submitted or disposal plan with the TSDF.

9.6.2 Environmental Clearance for Expansion of our Integrated Steel Plant from 0.50 MTPA to 0.70 MTPA Steel at village Chaliyama in Saraikela' Kharswan District of Jharkhand by M/s Rungta Mines Limited.[J-11011/305/2012-IA-II(I)]

The proposal was considered by the Expert Appraisal Committee to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 3(a), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

The project proponent submitted request for Expansion of Steel Plant from 0.50 to 0.70 MTPA at village Chaliyama, Bankasai & Kuju of District Saraikela–Kharsawan, Jharkhand of M/s Rungta Mines Ltd. along with Form-I and Feasibility Report. The existing project area is 592.16 acres. No additional land will be required for the proposed expansion phase. No forest land is involved. No national park/ sanctuary is located within 15 Km. No displacement is involved. Forests present in the study area are Chuka pahar and Gidi Pahar PF (10.9 km), Tiring

PF (12.7 km), Jerai PF (12.9 km), Gobra Buru pahar PF (5.2 km), Kokcho PF (10.5 km), PF near Sini Village (9.0 km), PF near Utangsahi village (9.05 km), Sahedba RF (13.4 km). Kharkai river (0.20 km), Roro Gara (2.1 km), Sona Nadi (7.6 km), Sona nala (8.7 km), Lor Gara nala (0.1 km), Illi gara (5.4 km), Hon Gara (6.3 km), Chirchi nala (9.5 km), Bengra nala (10.7 km), and Gumua gara (11.8 km) are present within study area. Nearest city is Chaibasa at a distance of 12 km by road. The site falls in Seismic zone-I.

The manufacturing facilities for which EC was granted vide MOEFCC letter no. J-11011/838/2007-IA.II (I) dated 04.11.2008 and letter no. J-11011/305/2012-IA.II (I) dated 01.04.2016 and proposed manufacturing facilities for expansion of integrated steel plant from 0.5 to 0.7 MTPA is indicated in the following table.

Sl. No.	Plant/ facility	Units	Present sanctioned capacity as per EC dated 01.04.2016	Additional Proposed capacity	Total capacity
1	DRI plant	MTPA	0.450	0.17	0.62
2	Mini blast furnace	MTPA	0.383	0.075	0.458
3	Steel melting shop, IF (15T x 8 nos.) LRF (20T x 1 nos., 30 T X 2 no.) EAF (30 T X 1 no.)	MTPA	0.50	0.193	0.693
4	Billets/ Slab/ Bloom caster	MTPA	0.30	0.379	0.679
5	Continuous Casting Machine		3x3 strand	1 strand	3X4 strand
6	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)				
a	Mill-1	MTPA	0.20	0.02	0.22
b	Mill-2	MTPA	0.30 (Flat/ Round/ Structural)	0 (adding facility for TMT/ wire rod/ other)	0.22
c	Mill-3	MTPA	0	0.22	0.22
7	Captive power plant	MW	119	39	158
a	WHR based CPP	MW	32	21	53
b	AFBC/CFBC based CPP	MW	87	18	105
8	Pelletisation Plant	MTPA	2 nos. X 1.2	0.24	2.64
9	Coal Washery	MTPA	1.26	No change	1.26
10	Oxygen Plant (1x30 T)	m ³ /annum	69,30,000	4,20,000	7,350,000
11	Lime Plant (1X90 T)	m ³ /annum	29,700	1,800	31,500
12	Vaccum Degassing	Tonnes	30	No change	30
13	Ferro Alloy Plant (9MVA+ 18 MVA)				

Sl. No.	Plant/ facility	Units	Present sanctioned capacity as per EC dated 01.04.2016	Additional Proposed capacity	Total capacity
a	Ferro Manganese OR	MTPA	-	9MVA=0.018 18 MVA= 0.036	0.054
b	Silico Manganese OR		-	9 MVA = 0.0144 18 MVA= 0.0288	0.0432
c	Ferro Chrome OR		-	9 MVA = 0.0144 18 MVA= 0.0288	0.0432
d	Ferro Silicon		-	9 MVA = 0.0064 18 MVA= 0.0128	0.0192
14	Briquette Plant				
a	For ferro chrome OR	MTPA	-	0.088	0.088
b	For ferro manganese	MTPA	-	0.112	0.112
15	Sinter Plant (2X24 sqm)	MTPA	-	0.532	0.532
16	Coke Oven plant (4 batteries X 70,000 TPA)	MTPA	0	0.28	0.28
17	Producer Gas Plant	NM ³ /hr	0	51,000	51,000

The main raw materials required for the existing & proposed units will be sourced from company's own mines in Odisha/ Jharkhand, Dolomite from open market, Coal shall be imported from South Africa or through e-auction and Quartzite from Chhattisgarh or open Market.

The proposed expansion project will generate direct employment for 1830 people. Total estimated water requirement for the proposed expansion units will be 1778 cum/hr. The water will be continued to be sourced from Kharkai River. The power demand for the existing and proposed expansion units will be 136 MW. Total cost of the proposed expansion project will be Rs. 2189.97 crores.

After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TORs enclosed at **Annexure I read with additional TORs at Annexure-2 and Annexure - 11:**

- i. PH to be conducted by Jharkhand Pollution Control Board

9.6.3 Installation of Induction Furnace , Rolling Mill and Ferro Alloys (SAF) Captive Power Plan 33MW including 8MW (WHRB) at Plot No A-23, 24, 30, & 31, Village Tadali MIDC, Taluka & District Chandrapur, Maharashtra by M/s Grace Industries Ltd. [J-11011/206/2016-IA-II(I)]

The proposal was considered by the Expert Appraisal Committee to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 3(a), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s. Grace Industries Limited proposed Installation of Induction Furnace to manufacture ingots, Billets etc.-18000MT/month Rolling Mill for hot rolled long products 18000MT/month, SAF to produce Ferro Alloys and Pig Iron - 6000MT/month, Captive Power Plant 33MW including 8MW (WHRB). 8 MW WHRB based CPP is in operation alongwith 4 x 100 TPD Sponge Iron Plant, 25 MW CPP is in installation stage. The proposed expansion is the forward integration to the existing plant. The proposed unit will be located at Plot No A-23, 24, 30, & 31, MIDC Tadali, Chandrapur, Maharashtra adjacent to the existing DRI unit. The land area leased by MIDC for this project is 69.76 ha. 33% of land will be used for green belt. The total project cost for expansion is Rs. 250 Crores. The employment generation from existing and proposed project will be 1100 direct and indirect employment.

Name of Unit	No. of Unit	Capacity of Each Unit	Production capacity
Induction Furnace	4	15 TPH	18000 MT/ Month
SAF	2 or 3	9 MVA x 2 OR 6 MVA x 3	6000MT/ Month
Rolling Mill	2 rolling lines	18000 MT/Month	18000 MT/Month Hot Rolled long Product
CPP	2	33MW including 8MW (WHRB)	33MW including 8MW (WHRB)

The electricity needs will be fulfilled from this own CPP and SEB. Captive Power Plant of 33 MW including 8MW(WHRB) operating on Waste Heat Flue Gases and 25MW plant requires Coal and Dolochar as fuel. Water Consumption for the proposed project will be 1100 m³/day. Domestic waste water of entire plant will be treated in packaged type STP and reused for gardening.

After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TORs enclosed at **Annexure I read with additional TORs at Annexure-2 and Annexure - 11:**

- i. PH to be conducted by Maharashtra Pollution Control Board

28th July, 2016 /Thursday (Bhramaputra)

9.7 ENVIRONMENTAL CLEARANCE (EC)

9.7.1 500 TPD clinker (Rotary Kiln) unit and 500 TPD Cement grinding (closed circuit) at Dag 144, 145, 146, 147 & 151 of K.P. Patta No. 19, 21, 42 & 9 under G.P.S. co-ordinate 26°05,12.96"N and 91°52,4930" E, Village-Ambher, 12th Mile, Jorabat, Mouza- Sonapur, Dist- Kamrup, (M) in Assam by M/s K. R. Associates. [F. No. J-11011/139/2015-IA II (I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/s En-Vision Enviro Technologies Pvt. Ltd) gave a detailed presentation on the salient features of the project. The application for the proposal was initially received in the Ministry on 18/07/2015 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 11/08/2015 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment and Forests had prescribed TORs to the project on 20/08/2015. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 06/07/2016.

The project of M/s K R Associates located in Dag No. 141, 142, 143, 144, 145, 146 & 151, Patta No. 3, 19, 21 & 9, Village Ambher, 12th mile, Jorabat, Mauza Sonapur, District Kamrup, Assam is for setting up of a new unit for production of 500 TPD clinker (Rotary Kiln) unit and 500 TPD Cement grinding (Closed circuit). The total land required for the project is 26859.40 m² (2.68 ha), The entire land has been acquired. There is no river passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed. The topography of the area is hilly and situated between 26° 5'9.97" N to 26° 5'7.61" N Latitude and 91°52'45.06" E to 91°52'44.26" E Longitude in Survey of India topo sheet No. G46H16, at an elevation of 82.90 m above mean sea level. The ground water table reported to ranges between 3.0 to 7.5 m below the land surface during the post-monsoon season and 2.5 to 6.5 m below the land surface during the pre-monsoon season. Based on the hydro-geological study. Further, the stage of groundwater development is reported to be 43 % and are designated as safe areas. The National Park/WL (Amchang Wildlife Sanctuary) etc. are located at a distance of 1.6 km from the site.

The targeted production capacity of the cement plant is 500 TPD Clinker and 500 TPD Cement. Raw material for the cement plant i.e. Lime stone and coal would be procured from Meghalaya & Assam, Fly ash from West Bangal, Odisha, Jharkhand & Bihar, Gypsum from Bhutan, Iron dust from Durgapur, WB and Bihar, Clay from Byrnihat, Assam. The raw materials transportation will be done through road network. The raw material for the plant would be transported through Road.

The water requirement of the project is estimated as 17.6 m³ /day, which will be met through Ground water using Bore well. The power requirement of the project is estimated as 3600 KW, which will be obtained from the Assam State Electricity Board.

Ambient air quality monitoring has been carried out at 8 locations during November 2014 to January 2015 and the data submitted indicated: PM10 (42.3 $\mu\text{g}/\text{m}^3$ to 82.6 $\mu\text{g}/\text{m}^3$), PM2.5 (18.5 $\mu\text{g}/\text{m}^3$ to 41.6 $\mu\text{g}/\text{m}^3$), SO₂ (7.4 $\mu\text{g}/\text{m}^3$ to 13.2 $\mu\text{g}/\text{m}^3$) and NO_x (15.2 $\mu\text{g}/\text{m}^3$ to 24.1 $\mu\text{g}/\text{m}^3$). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 19.38 $\mu\text{g}/\text{m}^3$ with respect to the PM₁₀, 20.53 $\mu\text{g}/\text{m}^3$ with respect to the SO₂ 19.31 $\mu\text{g}/\text{m}^3$ with respect to the NO_x.

It has been reported that there are no household in the core zone of the project. No/ R&R is involved. It has been reported that a total of 20 lit/month Used/Spent oil and 30,000 nos/month Discarded bags as a waste will be generated due to the project. Used/Spent oil will be sent to authorized recyclers and Discarded bags will be return to raw material suppliers. It has been envisaged that an area of 0.8833 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The Public hearing of the project was held on 20/04/2016. The issues raised during public hearing are Employment, CSR activities and pollution.

The capital cost of the project is Rs 148.5 Crores and the capital cost for environmental protection measures is proposed as Rs 5.02 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 0.74 Cr.

Based on the presentation made and discussions held, the Committee desired additional information on the following for further consideration of the proposal:

- i. Agreement/NOC with the State Electricity Department/Electricity Board for the required load has to be obtained and submitted.
- ii. Permission from the Ground Water Department for drawl of ground water for the required volume should be obtained and submitted.
- iii. A letter from the revenue department for conversion of land should be submitted. A note on, whether the new legislation has any conflict with the conversion of land based on the old legislation has to be submitted.
- iv. Monitoring to be done in NW direction near the city for a period of 1 month (non-monsoon) and data from the pollution control board for that area.
- v. Detailed EMP and pollution control system proposed for the plant should be revised and submitted.
- vi. Authenticate the data submitted in the EIA report regarding the list of flora and fauna from the local forest department and submitted.
- vii. The air pollution data analysis has to be revisited and submitted.
- viii. The green belt plan has to be revised and superimposed on the layout plan including parking plan should be submitted.
- ix. Domestic waste water treatment and disposal plan has to be submitted.
- x. A detailed green belt development plan along with the list of plant species to be planted should be submitted. More green belt should be developed towards north east direction where the city is located as also near the sanctuary.
- xi. Commitment by the PP for the point raised by the local public during the PH should be inserted in the presentation.

9.7.2 Capacity expansion of production of Integrated Steel Plant to 1.5 MTPA Crude Steel of M/s Nova Iron & Steel at Village Dagori, Ameri Akbari, Satighat, Tehsil Bilha, Dist. Bilaspur, Chhattisgarh [J-11011/379/2014-IA.II(I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/s M. N. Dastur & Co. (P) Ltd) gave a detailed presentation on the salient features of the project. The application for the proposal was initially received in the Ministry on 28.11.2014 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 11th – 12th, December, 2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry had prescribed TORs to the project on April 23, 2015 Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 01/07/2016.

M/s Nova Iron & Steel already owns a sponge iron plant (presently not in operation) of capacity 500 TPD in Bilaspur district of Chhattisgarh. The existing facilities of NISL include a DRI Kiln of 500 TPD capacity and Induction Furnace of capacity 30,000 TPA. NISL is now planning to set up a 1.5 MTPA integrated steel plant for production of carbon steel in the existing complex. The proposed project would be set up within the existing premises of NISL. The land available with the proponent is 803.05 acres out of which 480.0 acres of land will be utilised for steel plant. An area admeasuring 323.05 acres will be used for greenbelt and other activity.

The site is located in Bilaspur district of Chhattisgarh. The site fall between latitudes 21°52'40" - 21°54'25" N and longitudes 82°02'10" - 82°04'55" E and 250 m above mean sea level (MSL). It is located about 34 km south west of Bilaspur city and 70 km north east of Raipur city of Chhattisgarh. The site is connected with NH-200 by a bypass road which runs from NH-200 to village village Bilha at the northern side of proposed plant. The nearest railway station, Dagori is situated about 6 km away on the north-east side of the plant. Captive railway siding is envisaged for wagon loading/unloading. The site is about 25 km by rail from Bilaspur. The nearest airport is at Raipur which is about 70 km from the plant site. The plant would be served mainly by Paradip port which is located at a distance of 500 km. The total expenditure towards social upliftment activities for the proposed expansion is estimated at Rs. 270 crore (Rupees Two hundred and seventy crore only). The total manpower would be around 1,600 of these, 150 personnel would be used for general administration. The following table presents the existing and proposed configuration of the plant:

Sl. No.	Facilities	Existing Capacity	Proposed Capacity	Total Capacity at 1.5 MTPA
1	Coal Washery	-	1.5 MTPA	1.5 MTPA
2	Sinter Plant	-	1 x 248 m ²	2.25 MTPA sinter
3	Blast Furnace	-	1 x 1008 m ³ 1 x 550 m ³	1.46 MTPA hot metal
4	DR Plant	1 x 500 T	3 x 500 TPD	0.66 MTPA DRI
5	Lime/Dolo	-	2 x 600 TPD	0.3 MTPA

	Calcining Plant			
6	EAF	-	2 x 90 T	1.63 MTPA liquid steel
7	IF	3 x 15 T	-	
8	LF	-	1 x 15 T 2 x 90 T	
9	VD	-	1 x 90 T	
10	Billet Caster and Billet cum Bloom Caster	-	1 x 2 Strand 2 x 4 Strand	1.5 MTPA crude steel
11	Wire Rod Mill	-	0.5 MTPA	0.5 MTPA
12	Medium Section Mill	-	0.55 MTPA	0.55 MTPA
13	Light Section Mill	-	0.39 MTPA	0.39 MTPA
14	Captive Power Plant	-	2 x 130 MW	260 MW

Total water requirement for the project for about 1.5 MTPA crude steel production would be about 1,610 cu m/hr (8.5 MGD). The water requirement for the expansion project would be met from Sheonath River, which flows on the southern side of the plant. A raw water storage reservoir of about 14 days holding capacity has been considered in the plant to take care of eventualities like lack of availability of water from the river. The total power requirement for the project after expansion, will be about 260 MW. This would be met through in-plant generation by two (2) Nos. coal based captive power plants each of 130 MW capacity, one (1) No. 35 MW capacity BF gas based power plant [two (2) 7.5 MW units and one (1) 20 MW unit for Turbo Blower] and one (1) No. 4.5 MW TRT based captive power generation.

The AAQ monitoring has been carried out at 8 different locations within 10 km of the study area to measure the prevailing air quality in and around the study area. The average concentration (24 hrs) of PM10 and PM2.5 are in the range of 50.7 - 61.3 µg/cu m and 23.3 - 27.2 µg/cu m respectively. SO₂ (< 4 µg/m³) and NO_x (17.7 µg/m³ to 21.8 µg/m³).

The PH organized by the CECB official and ADM, Bilaspur on 26th February, 2016 outside the plant premises was attended by about 200 people representing the nearby villages. The public is optimistic that the expansion project would also create job opportunity and overall development of the surrounding areas. The locals present in the PH meeting expressed their concerns about the pollution potential of the proposed project.

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

- i. The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.

- ii. In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant etc. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.
- iii. The ETP for Blast Furnace effluent should be designed to meet Cyanide standard as notified by the MoEFCC.
- iv. The COD level in the effluent should be maintained at the prescribed standard and the STP effluent is to be recycled within the premises.
- v. No effluent shall be discharged outside the plant premises and 'zero' discharge shall be adopted.
- vi. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology.
- vii. Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely. The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack.
- viii. Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. ETP sludge should be disposed off scientifically.
- ix. All the coal fines, char from DRI plant shall be utilized and no char shall be used for briquette making or disposed off anywhere else. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.
- x. All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit.
- xi. The Standards issued by the Ministry vide G.S.R. No. 277(E) dated 31st March, 2012 regarding integrated iron and steel plant shall be followed.
- xii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.

- xiii. 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.
- 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. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.
- xvi. A time bound action plan shall be submitted to reduce solid waste generated due to the project related activity, its proper utilization and disposal.
- xvii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office.
- xviii. A Risk and Disaster Management Plan 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.
- xix. 10-15 m wide green belt should be developed all along the boundary of the plant and in all 33% of the area should be developed green by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines.. The complete plantation should be completed in 3 years.
- xx. All the commitments made to the public during Public Hearing/public consultation meeting shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xxi. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.
- xxii. The proponent shall prepare a detailed CSR Plan for every year for the 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 plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included. 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. 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.

- xxiii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xxiv. The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xxv. The project proponent shall provide for LED lights in their offices and residential areas.
- xxvi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

9.7.3 Expansion of Integrated Cement Plant [(Clinker 11.2 MTPA to 15 MTPA) , Cement (8.8 MTPA to 13.2MTPA), WHRB(66 MW to 80 MW), CPP (180MW), DG sets (1000 KVA to 2000 KVA)] and production of 1560 TPD of synthetic gypsum of M/s Shree Cement Ltd. located near Village Ras, Tehsil Jaitaran, District Pali, Rajasthan. [J-11011/343/2012-IA.II(I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/s J.M. EnviroNet Pvt. Ltd.) gave a detailed presentation on the salient features of the project. The application for the proposal for expansion of Integrated Cement Plant near Village Ras, Tehsil Jaitaran, District Pali (Rajasthan) by M/s. Shree Cement Ltd. was initially received in the Ministry on 24th January, 2015 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 11th February, 2015 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry had prescribed TORs to the project on 10th Feb., 2016. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 01st July, 2016.

The project of M/s. Shree Cement Ltd. located near Village: Ras, Tehsil: Jaitaran, District: Pali (Rajasthan) is for proposed expansion of Integrated Cement Plant - Clinker (11.2 to 15.0 Million TPA), Cement (8.8 to 13.2 Million TPA), WHRS (68 to 90 MW), CPP (180 MW), Synthetic Gypsum Unit (1560 TPD) and DG Sets (1000 to 2000 KVA). Total plant area is 231.54 ha (which includes 187.56 ha existing plant area and 43.98 ha additional area within plant boundary); 72.7 ha area is also available outside the plant boundary for future use; the proposed expansion will be done within the existing area. Bagatpura residential colony is established in 40 ha land. No forest land is involved. No River passes through the project area.

No National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve/ Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule- 1 Fauna. There is only one Reserve Forest (5.0 km in SSE direction) and One Protected Forest (9.9 km in SE direction) exists within study area. No Sch. - I faunal species was recorded in the study area.

The targeted production capacity of the Clinker is 15.0 Million TPA, Cement is 13.2 Million TPA, Captive Power Plant is 180 MW, WHRS is 90 MW and Synthetic Gypsum Unit is 1560 TPD. The raw materials required for the proposed expansion project are Limestone (22.5 MTPA), Laterite / Lead Zinc Slag (0.675 MTPA), Indian, Imported Synthetic and Chemical Gypsum (0.66 MTPA), Indian and imported coal and Petcoke (5.5 MTPA) and Fly Ash (4.5 MTPA). The Limestone will be transported through covered conveyor belt and rest of the raw materials, fuel, clinker and cement will be transported through Road and Rail.

The topography of the area is flat and situated between 26° 15' 31.6" to 26° 16' 45.3" N Latitude and 74° 10' 53" to 74° 11' 48.1" E Longitude in Survey of India toposheet no. 45 J/3, 45 J/4, 45 J/7 and 45 J/8 at an elevation of 374 m to 400 m. The ground water table reported to be 30 m during pre-monsoon period and 25 m during post monsoon period. Based on the Hydrogeological study, it has been reported that the radius of influence of the pumped out water will be 960 m. Further the stage of ground water development is reported to be 38 % and thereby these are designated as safe.

The water requirement of the project is estimated as 3500 m³/day including cement plant, CPP, WHRS, Synthetic Gypsum Plant and Bagatpura Residential Colony which will be sourced from Ground Water. The power requirement of the project is estimated as 158.9 MW, which will be sourced from Captive Power Plant, WHRB, Grid and D.G Sets (for backup).

Ambient air quality monitoring has been carried out at 12 stations during Summer Season (March to May, 2015) and the data submitted indicated: PM10(56.2 to 81.0 µg/m³), PM2.5(20.6 to 38.1 µg/m³), SO₂ (5.2 to 9.8 µg/m³) and NO_x (14.2 to 26.3 µg/m³). The results of the modeling study indicates that the maximum increase of GLC for the proposed expansion project is 4.98 µg/m³ with respect to the PM10, 1.32 µg/m³ with respect to the SO₂ and 4.30 µg/m³ with respect to the NO_x.

No solid waste will be generated from the cement manufacturing process. Dust collected from air pollution control equipments will be totally recycled back to the process. Fly ash generated from CPP will be utilized in manufacturing of cement. Solid waste in the form of sludge will be generated from the sewage treatment plant and same will be used as manure for greenbelt development/ plantation. Solid waste generated from colony will be disposed after

segregating the waste into biodegradable and non-biodegradable. 63.8 ha (34% of the total existing plant area i.e. 187.5 ha) has already been developed under greenbelt/ Plantation. Additional 14.5 ha will be further developed for this expansion project.

The Public hearing of the project was held on 20th April, 2016 under the Chairmanship of District Magistrate Pali, Rajasthan. The issues raised during public hearing was related to Employment, Environment related, plantation, education, ESC activities etc.

The capital cost of the proposed Expansion project is Rs. 755 Crores and the capital cost for environmental protection measures is proposed as Rs. 51 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 1 Crores/ annum.

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

- i. The project proponent should install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.
- ii. The Standards issued by the Ministry vide G.S.R. No. 612 (E) dated 25th August, 2014 and subsequent amendment dated 9th May, 2016 and 10th May, 2016 regarding cement plants with respect to particulate matter, SO₂ and NO_x shall be followed. The SO₂ emission for the plant should be less than 100 mg/Nm³ as the pyrite sulphur content is < 0.25%
- iii. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control viz 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. Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- v. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- vi. AAQ Modelling shall be carried out based on the specific mitigative measures taken in the existing project and proposed for the expansion project to keep the emissions well below prescribed standards.
- vii. 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.

- viii. A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.
- ix. For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves, eye protection etc. There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc
- x. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- xi. The coal yard shall be lined and covered.
- xii. The project proponent shall prepare a report on impact of project on surrounding reserve forests within six months and will get it approved from the State Forest Department. A copy of the same should be submitted to the Ministry and its Regional Office.
- xiii. The project proponent shall take all precautionary measures for conservation and protection of wild fauna found in the study area. A Wildlife Conservation Plan specific to this project site shall be prepared in consultation with the State Forest and Wildlife Department. A copy of the Conservation plan shall be submitted to the Ministry and its Regional Office.
- xiv. The project proponent will also provide the latest status of the environmental compliances in respect of its existing plant.
- xv. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- xvi. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.

- xvii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- xviii. 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.
- xix. 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 / re-processors only.
- xx. The kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes and other wastes including biomass, etc.
- xxi. The proponent shall examine and prepare a plan for utilisation of high calorific wastes such as chemical wastes, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify suitable industries with such wastes and enter into an MOU for long-term utilisation of such wastes as per the Environment (Protection) Rules, 1986 and with necessary approvals.
- xxii. Efforts shall be made to use the high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly. The PP shall enter into an MOU with units with potential for generating hazardous waste and in accordance with Hazardous Waste Regulations and prior approval of the MPPCB.
- xxiii. Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines. Plantation at all the neighbouring villages should be done along the road side and in free areas
- xxiv. The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xxv. The project proponent shall provide for LED lights in their offices and residential areas.
- xxvi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xxvii. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and

District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.

- xxviii. The proponent shall prepare a detailed CSR Plan for every year for the 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 plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included. 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. 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.
- xxix. A Risk Assessment Study and Disaster Preparedness and Management Plan along with the mitigation measures shall be prepared with a focus of Disaster Prevention and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xxx. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xxxi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

9.8 FURTHER CONSIDERATION

9.8.1 Proposed modification/enhancement in the existing configuration of induction furnaces with at existing steel division without change in approved capacity of M/s SKS Ispat and Power Ltd. at Village Siltara, District Raipur, Chhattisgarh. – ToR proposal [F.No-J-11011/99/2006-IA.II(I)]

The proposal was earlier considered in the 6th EAC meeting held on 3rd - 4th May, 2016. After detailed deliberation the Committee suggested the proponent to submit the following information for further consideration of the proposal:

- i. Technical report from competent agency should be submitted as to why the present approved capacity has not been achieved and how the addition of 4X15 IF will facilitate to achieve the approved capacity without enhancing the approved capacity.
- ii. Pre-feasibility report should be prepared and presented.

PP vide letter No SKS/EHSCP/2016/86 dated 28th June, 2016 submitted the information as suggested by the Committee.

Presently this integrated unit is in operation with following facilities as per above approvals.

- a) Sponge Iron Plant with capacity - 2, 70,000TPA (2x100TPD & 350 x2 TPD Kiln).
- b) Power Plant - 85 MW (25 MW WHRB and 2x30 MW CFBC & AFBC).
- c) Steel Melting Shop – 3, 31,500 TPA.
- d) Rolling Mill (4Nos.) total Capacity -3, 84,000 TPA.
- e) Ferro Alloys – 29400 TPA.

PP mentioned that the steel melting shop of having capacity 3, 31,500 TPA has been achieving only 55-60% capacity and hence being an integrated plant other facilities such as Sponge Iron, Rolling Mills, Ferro Alloys and also CPP are under-utilized. As the Steel Melting shop was producing less capacity of production the entire unit has become unviable and uneconomical and is not in a position to meet the financial refunds as stipulated by financial institutions.

Under such circumstances it has been observed that if the unit is supported by establishing additional 4 Nos. x 15 T capacity Induction Furnace, along with existing Steel Melting Shop configuration without crossing the already approved total capacity of 3,31,500 TPA within the existing plant premises. The units can achieve the approved capacity.

The Committee deliberated on the issue and it was noted that the existing plant is already having a production capacity of 3,31,500 TPA, therefore installation of additional furnace (4x15 T Capacity) will certainly enhance the overall approved capacity of the plant. Therefore, the request of the PP to provide ToR for installation of additional furnace (4x15 T Capacity) without changing the overall capacity of the plant is not reasonable. On the request of the Committee, the PP vide their letter dated 28th June, 2016 provided the overall capacity of the plant as 5,15,666.00 TPA after installation of additional 4x15 T Capacity furnaces.

After detailed deliberations, the Committee prescribed following specific TORs for undertaking detailed EIA-EMP study in addition to the generic TORs enclosed at **Annexure I read with additional TORs at Annexure-2 and Annexure - 11**:

- i. The public hearing should be conducted by the Chhattisgarh Pollution Conservation Board
- ii. The overall capacity of the plant for the existing and the proposed units should be calculated and presented.

9.8.2 Expansion of Steel Manufacturing Unit (from 29000 MTA to 84,000 MTA) by M/s Jyoti Industries (Unit-II) at B-57A, Phase-VII, Focal Point, Ludhiana, Punjab [F. No. J-11011/408/2012-IA.II(I)]

On request of the proponent, the proposal is deferred for the next meeting.

9.9 ANY OTHER ITEM

9.9.1 Expansion of Cement Grinding unit (3.4 MTPA to 4.6 MTPA) located at Rahargora, Jamshedpur Dist, Jharkhand by M/s Lafarge India Pvt Ltd. [J-11011/638/2008-IA.II(I)]

The Environmental Clearance for the above project was accorded by the Ministry vide letter no J-11011/638/2008- IA II (I) on 19.12.2008 for producing ground cement of 4.6 Million Tonnes per annum(MTPA), with Portland Slag Cement at 3.2 MTPA and Portland Pozzolona Cement (PPC) at 1.4 MTPA.

An amendment to the Environmental Clearance was accorded by the Ministry vide letter no. J-11011/638/2008.IA.II(I) dated 16th March, 2016. The Amendment was for producing PSC to a maximum of 4.0 MTPA and PPC for 1.0 MTPA, while maintaining the production limit at 4.6 MTPA only.

PP informed that now Bureau of Indian Standards came out with a new product called the Composite cement, which permits the usage of Slag and Flyash together, so that the clinker consumption is reduced.

PP has requested for amendment in the environmental clearance under clause-7(ii) for change of product mix as follows:

S. No	Product	Million Tonnes Per Annum	
		Present	Proposed
2	PSC	4.0	4.0 (Max.)
3	PPC	1.0	1.0 (Max.)
4	Portland Composite Cement (PCC)	-	1.0 (Max.)
However the production is limited to 4.6 Million Tonnes per annum			

The Committee after deliberation recommended the proposal for amendment in the Environmental Clearance for change in the product mix under clause 7(ii) of the EIA Notification, 2006 as amended. The overall capacity of the plant will be limited to 4.6 Million Tonnes per annum.

9.9.2 Expansion of Alumina Refinery (1.0 MTPA to 3.0 MTPA) alongwith Co-generation Power Plant (50 MW to 90 MW) at Village Doragurha, Tehsil Kashipur, District Rayagada, Orissa by M/s Utkal Alumina International Ltd. - [J-11011/753/2007-IA.II(I)]

On request of the proponent, the proposal is deferred for the next meeting.

9.9.3 Proposed Greenfield integrated steel plant complex of 7 MTPA capacity with 1320 MW Captive Power Plant and Associated facilities of M/s Jindal Steel & Power Limited-Amendment in TOR [J-11011/73/2009-IA.II(I)]

Terms of Reference for the proposal was granted for the Integrated Steel Plant for the capacity of 7 MTPA by MOEF vide letter No F.No J-11011/73/2009-IA-II (I) Dated 08.07.2014.

Subsequently, the capacity of the proposed project is being planned to reduce from 7.0 MTPA to 4.0 MTPA and delete the Captive Power Plant of 1320 MW. It has been mentioned that the present scenario of coal availability has triggered the need to revise the capacity of the proposed plant to 4.0 MTPA adopting BF-BOF route for steel making. The revised capacities of the plant is indicated in the following table:

S. No	Units	Capacity as per earlier TOR	Proposed Capacity
1	Sinter Plant	6.6 MTPA	5.0 MTPA
2	Pellet Plant	8.0 MTPA	4.5 MTPA
3	Coke Oven (Recovery Type)	2.2 MTPA	2.20 MTPA
4	Coal Gasifiers	600,000 Nm ³ /hr	Deleted
5	DRI Plant (Gas based)	6.0 MTPA	Deleted
6	Cogen Plant-DRI	3x25 MW	Deleted
7	Coal Pipe Conveyor	50 Km long	Deleted
8	Cogen Plant- Coal Gasifer	5x16 MW	Deleted
9	Blast Furnace	4 MTPA	4 MTPA
10	Desulphurization Unit	2x250 T	2 x 200 T
11	Electric Arc Furnace	2x250 T	Deleted
12	Basic Oxygen Furnace	2x250 T	2 x 200 T
13	Ladle Furnace	4x250 T	2 x 200 T
14	Vacuum Degassing	2x250 T	1 x 200 T
15	RH-TOP	2x250 T	1 x 200 T
16	Slab Caster	4 MTPA	4.0 MTPA
17	Rolling Mill	4 MTPA	4.0 MTPA
18	Compact Strip Mill (CSP)	3.5 MTPA	
19	C.R.M.	1x2.0 MTPA	1 x 2.0 MTPA
20	C.G.L. (Continuous Galvanizing Line)	1x1.0 MTPA	1 X 1.0 MTPA
21	Oxygen Plant	12000 TPD	2500 TPD
22	Lime & Dolime Plant	5000 TPD	2000 TPD
23	Captive Power Plant	1320 MW	Deleted

Following table presents the revised land details:

Item		Earlier TOR	Revised
Land Requirement	Main Plant	912.611 Ha	809.39 Ha (Optimized within approved boundary)
	Coal Conveyor ROW	68.044 ha	Deleted
	CPP	299.479 Ha	Deleted
		Total : 1280 Ha (3163 acres)	Total : 809.39 Ha (2000 acres)
Forest land	Main Plant	50.233 Ha	50.233 Ha (Stage I for 30.62 Ha received)
	Coal Conveyor ROW	20 Ha	Deleted
	CPP	31.79 Ha	Deleted

The water Requirement for the plant will be 18 MCM (14 MGD), Mahanadi River (earlier approved 100 MCM). The power requirement will be catered from existing CPP at Dongamhua or Thermal Power Plant of Company at Tamnar, Raigarh. The man power requirement will be 4510 nos. during operation phase and the revised cost of the project will be Rs 15,500 Crores

After detailed deliberation the Committee recommended the proposal for amendment in the ToR letter No J-11011/73/2009-IA-II (I) Dated 08.07.2014 for the proposed Greenfield Integrated Steel Plant at Raigarh for Change in Capacity from 7.0 MTPA to 4.0 MTPA by deleting various components as indicated in the table above. The Committee also agreed for the use of baseline environmental data generated during pre-monsoon of 2015 to finalize draft EIA report for revised Plant Configuration.

9.10 CASE FOR TERMS OF REFERENCE (TOR)

9.10.1 Proposed of Transmission Line Tower(TLT) Manufacturing complex of 120,000 TPA capacity of M/s RINL Powergrid TLT Private Limited (RPTPL), JV of RINL & POWERGRID, at Room No-31, "B" Block, Project Office, Vishakhapatnam, Andhra Pradesh. [J-11011/210/2016-IA(I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/s MECON Limited) gave a presentation on the salient features of the project. The proposal was considered for prescribing Terms of Reference (TORs) for undertaking detailed EIA and EMP study for obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. The project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The

proposed project activity is listed at S.No. 3(a), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s. RPTPL proposes to setup a Transmission Line Manufacturing Plant of 1,20,000 TPA capacity. It is proposed to setup the plant for fabrication of Transmission line Tower parts via state-of-the-art CNC technology. Angle & Plates will be used for fabrication of TLT parts which will be further galvanized and the towers will be dispatched to site for assembly. The proposed unit will be located at Kanithi Village, Tehsil Gajuwaka, District Visakhapatnam, Andhra Pradesh. The land area required for the proposed project is 20.23 Ha (50 acres), out of which 6.88 Ha (17 acres) land will be used for green belt development. Total project cost is approx. 331.30 Crore rupees. Proposed employment generation from proposed project will be 100 direct employment and 150 indirect employment.

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

SN	PROPOSED UNIT/FACILITY	NO. OF UNITS	CAPACITY/CONFIGURATION
1.	TLT Fabrication units	02 x 60,000 TPA	120,000 TPA
2.	Galvanization units	02 x 60,000 TPA	120,000 TPA
3.	Angle Storage	01 bay	400 m x 32 m (117,990 TPA) (approx)
4.	Fabrication Bays	02 bays	400 m x 25 m (approx)
5.	Jigging Bay	01 bay	400 m x 25 m (approx)
6.	Un-jigging Bay	01 bay	270 m x 25 m (approx)
7.	Galvanizing Bay	01 bay	270 m x 25 m (approx)
8.	Finished Part storage & Tower prototype installation area	01	400 m x 60 m (120,000 TPA) (approx)

The electricity load of 3.5 MW will be sourced through 11 kV feeders drawn from the nearest APSEB substation. Proposed raw material and fuel requirement for project are described in the following table.

SN.	RAW MATERIAL	QUANTITY (TONS/YR)	SOURCE
1.	Black Angles	117,990	~30% from RINL & rest will be purchased
2.	Plates	6,600	Purchased from outside
3.	Zinc	4,800	Purchased from outside

Raw material / input material requirement would be fulfilled mostly from domestic sources including RINL's Visakhapatnam Steel Plant. Fuel consumption will be mainly of Coke Oven gas sourced from existing Coke Oven gas network of RINL's Visakhapatnam Steel Plant.

Water Consumption for the proposed project will be 5m³ /h of makeup water and it will be met from two dedicated borewells, each having a maximum capacity of 15 m³ /hr. The

domestic water requirement is estimated to be 50 m³ /day. The domestic water requirement is estimated to be 50 m³ /day. It is envisaged to treat and recycle entire quantity of water within the plant.

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. Public Hearing has to be conducted by Andhra Pradesh Pollution Control Board
- ii. The proposed plant site is approximately 5 km from the shoreline however, a detailed site map showing the creek in the nearby area of the site should be prepared and submitted
- iii. Disposal of metal solid and zinc dross should be submitted
- iv. The disposal plan for spent acid, di-chromate, zinc waste should be submitted
- v. Detailed plan for transportation of CO and safety plan.
- vi. Recycling, reuse, recovery of acids, zinc and other material should be submitted

9.10.2 Capacity Expansion from 6.3 MTPA to 7.3 MTPA by revamping and augmentation of existing facilities at Vishakhapatnam Steel Plant, Gajuwaka, Vishakhapatnam, Andhra Pradesh by M/s Rashtriya Ispat Nigam Ltd.[J-11011/196/2005-IA.II(I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/s MECON Limited) gave a presentation on the salient features of the project. The proposal was considered for prescribing Terms of Reference (TORs) for undertaking detailed EIA and EMP study for obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. The project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 3(a), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s Visakhapatnam Steel Plant (VSP) is the first shore-based integrated steel plant in India owned by M/s. Rashtriya Ispat Nigam Limited (RINL), Visakhapatnam, a Navratna PSE under Ministry of Steel, Government of India. It is located in Village Gajuwaka, District Visakhapatnam, State Andhra Pradesh. Environmental clearance for the earlier project was obtained for expansion of Hot metal from 4.0 to 6.5 MTPA by Ministry of Environment, Forest and climate change (MoEFCC) vide their letter no.J-11011/196/2005-IA II (I) dated 11-08-2005. The said EC was for increase in hot metal production from 4.0 to 6.5 MTPA, liquid steel production from 3.5 to 6.3 MTPA, saleable steel from 3.17 to 5.72 MTPA, coal chemicals from 0.18 to 0.23 MTPA and power generation from 235 MW to 384 MW.

Now RINL intends to expand its capacity of liquid steel production from 6.3 to 7.3 MTPA. The facilities and revamping envisaged for the proposed project are given **Table** below:

S.No	Facility
1	Revamping of Sinter Plant 1 &2
2	Revamping of SMS-1
3	Installation of Conv.3 & Caster4 (SMS -2)
4	Installation of LPG storage facility

S.No	Facility
5	Installation of Nitrogen buffer vessel
6	Installation of Twin Laddle Heating furnace in SMS 2
7	Revamping of Blast Furnace 1
8	Revamping of Blast Furnace 2
9	Installation of Re bar mill
10	Installation of Coke Oven Battery -5
11	Revamping and Modernization of Continuous Casting Department
12	Revamping and upgradation of Walking beam type reheating Furnaces of the light and medium merchant mill (LMMM)
13	Rebuilding of Coke Oven Battery No. 1
	OTHERS
14	Revamping & Upgradation of Electrostatic Precipitators of Two Boilers in Thermal Power Plant (TPP)
15	Guard Pond
16	Turbo Blower -5
17	Kanthi Balancing Reservoir
18	Installation of Desalination plant

The total land area in possession with the company is 8827 Ha of which the plant area is 3240 Ha. No additional land will be required for this capacity augmentation project. The existing plant falls between 17° 34' 29" to 17° 38' 49" N Latitude and 83° 09' 23" to 83° 14' 12" E Longitude in Survey of India topo sheet No. 65 O/2, at an elevation of 10 m above mean sea level.

The plant water requirement is 1,36,350 m³/day (30 MGD) and for township and others it is estimated at 36,360 m³/day (8 MGD) for 6.3 MTPA stage. The additional water required for the proposed augmentation would be 31,815 m³/day (7 MGD) of which 27,270 m³/day (6 MGD) would be required for the operation of plant and 4,545 m³/day (1 MGD) for the township and others. The water will be sourced from existing Yeleru Reservoir. RINL has accorded permission for withdrawal of 45 MGD from Visakhapatnam Industrial Water Supply Company Limited (VIWSCO).

The power requirement for operating the steel plant including township at 6.3 MTPA stage is 470 MW of which in plant generation is 384 MW and the balance 86 MW is drawn from APTRANSCO. The additional power required for the proposed expansion is 76 MW, which will be sourced from the APTRANSCO. The capital cost of the expansion project is estimated at around Rs 10,200 crores .

For the proposed capacity augmentation from 6.3 MTPA to 7.3 MTPA liquid steel, it is estimated that nearly 3.065 MTPA minerals would be required additionally. The additional requirements of the minerals is presented in below

Sl. No.	Minerals	Quantity, MTPA
1	Sized Iron Ore	0.33
2	Iron Ore (fine)	1.06
3	PCI Coal	0.11
4	Limestone	0.20
5	Dolomite	0.15
6	Quartzite	0.015
7	Coal	1.2
Total		3.065

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. Public Hearing has to be conducted by Andhra Pradesh Pollution Control Board
- ii. Submit a copy of layout map superimposed on the HTL/LTL map demarcated by an authorized agency on 1:4000 scale.
- iii. Suitable technology for control for SO_x has to be installed before the ESP, details should be submitted.

9.10.3 Uranium recovery plant from Copper tailing at Mosabani for the capacity of 0.9 MTPA by M/s Uranium Corporation of India located at Mosabani, East Singhbani District, Jharkhand [J-11011/141/2006-IA.II(M)]

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

29th July, 2016 /Friday (Bhramaputra)

9.11 ENVIRONMENTAL CLEARANCE (EC)

9.11.1 Proposal for Cement Grinding Unit of 0.14 MTPA Greenfield Portland Pozzolana Cement of M/s Himalaya Height Cements Pvt. Ltd. at Kudari, Durgawati kaimur, District Bhabua, Bihar. [F. No. J-11011/333/2014-IA II (I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/S Visiontek Consultancy Services Pvt. Ltd) gave a detailed presentation on the salient features of the project. The proposal was initially received in the Ministry on 01.11.2014 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC (I)] during its meeting held on 13.11.2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry had prescribed TORs to the project on 31.12.2014. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 08.07.2016. Proposed project falls under sl. No. (b) Cement Plants, category 'B' as per the EIA notification dated 14th September 2006 by MoEFCC, however, as the interstate boundary (UP-Bihar) falls at 4 Km in western direction of the project site, the project is treated as "Category A" project and appraised at the central level.

The project of M/s Himalayaheight Cement Private Limited located in Village Kudari, Tehsil Durgawati, District kaimur (Bhabua) State Bihar is for setting up of a new Greenfield Cement Grinding Unit for production of 0.14 million tones per annum (million TPA) of Portland Pozzolana Cement (PPC). The total land required for the project is 1.25 ha (3.10 Acre), which is barren land. No forestland involved. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed. The topography of the area is flat and reported to lies between 25° 12' 57.25'' N to 25° 13' 0.84'' N Latitude and 83° 26' 49.83'' E to 83° 26' 56.58'' E Longitude in Survey of India topo sheet No 63 O/7, at an elevation of 75 m AMSL.

No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The Portland Pozzolana Cement will be produced based on ball mill technology. Raw Materials are Clinker, Fly Ash and Gypsum.

The targeted production capacity of the Portland Pozzolana Cement (PPC) is 0.14 million TPA. 98,000 TPA Clinker will be sourced from K.J.S Cement, Maihar, Birla Cement, Satna M.P and Shree Cement, Rajasthan through Road/Rail. 36,400 TPA Fly Ash will be purchased from Hindalco, U.P through Road and 5,600 TPA Gypsum will be purchased from Paradeep Phosphate Limited, Paradeep and Druk Sapair Corp., Bhutan through Road/Rail.

The water requirement of the project is estimated as 8 m³/day, which will be obtained from the Ground Water. The power requirement of the project is estimated as 1000 KW, which will be met from BSEB from 33 KV substation located at Karamnasha at 3.5 Km from the site.

Ambient air quality monitoring has been carried out at 8 locations during March 2015 to May 2015 and the data submitted indicated: PM10 (27.2 µg/m³ to 89.5 µg/m³), PM2.5 (11.5 µg/m³ to 52.1 µg/m³), SO₂ (4.1 µg/m³ to 11.8 µg/m³) and NO_x (9.2 µg/m³ to 24.80 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 1.70 µg/m³ with respect to the PM10 and 1.16 µg/m³ with respect to the PM2.5.

It has been reported that there is no population in the core zone of the project. No R&R is involved. It has been reported that a total of 500 TPA dust from APC devices will be generated due to the project, which will be reused in the manufacturing process. 60.0 Litre/Annum of Used Oil/Lubricants will be generated which will sold to authorized re-processors. 0.10 TPA Garbage/Food waste will be generated which will be used green belt development. It has been envisaged that an area of 1.10 Acre (0.44 Ha) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The Public hearing of the project was held on 07.02.2016 for 0.14 million TPA of Portland Pozzolana Cement (PPC) Grinding Unit under the chairmanship of Sub-Collector and Additional District Magistrate, Kaimur (Bhabua). The issues raised during public hearing are Peripheral Development, Local Employment, CSR and Environment Protection. The capital cost of the project is Rs8.05 Crores and the capital cost for environmental protection measures is proposed as Rs 44.75 Lakhs. The annual recurring cost towards the environmental

protection measures is proposed as Rs10.54 Lakhs. The proponent has mentioned that there is no court case to the project or related activity.

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

- i. The project proponent should install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.
- ii. The Standards issued by the Ministry vide G.S.R. No. 612 (E) dated 25th August, 2014 and subsequent amendment dated 9th May, 2016 and 10th May, 2016 regarding cement plants with respect to particulate matter, SO₂ and NO_x shall be followed.
- iii. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control viz 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. Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- v. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- vi. AAQ Modelling shall be carried out based on the specific mitigative measures taken in the existing project and proposed for the expansion project to keep the emissions well below prescribed standards.
- vii. 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.
- viii. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- ix. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- x. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related

activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.

- xi. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- xii. 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 / re-processors only.
- xiii. Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.
- xiv. The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xv. The project proponent shall provide for LED lights in their offices and residential areas.
- xvi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xvii. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.
- xviii. In addition to the above provision of ESC, the proponent shall prepare a detailed CSR Plan for the next 5 years including annual physical and financial targets for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Skill Development and infrastructure etc) activities in consultation with the local communities and administration. The plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included. 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. 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.

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

9.11.2 Modernization of Steel Plant (4.2 MTPA) by adding 3 MTPA Hot Strip Mill, 3.3 MTPA Beneficiation and 2 MT Pellet Plant and Special Plate Plant (3,000 TPA to 15,000 TPA) within the premises of Rourkela Steel Plant of M/s Steel Authority of India Ltd (SAIL) at Village Rourkela Tehsil Rourkela, District Sundergarh, Odisha. [F. No. J-11011/66/2014-IA II (I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/S MECON Limited) gave a detailed presentation on the salient features of the project. The proposed project of 3 MTPA Hot Strip Mill, 3.3 MTPA Beneficiation and 2 MTPA Pellet Plant and Special Plate Plant (3000 TPA to 15000 TPA) within the premises of Rourkela Steel Plant” of M/s Steel Authority of India Limited (SAIL) at Village - Rourkela, Tehsil - Rourkela, District - Sundargarh, State – Odisha was initially received in the Ministry on 01/02/2014 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 28/04/2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry had prescribed TORs to the project on 27/06/2014. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 07/07/2016.

The project of M/s SAIL-RSP located in Village- Rourkela, Tehsil- Rourkela, District- Sundargarh, State - Odisha is for setting up of a new Hot Strip Mill for production of 3 million tons per annum (million TPA), of Hot Rolled Strips, a new Beneficiation Plant for production of 3.3 million tons per annum (million TPA) of beneficiated ore, new Pellet Plant for production of 2 million tons per annum (million TPA) of Pellets and enhancement of production of Special Plates from 0.003 to 0.015 million tons per annum (million TPA). Following table shows the existing and the proposed facility:

SN.	Plant Unit/Product	As per existing EC dated 29/01/2008	Proposed changed after Modernisation	Remarks
1.	Coke Ovens • No. of ovens	437 ovens	437 ovens	No change

	• Gross coke	2,170,000	2,170,000	
2.	Sinter Plant (Sinter)	6,760,000	6,760,000	No change
3.	Blast Furnace – Hot Metal Production	4,500,000	4,500,000	No Change
4.	Steel Melting Shops – Crude Steel	4,200,000	4,200,000	No change
5.	Rolling Mills – • Total Saleable Steel	3,880,000	3,880,000	No change
6.	Hot Strip Mill – Hot Rolled Steel	1,850,000	3,000,000	Addition of new Hot Strip Mill of 3 MTPA capacity slab input for producing Hot Rolled steel of 2.92 MTPA.
7.	Plate Mill – Plates	2,135,000	2,135,000	No change
8.	Cold Rolling Mill – Cold Rolled Steel • CR coils • CR sheets • Galv. Sheets • Tin Plates	345,000 25,000 196,000 75,000	345,000 25,000 196,000 75,000	No change
9.	Silicon Steel Mill – CRNO Steel	255,000	255,000	No change
10.	Pipe Plant – • Spiral welded pipes • ERW Pipes	55,000 75,000	55,000 75,000	No change
11.	LDBP	Lime : 414,900 Dolo : 130,000	Lime : 414,900 Dolo : 130,000	No change
12.	Beneficiation Plant	-	3,300,000	Addition of new 3.3 MTPA Beneficiation Plant.
13.	Pellet Plant	-	2,000,000	Addition of new 2 MTPA Pellet Plant.
14.	Special Plate Plant	-	15,000	Addition

Note : The capacities shown under the head “Proposed change after Modernisation “are the installed capacities of the mills. Depending on the market demand the product mix will vary and RSP’s production will be limited to the following;

- 4.5 MTPA Hot Metal
- 4.2 MTPA Crude Steel
- 3.88 MTPA Saleable Steel

The total land required for the project is 90.73 ha, which comes under the category of Industrial Land under RSP's premises. No forest land involved. The entire land has been acquired way back in late 50s for Rourkela Steel Plant. No River passes through the project area. It has been reported that no water body exists around the project and modification /diversion in the existing natural drainage pattern at any stage has not been proposed.

The topography of the plant area is flat and reported to lie between 22°12' 0.91"N to 22° 13' 40.59"N Latitude and 84°50' 0.89"E to 84°54'11.46" E Longitude in Survey of India topo sheet No.F45G16 at an elevation of 202 m AMSL. The ground water table reported to ranges between 2-7 m below the land surface during the post-monsoon season and 2-10 m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 7-8 m. Further, the stage of ground water development is reported to be 0% (as no ground water is utilized in project site/core zone) and >75% (considering total population in the study area excluding SAIL Township area and Rourkela city which are dependent completely on ground water/river water) in core and buffer zone respectively and there by these are designated as safe areas.

No national park/wild life sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc., are reported to be located in the core and buffer zone of the project.

The targeted production capacity of the Hot Strip Mill is 3 million TPA, Beneficiation Plant is 3.3 million TPA, Pellet Plant is 2 million TPA and Special Plate Plant is 0.015 million TPA. The ore for the plant would be procured from captive mines at Kiriburu, Meghahatuburu, Bolani, Barsua and Gua. The ore transportation will be done by Rail.

The water requirement of the project is estimated as 32,880 m³/day. No fresh water will be drawn from river/ground water table. The total water requirement will be met from recycling the treated waste water from the existing polishing treatment unit of Rourkela Steel Plant ie., Lagoon. The power requirement of the project is estimated as 210 MW, which will be obtained from GRIDCO, OPTCL, NSPCL and CPP-1 of Rourkela Steel Plant.

Ambient air quality monitoring has been carried out at 8 locations during September 2014 to December, 2014 and the data submitted indicated : PM₁₀ (32 µg/m³ to 98 µg/m³), PM_{2.5} (16 to 54 µg/m³), SO₂ (<4 to 16µg/m³) and NO_x(<10 to 49 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 1.53µg/m³ with respect to the PM₁₀, 1.9µg/m³ with respect to the SO₂ & 2.6 µg/m³ with respect to the NO_x.

A total of 0.960 MTPA of waste will be generated due to the project, out of which 10200 TPA will be used gainfully in Ore Bedding and Blending Plant and remaining waste (Slime filter cake from Beneficiation Plant) will be used for filling the low lying areas within the premises of RSP and used for reclaiming the slag dump areas of RSP. It has been envisaged that an area of 15.625 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The Public hearing of the project was held on 16th June, 2016, for production of 3 MTPA Hot Strip Mill, 3.3 MTPA Beneficiation and 2 MTPA Pellet Plant and Special Plate Plant

(3000 TPA to 15000 TPA). The issues raised during public hearing, responses of RSP along with action plan and fund allocation are given in Table 11.1 of the EIA report.

The capital cost of the project is Rs 5419.11 Crores and the capital cost for environmental protection measures is proposed as Rs 54200 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 3800 Lakhs.

The Member Secretary informed the Committee that a representation has been received in the Ministry from S.J. Shankar Oram, Ex-MLA, Raghunathpally regarding various issues related to collection of baseline information, ambient air quality monitoring, noise monitoring, Frequency of sampling, missing readings for TSS & Conductivity, values of Iron(Fe) exceeding the prescribed limits, location of public hearing venue etc. The proponent has provided justification for the same and also explained that S.J. Shankar Oram, Ex-MLA, Raghunathpally has sent another letter in support of the project on 13/06/2016 which is addressed to the Member Secretary, State Pollution Control Board, Odisha. A copy of the letter has been provided to the Committee.

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

- i. The project proponent should install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.
- ii. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology.
- iii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- v. Flood data for the past 100 year should be collected from the irrigation department and submitted along with the 6 monthly compliance report
- vi. Funds proposed for Wild life Management Plan should be allotted as proposed and the implementation of the project should be monitored and a report should be submitted to the Ministry every year within three months after each financial year.
- vii. Total make up water requirement of the water from Brahamani River shall not exceed 1,76,256 m³/day and prior permission shall be obtained from the concerned department. No ground water shall be used for the plant. The effluent shall be treated in the effluent

treatment plant. Maximum treated wastewater shall be recycled and reused in the process for cooling, gas cleaning plant (GCP, steel making, slag granulation plant (SGP), dust suppression, green belt development etc. Zero liquid discharge criteria to be achieved within 4 years from the date of grant Environmental Clearance to the project.

- viii. Green belt in an area admeasuring 910 Ha is still to be planted with trees. The hill adjacent to the steel plant should be adopted and plantation should be carried out. The river bank should also be planted with suitable species of trees on the either side of the river.
- ix. A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.
- x. Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- xi. 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 whichever are more stringent.
- xii. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.
- xiii. A time bound action plan shall be submitted to reduce solid waste generated due to the project related activity, its proper utilization and disposal.
- xiv. A Risk and Disaster Management Plan 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.
- xv. Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.
- xvi. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative

order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

- xvii. The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xviii. The project proponent shall provide for LED lights in their offices and residential areas.
- xix. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.
- xx. The proponent shall prepare a detailed CSR Plan for every year for the 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 plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included. 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. 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.
- xxi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

9.11.3 Regularization of EC for 0.9 MTPA operational Pellet Plant of M/s Rashmi Metaliks Ltd. installed and commissioned at vill. Gokulpur, PO Shamraipur, PS: Kharagpur, Dist. west Midnapore, west Bengal [J-11011/372/ 2014-IA.II(I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/S EMTRC Consultants Private Limited) gave a detailed presentation on the salient features of the project. M/s Rashmi Metaliks Limited (RML) has established 0.9 Million Tons Per Annum (MTPA) Iron Ore Pelletization Plant at village Gokulpur, PO Shyamraipur, PS: Kharagpur, District Paschim Midnapur, West Bengal after obtaining the NOC/ Consent to Establish from West Bengal Pollution Control Board on

12.08.2010. Consent to Operate was obtained from West Bengal Pollution Control Board on 02.08.2012 to produce 0.6 MTPA (50000 tons per month) Pellets. The Consent to Operate was amended on 22-08-2014 to produce 0.9 MTPA (75000 tons per month) Pellets. Pursuant to NGT Order – 05 of 2014 dated 27-05-2014 and MOEF letter No.J.11011/12/2014-IA.II (I) dated 08-09-2014, West Bengal Pollution Control Board intimated RML to obtain Environmental Clearance for the operating 0.9 MTPA Pellet Plant from MoEF, Govt. of India as per provision of EIA Notification 2006. The Terms of Reference was issued by MOEF&CC on 12.2.2015. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 27.10.2014.

The project of M/s Rashmi Metaliks Ltd is located in Village Gokulpur, PS: Kharagpur, District West Medinipore is for regularisation of EC for an installed and commissioned Pellet Plant for production of 0.9 MTPA of Pellets through Travelling Grate technology. The total land required for the project is 10 acres. No forest land is involved. Entire land has been acquired for the project. No River or stream passes through the project area. It has been reported that no water body exist around the project and modification / diversion in the existing natural drainage pattern at any stage has not been proposed.

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

The topography of the area is flat and falls between Latitude is 22°31'31" N and Longitude is 87°17'21" E in Survey of India Toposheet No 73N/7 at an elevation of 30 m AMSL. The water requirement of the project is estimated as 120 m³/day. RML will use ground water. Permission to draw groundwater is available from State Water Investigation Directorate. The power requirement of the project is 5 MW which will be obtained from the Grid.

Ambient air quality monitoring has been carried out at 8 locations during December 2014 to February 2015 and the data submitted indicated: PM10 (67 µg/m³ to 97 µg/m³), PM2.5 (30 to 55 µg/m³), SO₂ (5.2 to 10.0 µg/m³) and NO₂ (10.8 to 21.4 µg/m³). The results of the modeling study indicate that the maximum GLC from the existing project is 1.1 µg/m³ with respect to the PM10, 4.0 µg/m³ with respect to the SO₂ and 2.2 µg/m³ with respect to the NO_x.

It has been reported that a total of 84 tons per day of dust will be generated due to the project, which 100% will be reused in pellet making. No solid wastes will be dumped. It has been envisaged that an area of 47.5 acres (33% of 144 acres) has been developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities. The Public hearing of the project was exempted.

The capital cost of the project is Rs 170 Crores and the capital cost for environmental protection measures is 770 Rs Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 54 Lakhs. The proponent has mentioned that there is no court case to the project or related activity.

It was informed by the Member Secretary to the Committee that the TOR for the project was issued on 12.02.2015. PP vide letter dated 3.08.2015 requested for transfer of TORs from M/s

Rashmi Metaliks Limited to M/s Orissa Metaliks Pvt Ltd. Ministry vide its letter dated 14th October, 2015 issued a letter in respect of transfer of ToRs M/s Rashmi Metaliks Limited to M/s Orissa Metaliks Pvt Ltd. Further PP again requested the Ministry to transfer the ToRs from M/s Orissa Metaliks Pvt Ltd. to M/s Rashmi Metaliks Limited, however, no hard copy of affidavits were received by the Ministry. The PP handed over the hard copied during the meeting.

In view of the above, it has been decided by the Committee that the appraisal of the project will done, once the formalities for transfer of ToR takes place.

9.12 ANY OTHER ITEM

9.12.1 Proposed expansion to Steel Melting Shop (SMS) of 60,000 mtpa and ROLLING MILL of 1.5 mtpa at Kudithini Village, Bellary Taluk & District, Karnataka State by M/s Agarwal Sponge and Energy Pvt Ltd – ToR proposal [J-11011/908/2007- IA II (I)]

Environmental Clearance for the proposal of Sponge Iron Plant of capacity 90,000 TPA and captive power plant of capacity 12 MW (6MW-AFBC & 6MW-WHRB) of M/s. Agarwal Sponge & Energy Private Limited situated at Sy.No.899A, 899B and 900 of Kudithini village, Ballari Taluk was granted by the Ministry vide letter no. J-11011/908/2007-IA II(I) dated 11th December 2008.

Now Project Proponent proposed to expand by manufacturing Billets and TMT in the existing plant premises. The total land is 24.75 Acres in which about 8 acres (33%) allotted for green belt. Technology with forward integration process of the proposed expansion project, having Steel Melting Shop (SMS)(Billets) and Rolling mill (TMT Bars). The cost of the project is around Rs. 2200 Lakhs, due to proposed expansion, additional employment generation would be 75 directly and 200 Indirect employment.

The proposed expansion capacity of different products as below:

Name of the Unit	No. of Units	Capacity of the Each Unit	Production Capacity
Steel Melting Shop (SMS)	1	60,000 MTPA	60,000 MTPA
Rolling Mill (TMT)	1	1,50,000 MTPA	1,50,000 MTPA

The required Raw material for SMS will be Sponge Iron, Pig Iron, Ferro Alloys, MS Scrap, Boric Acid, Coke Breeze and Power. The generated Power from our Co Generation Power Plant will be used to run the Induction – Furnace and Rolling mill both. The product from SMS that means “Billets” will be fed into the Rolling mill in both direct hot charging mode and Re-heating furnace mode. Where the material will pass through different mills and passes, and finally rolled into TMT having different diameters as per requirement.

As power plant is continuous operating unit, hence requirement of DG set only as emergency back-up, during any break-down or maintenance just to keep the plant at minimum lighting load and to run the auxiliary equipments.

Our existing DRI plant operation, source of Iron Ore is from surrounding mines of Ballari-Hosapete-Sandur sector including Iron Ore Pellets from various pellet plants units from

the this sector. South African coal is being used for producing Sponge Iron. The Sponge Iron produced will become raw material for the proposed SMS (Induction furnace).

From Iron ore to finished steel will be under one roof to be precise once this expansion happens then it will be an Integrated Steel Plant.

Water consumption for the above proposed project will be 200KLD and domestic waste water generation will be 20KLD which will be treated in CPCB Approved Soak pit and Septic Tank and Industrial waste water generated will be recycled back for cooling purpose.

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. The Public Hearing for the project should be conducted by Karnataka Pollution Control Board.

9.12.2 Modification cum expansion of existing project from 0.1 MTPA billet to 0.25 MTPA rolled product at badtumkela dist. Sundergarh, Odisha by M/s Bhaskar Steel and ferro Alloys-Amendment in ToRs [J-11011/491/2008-IA II (I)]

M/s. Bhaskar Steel & Ferro Alloy ltd. was issued ToR vide letter no J-11011/491/2008-IA II (I) date 31st July 2015 for modification cum expansion of existing integrated steel project from 0.1 MTPA billet to 0.25 MTPA rolled product. Following table presents the configuration of the project:

PHASE-1		PHASE-2	
UNIT	CONFIGURATION	UNIT	CONFIGURATION
DRI kiln	2x350 TPD 2x100 TPD	DRI kiln	2x350 TPD 2x100 TPD
Pelletization	1x0.6 MTPA	Pelletisation	1x0.6 MTPA
IO Beneficiation	1x1.2 MPTA	IO Beneficiation	1x1.2 MPTA
SMS	3x20 T IF	SMS	3x20 T IF
Rolling mill	25 TPH	Rolling Mill	25 TPH
Power Plant	2x9 MW(WHRB)	Power Plant	2x9 MW(WHRB)
Power Plant	2x10MW(CFBC) MW CFBC/AFBC	Power Plant	2x10 MW CFBC/AFBC
Fe-Mn Plant	1x9 MVA	Si-Mn Plant	1x9 MVA

PP has requested for amendment in ToR for inclusion of 1x3 T IF in phase-1 along with proposed configuration. So that amended configuration of SMS in phase-1 will be 3x20 T IF & 1x3T IF. The amendment being a 3T IF only there will be increase in production of billet from 0.417 MTPA to 0.419 MTPA.

The Committee recommended the proposal for amendment of ToR for addition of 1x3 T IF in phase-1.

9.12.3 Proposed Greenfield cement plant (Clinker production: 1.5 MTPA and Cement production: 2.0 MTPA) and captive power plant of 30 MW at Angadi Raichur and Indanur Villages, Kodangal Mandal, Mahabubnagar District, Andhra Pradesh by M/s Seetharam Cements Limited – Extension of validity of ToR [J-11011/170/2013-IA.II(I)]

M/s Seetharam Cements Ltd (SCL), proposes to install a Greenfield cement plant with clinker production capacity of 1.5 Million tonnes per annum (MTPA) and Cement production capacity of 2.0 MTPA along with 30 MW Captive Power Plant at Angadi Raichur/Indanur Villages adjoining Gandlepalli village, Kodangal (M), Mahabubnagar District, Telangana State. The project received the Terms of Reference vide no J-11011/170/2013-IA-II (I) dated 13.11.2013 with validity upto 12.11.2015. Further SCL has obtained extension of TOR for one more year with validity upto 12.11.2016.

The project is proposed in about 60 ha of the area, which is Government waste land. Of which 20 Ha will come under greenbelt development.

Due to the delay in processing of mine documents, the bifurcation of employees between two states, the Public Hearing could not be taken up. Now , the documents were already submitted to Telangana State Pollution Control Board , the PH will be taken up shortly. Hence the proponent requested to extend the validity of TOR by one more year ie up to 11.11.2017.

The Committee recommended the proposal for extension of validity of ToRs for further period of 1 year up to 11.11.2017.

9.13 CASE FOR TERMS OF REFERENCE (TOR)

9.13.1 1.2 MTPA Portland Slag Cement (PSC) and Ground Granulated Blast Furnace Slag (GGBS) Grinding Unit at Pottaneri, Village M. Kalipatti, Mettur taluk, Salem, Tamil Nadu of M/s JSW Cement Ltd. [J-11011/209/2016-IA(I)]

M/s. JSW CEMENTS LTD. proposes for setting up of 1.2 MTPA Portland Slag Cement (PSC) and Ground Granulated Blast Furnace Slag (GGBS) Grinding Unit at Pottaneri, M. Kalipatti Village, Salem, Tamil Nadu. The land area proposed for the grinding unit is 12.95 Ha Ha out of which 4.32 . Ha land will be used for green belt development. Total project cost is approx Rs 350 crores. Proposed employment generation from proposed project will be 35 direct employment and 150 indirect employment.

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

One Cement Mill of 1.2 MTPA grinding capacity will be installed and the Electrical Power requirement is 15 MVA, which will be met from Grid. Company has also proposed to install 2x500 Kva DG Set.

Water Consumption for the proposed project will be 500 m³/day Around 8 m³/day of domestic waste water is expected to be generated from the proposed project and the same will be treated in septic tanks followed by soak pits. No waste water will be generated from the process.

It has been noted by the Committee that the extant proposal is a Category B project. However, as the unit is proposed to be located in the premises of JSW steels Ltd, which is an A category project, the Tamil Nadu State Environmental Impact Assessment Authority advised the proponent to approach the Ministry on the applicability of category. The Committee noted that the piece of land on which M/s JSW Cement Ltd intend to establish the cement unit belongs to M/s JSW steels Ltd, however, the land has been allotted on 20 year lease to M/s JSW Cement Ltd. by the M/s JSW steels Ltd. Since cement grinding units falls under category 'B' as per EIA Notification, 2006, as amended, the proposal has to be appraised at the State level. Therefore, the proposal should be transferred to State Environmental Impact Assessment Authority for further necessary action.

9.13.2 Proposal for expansion of ore Beneficiation Plant with throughput capacity from 0.6 MTPA to 1.5 MTPA within the exiting premises at Hire Baganal Village, Koppal Talul & District, Karnataka by M/s Thakur Industries [J-11011/208/2016-IA(I)]

The proposal was considered by the Expert Appraisal Committee to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 3(a), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s. Thakur Industries, Hosapete, Bellari, Karnataka, proposes to expand Ore Beneficiation plant capacity from existing 0.6 MTPA to 1.5 MTPA by adding additional beneficiating equipment. The plant is located at Hirebaganal Village, Koppal Taluk, Koppal District, Karnataka State. The Plant already obtained Environmental Clearance from Ministry of Environment, Forests & Climate Change, New Delhi, vide letter ref no. J-11015/257/2010-IA.II (M), dated 19th April, 2012 for the capacity 0.60 MTPA.

The extent of beneficiation plant is 17.50 Acres (7.08 Ha) out of which 5.7 Acres (2.33 ha) land is being developed for green belt development. The total project cost is approx 220 Lakhs rupees. Proposed additional employment generation from proposed expansion project will be 20 direct employments and 35 indirect employments.

The proposed capacity for different products in the existing site area as below;

Name of the Unit	No. of Units	Capacity of the Each unit	Production Capacity
Ore Beneficiation Plant	1	Present capacity 0.6mtpa	Proposes to increase to 1.5 million TPA throughput

The electricity load of 900 KVAMW will be procured from GESCOM. Company has also proposed to install 62 KVA – 3 No's, 155 KVA – 1 No. & 380 KVA – 1 No., DG Set.

Proposed raw material and fuel required for project are Low Grade Ore & Diesel. The Low grade iron ore requirement would be fulfilled by Karnataka and adjoining state of Telangana and Andhra Pradesh including Goa and also from any state of India. Also would be met by imports from other countries. Primarily it would be sourcing the raw material at the existing nearby iron ore mines of Bellary district (Bellary-Hospet-Sandur regions). The Fuel consumption will be mainly for DG Sets.

Water consumption for the proposed project will be 3,150 KLD. Domestic waste water will be about 35KLD and is being treated CPCB Approved Soak Pit and Septic Tank and industrial waste water generated will be treated in thickener and recycled back in the process. About 110 KLD water will be used for dust suppression and afforestation purpose.

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. The Public Hearing for the project should be conducted by Karnataka Pollution Control Board.

9.13.3 Expansion of Steel Plant at R.G. Peta & Srirampuram Villages, L. Kota Mandal, Vizianagaram District, Andhra Pradesh of M/s MAA Mahamaya Industries Ltd. [F. No. J-11011/50/2005-IA.II(I)]

The proposal was considered by the Expert Appraisal Committee to determine Terms of Reference (TORs) for undertaking detailed EIA and EMP study for the purpose of obtaining Environment Clearance in accordance with the provisions of EIA Notification, 2006, as amended. For this purpose, the project proponent submitted information in prescribed format (Form-I) along with the pre-feasibility report. The proposed project activity is listed at S.No. 3(a), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

Maa Mahamaya Industries Ltd. (MMIL) is located at R.G. Peta Village, L.Kota Mandal, Vizianagaram District, Andhra Pradesh. The Company has received the Environmental Clearance vide No. J-11011/50/2005-IA-II(I) dated 30th September 2005 for the existing Sponge Iron Plant (1,12,000 TPA), Steel Melting Shop (1,18,300 TPA), Rolling Mill (1,00,000 TPA) and Power Plant (20 MW). Now, Maa Mahamaya Industries Ltd., proposes to go for expansion as mentioned below:

S.No	Unit	Existing Production capacity (Unit)	Proposed Production capacity (Unit)	Production Capacity After proposed expansion
1	Iron ore beneficiation & Pelletisation (Beneficiated iron ore & Pellets)	---	6,00,000 TPA (1 x 2000 TPD)	6,00,000 TPA (1 x 2000 TPD)
2	DRI kiln (Sponge Iron)	1,12,000 TPA (1 x 350 TPD)	1,12,000 TPA (1 x 350 TPD)	2,24,000 TPA (2 x 350 TPD)
3	Mini Blast Furnace (Hot Metal)	---	1,65,000 TPA (1 x 550 TPD)	1,65,000 TPA (1 x 550 TPD)

			Capacity : 1 x 250 M ³	
4	Steel melting shop (Billets/Ingots)	1,18,300 TPA	5,40,000 TPA	6,58,300 TPA
	• EAF	---	1 x 45 T	
	• Ladle furnace	1 x 30 T	1 x 45 T	
	• VD / VOD	---	1 x 45 T	
	• Induction furnace	4 x 9 T	4 x 20 T	
	• Billet / Bloom caster	---	1 x 2 strand	
	• Billet caster for IF & Rolling Mill	1 x 2 strand	1 x 2 strand	
5	Rolling mill			
	• Bar & Rod mill (Wire Rods)	---	1,00,000 TPA	1,00,000 TPA
	• TMT mill (TMT Bars & Rods)	1,00,000 TPA	2,00,000 TPA	3,00,000 TPA
	• Section mill (Structural Angles)	---	2,50,000 TPA	2,50,000 TPA
6	Galvanizing line (Galvanized Steel)	--	2,50,000 TPA	2,50,000 TPA
7	Lime & Dolo plant	---	2 x 100 TPD	2 x 100 TPD
8	Oxygen plant	---	1 x 90 TPD	1 x 90 TPD
9	Power Plant	20 MW	98 MW	118 MW
	• Waste Heat Recovery Boiler	8 MW (36 TPH)	8 MW (36 TPH)	16 MW
	• FBC Boiler	12 MW (55 TPH)	90 MW (405 TPH)	102 MW

Proposed expansion will be carried out in partly in the existing plant (in R.G.Peta Village – 40.48 Ha.) and partly in the land adjoining (in R.G.Peta village 6.8 Ha and Srirampuram Village – 17.7 Ha.) to the existing plant. Total land envisaged for the entire project will be 64.98 Ha. Estimated project cost for proposed expansion will be Rs. 3600 Crores.

Water required for the proposed expansion project will be 4000 KLD and same will be sourced from Visakhapatnam Municipal Corporation & Ground water source. Power required for the proposed expansion project will be sourced from the Captive power plant. The total manpower requirement for the entire plant is 500 numbers inclusive of staff and security. They will comprise of 20 % of skilled labours, 40 % of semi- skilled labours and 40 % of unskilled labours. 33% of total area will be developed with greenbelt.

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) The Public Hearing for the project should be conducted by Andhra Pradesh Pollution Control Board.

Executive Summary

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

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

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

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

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

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

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).
- ii. 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.

6. **Environmental Status**

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

7. Impact Assessment and Environment Management Plan

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

treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

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

8. Occupational health

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

9. Corporate Environment Policy

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
 11. 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.
 12. 'A tabular chart with index for point wise compliance of above TORs.
 13. The TORs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be

posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

- ix. TORs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

ADDITIONAL TORS FOR INTEGRATED STEEL PLANT

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

ADDITIONAL TORS FOR PELLETT PLANT

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

ADDITIONAL TORs FOR CEMENT INDUSTRY

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

ADDITIONAL TORs FOR PULP AND PAPER INDUSTRY

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

LEATHER/SKIN/HIDE PROCESSING INDUSTRY

1. Justification for engaging a particular type of process (raw hide/skin into semi finishing or finished leather, semi finished leather to finished leather, dry finishing operations, chrome/vegetable tanning, *etc.*).
2. Details regarding complete leather/ skin/ hide processing including the usage of sulfides, nitrogen compounds, chromium or other tanning agents, post-tanning chemicals, biocides, *etc.*, along with the material balance shall be provided.
3. In case of chrome tanning, details of the chrome recovery plant, management of shavings/solid waste including safe disposal.
4. Details on reuse of soak liquor / saline stream from membrane system, if applicable, to the extent possible in pickling activity after required treatment. Also, mention the salt recovery measures.

COKE OVEN PLANT

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

ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE

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

METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

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

**LIST OF PARTICIPANTS OF EAC (I) IN 8th MEETING OF EAC (INDUSTRY-I) HELD
ON 27th – 29th JULY, 2016**

S.No	Name and Address	Position	Attendance	Signature
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	
Members				
2.	Director, Central Pulp and Paper Research Institute	Member	P	
3.	Director, Central Leather Research Institute	Member	A	
4.	Representative of Indian Meteorological Department	Member	P	
5.	Representative of Central Ground Water Board	Member	A	
6.	Dr. G. Bhaskar Raju	Member	P	
7.	Prof. Naresh Chandra Pant	Member	A	
8.	Dr. Jagdish Kishwan, IFS(Retired)	Member	A	
9.	Dr.G. V.Subrahmanyam	Member	P	
10.	Prof. Arun Pandey	Member	P	
11.	Shri Santosh Raghunath Gondhalekar	Member	A	
12.	Shri Ashok Upadhyay	Member	P	
13.	Shri Vijay Prakash Saha	Member	P	
14.	Dr.Satish C.Garkoti	Member Secretary	P	
15.	Amardeep Raju		P	
