

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

SUMMARY RECORD OF THE FIFTH (5TH) MEETING OF EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006 HELD ON 30TH – 31ST MARCH, 2016

The fifth 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 30th – 31st March, 2016 in the Ministry of Environment, Forest and Climate Change. Professor Arun Pandey, Delhi University and Dr. Ashok Upadhyay, expressed their inability to attend the meeting due to prior commitments. The list of participants is annexed.

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

5.2 Confirmation of the minutes of the 4th Meeting

The minutes of the 4th meeting of the Expert Appraisal Committee (Industry-I), as circulated were confirmed.

5.3 ENVIRONMENTAL CLEARANCE (EC)

5.3.1 Expansion of Clinkerization Capacity from 1.98 MTPA to 3.2 MTPA of Cement Plant and installation of 1x9 MW capacity WHRB of M/s Emami Cement Limited, located at Village(s) Risda & Dhandhani, Tehsil Balodabazar, District Balodabazar-Bhatapara, Chhattisgarh. [F. No. J-11011/309/2013-IA-II (I)].

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (J.M. EnviroNet Pvt. Ltd.) gave a detailed presentation on the salient features of the project. The Application was initially received in the Ministry on 9th October, 2013 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 19th December, 2013 and prescribed TORs to the project for undertaking detailed EIA and EMP study for the purpose of obtaining environmental clearance. Accordingly, the Ministry had prescribed ToRs to the project on 31st January, 2014 and issued revised ToRs letter on 1st 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 March, 2016.

The proposal is for enhancement of production of clinker capacity from 1.98 million TPA to 3.2 million TPA. The project was earlier accorded environment clearance by the Ministry vide letter No. J-11011/372/2007-IA.II(I) dated 31.10.2011 for 2.5 million TPA of cement plant, 1.98 million TPA of clinker, 9 MW of WHRB and 30 MW of captive power plant. Subsequently, an amendment was issued on 30.11.2013 for changing the project area followed by an amendment dated 1.02.2016 for outsourcing clinker, change in CPP capacity and change in fuel mix. No additional land is required for the proposed expansion proposal and the same will be carried out in the existing land of 188.35ha. No forestland is involved. 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 area. The topography of the area is flat and reported to lie between 21^o 37' 15" N to 21^o 38' 30.80" N Latitude and 82^o 04' 30" E to 82^o 07' 18.3" E Longitude in Survey of India toposheet No. 64K/2, at an elevation of 235-303 m. There are four water bodies within 10km radius (study area) i.e. Mahanadi Canal (seasonal) (~3.5 Km in NW), Banjari Nala (~8.6 Km in WNW), Khosri Nala (~3.0 Km in SE) and Kukurdih Talav (~0.5 Km in NNW). The ground water table reported to range between 4m-9m below the land surface during the post monsoon season and 6m-17m below the land surface during the pre-monsoon season. The following table presents the existing and the proposed capacities:

	Units (MTPA)	Existing Granted Capacity	Additional Proposed Capacity	Total Capacity after Expansion
Project Proposal	Cement	2.50	No Change	2.50
	Clinker	1.98	1.22	3.20*
	WHRB (MW)	NIL	1x9	1x9
	CPP (MW)	1x30	No Change	1x30
*The excess clinker will be sent to their captive grinding units				

The Waste Heat Recovery Boiler of 9 MW capacity will be installed for re-utilization of the waste heat from the expelled gases of Pre-Heaters (PH) and Air Quenched Coolers (AQC). The main objective of WHRB is to utilize waste heat from cement production lines, for generating electric power, which will be utilized on-site and will reduce load of power supplied from the Grid.

The raw materials required for the plant includes limestone, iron ore and bauxite. The limestone will be sourced from their own limestone mines,

whereas the iron ore and bauxite will be sourced from nearby areas. The fuel required for the project is coal, pet-coke and agro-waste. The coal will be procured from open market/import and pet-coke from refineries/import and agro-waste from nearby area. The above all raw materials will be transported by road or rail as the situation demands. Following table presents the details of the raw material and fuel requirement:

Raw Material Requirement					
S. No.	Raw Material	Total Requirement (MTPA)	Source	Mode of Transportation	Distance
1.	Limestone	4.99	Captive Mine	Covered Conveyor Belt from limestone crusher	~1 km
2.	Iron Ore	0.06	Nearby Area	Road/Rail	~100 km
3.	Bauxite	0.07	Nearby Area	Road/Rail	~150 km

Fuel Requirement							
S.No	Fuel Required	Total Requirement (MTPA)	Source	Mode of Transportation	Caloric Value (Kcal./kg)	% Ash	% Sulphur
1.	Coal	0.62	Indian/Imported	Road/Rail	4000-4500	30-34.0	0.70-0.8
2.	Pet coke	0.297	Any Refinery/Import	Road/Rail	8352	1	5
3.	Agro waste	0.08	Nearby Area	Road/Rail	4000-4500	22.0 - 29.0	0.04 - 0.08

The total water requirement of the project is estimated as 4571 KLD, out of which 4041 KLD of fresh water requirement will be sourced from the ground water and the remaining 530 KLD will be met from the Recycled water. The power requirement of the project is estimated as 46.1 MW, which will be sourced from the Captive Power Plant (1 x 30 MW), WHRS (1 x 9 MW) & CSEB Grid.

Ambient air quality monitoring has been carried out at 8 stations during Summer Season, 2014 (March to May) and the data submitted indicated that PM₁₀ ranges from 51.3 to 85.8 µg/m³, PM_{2.5} ranges from 22.2 to 39.5 µg/m³, SO₂ ranges from 5.5 to 10.7 µg/m³ and NO_x ranges from 11.3 to 24.7 µg/m³. The results of the modelling study indicated that the maximum increase of GLC for the proposed project is 4.18 µg/m³ with respect to the PM, 2.80 µg/m³ with respect to the SO₂ and 6.55 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 recycled back to the process. 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. It has been envisaged that an area of 62.16 ha is being developed under greenbelt/plantation 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 CECB has been obtained *vide* letter No. 140/TS/CECB/2012 dated 09.04.2012.

The Public hearing of the project was held on 30th December, 2015 for production of 3.2 MTPA clinker, under the Chairmanship of Additional District Collector, Balodabazar. The issues raised during public hearing *inter-alia* include pollution, employment, CSR, land, etc.

The capital cost of the project is Rs. 1831 Crores and the capital cost for environmental protection measures is proposed as Rs. 74.69 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 3.73 Crores/ annum. The total employment generated from the proposed expansion will be 1050 persons. 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 desired additional information on the following for further consideration of the proposal:

- i. The project proponent should undertake a study to assess the impact of particulate matter on the reserve forest in the study area and submit a report to the Ministry and Regional Office.
- ii. A test on trace element content in the fly ash should be conducted through a recognized laboratory and submitted.
- iii. Details (quantitative) of air pollution control equipments should be provided.
- iv. A note on handling of NO_x and SO₂ should be provided.

- v. Water balance calculations should be revised and submitted.
- vi. Details regarding utilization of hazardous waste in the kiln should be submitted.
- vii. A compliance report from the Regional Office of the Ministry for the existing EC conditions should be submitted.
- viii. Details regarding ToR No. 49, 50 and 58 should be revised and submitted.

5.3.2 Greenfield Integrated Cement Project Consisting of Clinker (2.4 MTPA), Cement (4 MTPA), Captive Power Plant (25MW) and Waste Heat Recovery Power Generation (15 MW) of M/s Shree Cement Limited, located near village Pedagarlapedu, Mandal Dachepalli, District Guntur, Andhra Pradesh. [F. No. J-11011/165/2014-IA-II (I)].

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant [EMTRC Consultants Pvt Ltd (NABET: Sl. No. 42)] gave a detailed presentation on the salient features of the project. The Proposed Greenfield Integrated Cement Plant Project of M/s Shree Cement Limited located in Village Pedagarlapedu, Tehsil Dachepalli, District Guntur, Andhra Pradesh was initially received in the Ministry on 15.4.2014 for obtaining Terms of Reference (TORs) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 23rd – 24th June, 2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment, Forests and Climate Change had prescribed TORs to the project on 11th August 2014. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 23rd February 2016.

The proposal is for setting up of a Greenfield Integrated Cement Plant for production of 2.4 Million TPA Clinker, 4.0 Million TPA Cement, 25 MW Captive Power Plant (CPP), 15 MW Waste Heat Recovery Power Generation (WHRS) and Residential Colony. The total land required for the project is 142.79 ha (Plant: 100.49 ha and Residential colony:42.30 ha), out of which 104.24 ha (73%) is agricultural land and 38.55 ha (27%) is fallow land (100% private Land). No forest land is involved. Land being purchased through mutual negotiation and 77 acres of land has already been purchased. The general topography of the area is almost flat and gradually sloping towards North. The project lies within the geographical coordinates of 16° 30' 51" N to 16 31' 25" N latitude and 79° 43' 48" E to 79 44' 40" E longitude for the plant site and 16°30'46" to 16°31' 13" N latitude and 79°44'25" to 79°44'56" E longitude for Staff colony. The site elevation is 109 m in South end and 112 m in North end. No river passes through the

project area. It has been reported that a small nallah is passing through the site, which will be diverted along the plant boundary. This nallah will be used to discharge the storm water after passing through series of sedimentation tanks. The nallah joins Naguleru Vagu. Following table shows the proposed units along with its capacities:

S. No	Name of Unit	Proposed Capacity
1	Clinker Production	2.4 Million TPA
2	Cement Production	4.0 Million TPA
3	Captive Power Plant	25 MW
4	Waste Heat Recovery Power Generation	15 MW

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 raw materials required for the cement plant are limestone, gypsum, bauxite, iron ore and fly ash. Indian and imported coal & pet coke will be used as fuel for cement plant and power generation. The cement plant will adopt dry process technology for cement manufacturing with six stage pre-heater and pre-calciner technology. Vertical Roller Mill (VRM) and Ball Mill will be used for cement grinding. Air cooled condenser technology will be used for power generation and waste heat recovery unit will be installed with clinker unit.

Raw Material	Specific Consumption	Million TPA	Means of Transport
Lime Stone	1.5 T/ T clinker	3.6	Conveyor belt
Iron Ore	0.015 T/ T clinker	0.036	Rail & Road
Bauxite	0.044T/ T clinker	0.105	Rail & Road
Coal and Pet coke	0.1616 T coal / T clinker	0.387	Rail & Road
	0.10 T pet coke / T clinker	0.24	Rail & Road
Gypsum	0.05 T / T cement	0.2	Rail & Road
Fly Ash	0.35 T/T cement	1.4	Rail & Road

The limestone for the plant would be sourced from the adjacent captive limestone mines. The ore (bauxite, iron) transportation will be done through road and rail.

The ground water table reported to ranges between 10m-14m below the land surface during the post-monsoon season and 12m-18m below the land surface during the pre-monsoon season. In buffer zone, total recharge due to rainfall and irrigation return flow at normal rainfall works out to be 56.96 mcm per annum. Total discharge works out to be 19.82 mcm per annum and stage of development is 34%.

The water requirement of the project is estimated as 1350 m³/day, which will be sourced from the groundwater, for which groundwater permission has been obtained from CGWA on 20.09.2013 and renewal of permission is under process. The power requirement of the project is estimated as 35MW, which will be sourced from the proposed CPP, WHRB and Grid. 100 KVA DG sets also proposed for emergency.

Ambient air quality monitoring has been carried out at 8 locations during December 2014 to February 2015 and the data submitted indicated that PM₁₀ ranges from 38 µg/m³ to 73 µg/m³, PM_{2.5} ranges from 18 to 41 µg/m³, SO₂ ranges from 4 to 8.6 µg/m³ and NO_x ranges from 9 to 13.8 µg/m³. The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 1.1 µg/m³ with respect to the PM₁₀, 0.4 µg/m³ with respect to the SO₂ 1.4 µg/m³ with respect to the NO_x.

A total of 30,000 tons/annum of ash will be generated from the CPP, which will be fully utilised in cement making. It has been envisaged that an area of 47 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 30.10.2015 for setting up of Integrated Cement Plant, Captive Power Plant and Residential Colony. Issues raised during public hearing *inter alia* include land owners may cultivate the land till start of construction activity, employment, CSR activities, etc..

The capital cost of the project is Rs.1234Crores and the capital cost for environmental protection measures is proposed as Rs.50Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.1.0Crore. 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 desired that the project proponent should provide the documents relating to acquisition of the land for further consideration of the project.

5.3.3 Expansion of existing cement plant from 0.5 MTPA to 1.63 MTPA and clinker from 0.475 MTPA to 1.475 MTPA by installing a new production line of 1MTPA clinker and 1.13 MTPA cement production by M/s Tamil Nadu Cements Corporation Limited (A Tamil Nadu Government Enterprise), located near Village Kairulabad, District Ariyalur, Tamil Nadu [F. No. J-11011/83/2014-IA-II (I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant [B.S Envi-Tech Pvt Ltd, Secunderabad (NABET No. NABET/EIA/1316/RA002)] gave a detailed presentation on the salient features of the project. The proposal for establishment of a Cement Plant (new production line) of M/s Tamilnadu Cement Corporation Limited (TANCEM) located Near Village Kairalabad, District Ariyalur, Tamilnadu was initially received in the Ministry on 30.01.2014 for obtaining Terms of Reference (TORs) 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, the project proponent submitted proposal for environmental clearance online on 12th January 2016.

The proposal is for enhancement of production of cement plant from 0.5MTPA to 1.63 MTPA and clinker from 0.475MTPA to 1.475MTPA by installing a new production line of 1MTPA clinker and 1.13 MTPA cement production. Following table presents the existing and the proposed capacities:

S. No	Unit	Existing Capacity (Unit - I)	Proposed Expansion by New Unit (Unit - II)	Total Capacity after Expansion
1	Clinker Production	0.475	1	1.475
2	Cement Production	0.5	1.13	1.63

The project proponent has applied to the Ministry for environment clearance for the first time as the project was not attracting the provisions of EIA Notification, 1994. The cement production from the plant was commenced in the year 1979 prior to EIA Notification, 1994 coming into force and therefore, the plant is running based on the Consent to Operate accorded by the State Pollution Control Board.

The total land required for the project is 67.15 ha which has already been acquired by the project proponent. No additional land is required for the proposed enhancement. No forestland is involved. Out of the total land requirement of 67.15 ha, an area of 7 ha is for the existing plant area and 13.56 ha area is for the proposed new plant, 22.15 ha is for green belt and 24.44 ha is vacant 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 topography of the area is flat. No cut and fill are required. The site is not located on a hilly terrain and lies between North latitude 11°8'32.92"N - 11°9'2.00"N and East longitude 79°5'24.88"E to 79°6'4.85"E in Survey of India topo sheet No. 58/M/4, at an elevation of 80 m AMSL. No River passes through the project area and no diversion is proposed which affects the natural drainage. The ground water table depth ranges between 15m below the land surface during the post-monsoon season and 20m below the land surface during the pre-monsoon season. The stage of groundwater development is reported to be less than 70% in buffer zone and thereby these are designated as safe area.

The limestone requirement will be met from captive limestone mines. The limestone transportation will be done through trucks. Following table presents the details of raw material:

Raw Material	Quantity (MTPA)			Source	Mode of Transport
	Present Unit	Expansion Unit	Total		
Limestone	0.6	1.5	2.1	Kallankurichi, Kairalabad, Periyagalur and Ameenabad & Anandavadi etc.	Road
River Sand/ Granite & Chips	-	0.01	0.01	Local (30 Km)	Road
Gypsum	0.021	0.05	0.071	STERLITE (400 Km), SPIC and FACT	Road
Dry / Wet fly ash	0.028	0.13	0.158	METTUR Thermal Power, TNPL, NLC	Road

Coal (80% Indigenous & 20% imported)	0.08	0.15	0.23	Singareni Collieries Telangana & Imported Coal	Rail
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The present water consumption of the plant including colony is about 1160 m³/day. Additional water requirement of the plant is 450 m³/day (including domestic requirement). Water is sourced from ground water. The present power requirement for the project is estimated as 11 MVA and it is proposed that an additional power of 17 MVA will be required for the project. The entire power requirement will be sourced from the grid.

Ambient air quality monitoring has been carried out at 8 locations during January to March 2015 and the data submitted indicated that PM₁₀ ranges from 45.6 µg/m³ to 56.8 µg/m³, PM_{2.5} ranges from 22.7 to 26.6 µg/m³, SO₂ ranges from 8.5 to 10.2 µg/m³ and NO_x ranges from 9.6 to 11.1 µg/m³. The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 1.47 µg/m³ with respect to the PM₁₀, 0.26 µg/m³ with respect to the SO₂ and 4.74 µg/m³ with respect to the NO_x.

It has been envisaged that no solid waste will be generated. The sludge generated from the STP will be used as manure for plantation. An area of 22.15ha 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 with about 10,000 plants. It is proposed to increase the density by planting 1500-2000 trees per hectare.

The Public hearing of the project was held on 04.11.2015 under the Chairmanship of District Revenue Officer, Ariyalur. The issues raised during public hearing *inter-alia* include employment, supply of drinking water, improvement of roads etc.

The capital cost of the project is Rs 600crores and the capital cost for environmental protection measures is proposed as Rs 54crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 4.72crores. The proponent has mentioned that there is no court case on the project to the related activity.

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

- i. Compliance report for CTO for the existing plant from the Pollution Control Board should be submitted.

- ii. The CSR component for the project should be revisited and the revised CSR along with budget should be submitted.
- iii. It may kindly be clarified whether the District Revenue Officer under whose chairmanship the public hearing is conducted is equivalent to the Additional District Magistrate, as mandated under the EIA Notification, 2006.

5.4 FURTHER CONSIDERATION

5.4.1 Enhancement of Tissue Paper Production from 25,000 TPA to 55,000 TPA by installation of additional 30,000 TPA Tissue machine without increasing permitted Paper Production of 1,00,000 TPA by M/s Orient Paper and Industries Limited (formerly M/s Orient Paper Mills), located in Shadhol District of Madhya Pradesh. (Under Clause 7(ii) of EIA Notification, 2006) [J-I 1011/1142/2007- IA-II(I)]

The proposal was earlier considered by the Expert Appraisal Committee during its 3rd meeting held on 28th-29th January, 2016 wherein it was decided that the proposal is an expansion proposal and not a case of amendment in the environment clearance. The Committee after detailed deliberation noted that since the capacity increase is very marginal, the proponent can apply afresh under clause 7(ii) of EIA Notification, 2006. Accordingly the proponent submitted the revised application for expansion of plant under clause 7(ii) of EIA Notification, 2006.

The proposal was considered by the Expert Appraisal Committee(Industry) and the project proponent and their EIA-EMP consultant (M/s Chola MS) gave a detailed presentation on the salient features of the project. M/s Orient Paper and Industries Limited [Formerly Orient Paper Mills (OPM)] has installed machinery capacity of 85,000 TPA of paper at Amlai, Shahdol District, Madhya Pradesh. The existing facility was accorded Environmental Clearance *vide* letter No F.No.J-11011/1142/2007-IA-II(I) dated 19th March,2008 for modernisation, balancing and expansion of paper mill (85,000 TPA to 100,000 TPA) at Amlai, P.O. Amlai Paper Mills, District Shahdol, Madhya Pradesh. Subsequently the environmental clearance was amended *vide* letter No. J-11011/1142/2007-IA.II dated 2nd December, 2010 based on the modernization for environmental performance of the mill.

The Project proponent has mentioned that no further capacity addition will be done in the following units:

- i. No expansion of pulp mill, recovery boiler etc.
- ii. No additional in-house pulp production.
- iii. No additional steam generating boilers.

- iv. No additional power generation units.
- v. No additional land required.
- vi. No additional water drawl from river.
- vii. No additional wastewater generation beyond existing permitted levels.

It is proposed to install the following components:

- i. Additional pulp to the tune of 32000 TPA that is required for the production of additional soft tissue will be imported from the open market from outside India. Hence no additional down-stream facilities such as wood cutting, chipper house, wood digestion and pulp making units, evaporator, recovery boiler, re-caustisizing unit etc will be installed at the facility.
- ii. It is proposed that 1700 m³/day of water would be required for the manufacture of additional tissue paper which will be sourced from the existing permitted levels 36,000 m³/day.
- iii. The additional power requirement of 4MW will be sourced from the existing 55MW captive power plant.
- iv. The existing co-generation plant and recovery boiler has an installed steam generation capacity of 490 TPH. Hence the additional steam of 18TPH will be sourced from the existing boilers.
- v. Wastewater generated shall be handled through Floatation Cell & then used back to tissue machine for dilution purpose.
- vi. The overall emissions will be well within the consented and permitted levels.
- vii. 0.5 TPD Recovered fibre from Floatation Cell shall be recycled back to the machine

Following table presents the existing and the proposed units

Item	Permitted levels as per the consent to operate/ Environmental clearance	Existing Facilities	Proposed Facilities	Remarks
Products				
Paper (writing, printing & color) (TPA)	1,00,000	60,000	45,000	The existing writing/printing paper machine will be de-rated from the existing capacity of 60,000 TPA to 45,000 TPA.

Item	Permitted levels as per the consent to operate/ Environmental clearance	Existing Facilities	Proposed Facilities	Remarks
Tissue Paper (TPA)		25,000	55,000	Proposed to install 90TPD (30,000TPA) tissue paper machine
Total Production	1,00,000	85,000	1,00,000	The permitted production level of 1,00,000 TPA will be achieved after modification/modernization.

The details regarding raw material required for the project is presented in the following table:

Item	Permitted levels as per the consent to operate/ Environmental clearance	Existing Facilities	Proposed Facilities	Remarks
Raw materials				
Total Wood (TPA)	2,30,000	1,90,000	1,60,000	Wood consumption will be reduced since the existing writing/printing paper machine will be de-rated and pilot plant will be dismantled.
In house pulp (TPA)	80,000	75,000	62,000	In house Pulp generation will be reduced since the existing writing/printing paper machine will be de-rated and pilot plant will be dismantled.
Imported pulp (TPA)	Not Applicable	Not Applicable	32,000	Imported pulp will be used for

Item	Permitted levels as per the consent to operate/ Environmental clearance	Existing Facilities	Proposed Facilities	Remarks
				manufacturing additional 90 TPD (30,000 TPA) tissue paper in the proposed Tissue Paper Machine

The proposed tissue plant will be installed in the existing paper mill. Therefore no additional land is required.

Based on the plant records, it was noticed that the Particulate Matter (PM₁₀) emission levels in the stack flue gas is maintained less than 100 mg/Nm³ against the stipulated norm of 150 mg/Nm³. The existing stacks will be adequate to meet the marginal increase in coal consumption in the co-generation power plant. The overall emissions will be well within the consented and permitted levels. Since the load on the boilers will remain within the design capacity, the overall dust load on the ESPs will remain within the design capacities. Dust Collection Systems (DCS) in the proposed 90 TPD (30,000 TPA) Tissue Paper Machine area will be installed. Therefore there is no increase in air emissions.

Since the new tissue plant is technology sound and provided with acoustics, therefore no significant impact is envisaged.

It is estimated that 1700 m³/day of water would be required for the manufacture of additional Tissue Paper in the facility after augmentation. The required additional quantity of water will be met from the existing source. However the existing water consumption will be reduced due to de-rating the writing/printing paper machine and dismantling the pilot plant. Hence no additional fresh water will be required to be drawn and the total water drawl will not increase from the current level of 29,000 m³/day (Out of which 5000 m³/day is supplied to nearby villagers as CSR activity) as against the permitted and consented level of 36,000 m³/day. Therefore there is no additional fresh water requirement.

About 1400 m³/day of non-colored and low BOD wastewater will be generated from the proposed tissue machine operations and supporting utilities. However the wastewater generation will be reduced due to de-rating the existing writing/printing paper machine from 60,000 TPA to

45,000 TPA and dismantling the pilot plant. Hence the net wastewater flow rate on existing ETP remains same after implementing the proposed project. The treated wastewater will be utilized for plantation and greenbelt in and around the plant premises. Therefore wastewater generation will be reduced.

Except for small quantity of additional fly ash to the tune of 20 TPD and 0.5 TPD of primary clarifier sludge at the ETP will be generated. Existing solid waste disposal practices will be continued in post project scenario. Therefore no additional solid and hazardous waste generation is envisaged.

Based on the presentation made and discussions held, the Committee desired that the project proponent should submit the compliance report for the existing Environment Clearance from the Regional Office, for further consideration of the project by the Committee. The proponent may, however, need not be called again before the Committee as the decision to be taken is likely to be purely based on the compliance report submitted by the Regional Office.

5.5 ANY OTHER ITEM

5.5.1 Expansion of Cement plant (1800-6300 TPD) by Madras Cement Limited at Village Alathiyur - Proposed Addition of 4th Packer for Operational Advantage by M/s The Ramco Cements Ltd. - Environmental Clearance under Clause 7 (ii) of EIA Notification 2006 [J-I 1011/59/2000 IA-II(M)]/ [J-11011/104/2016-IA-II(I)]

M/s.The Ramco Cements Limited (RCL) proposes to install a new Cement Packer (4th Packer) of 180 TPH capacity in the Alathiyur Cement Plant for the Operational Advantages. The Cement Plant, with both Lines I & II, is being operated for the Clinker production of 2.52 MTPA and Cement production of 3.0 MTPA @ 8200 TPD. There is no increase in Clinker or Cement Production capacity of Alathiyur Cement Plant due to the addition of 4th Packer Proposal.

M/s RCL had established its Alathiyur Cement Plant near Pennadam in Ariyalur District in the Year 1996 (Line-I) with a cement production capacity of 1800 tons per day (TPD) (Project Cost Rs.393.00 crores) after obtaining the Environmental Clearance from the Ministry *vide* letter No. J-11011/10/95 IA.II(I) dated 11.09.1995. Line-I is in operation since May 1997.

The Cement Plant was expanded with Line-II of 4500 TPD cement production capacity in the Year 2001 (Project Cost Rs.280.01 crores) after obtaining the Environmental Clearance from the Ministry *vide* F. No. J-

11011/59/2000 IA.II(I) dated 05.01.2001 (Expansion from 1800 TPD to 6300 TPD). Line-II is in operation since July 2001.

M/s RCL also undertook the modification & upgradation of Line-I in May 2006 for the enhancement of its cement production capacity from 1800 TPD to 3700 TPD with a Project Cost of Rs.3.28 crores. As the proposal was <50 crores, it required only Consents from the Tamil Nadu Pollution Control Board (TNPCB), which were also obtained for the expansion of Line-I. Thus, RCL is operating its Alathiyur Cement Plant (with both Lines I & II) for the Clinker production of 2.52 MTPA and Cement production of 3.0 MTPA @ 8200 TPD.

It is proposed to set up the 4th Packer of 180 TPH capacity (to existing 3 Nos. packers of 240 TPH capacity) to pack cement in a 50 kg bags and to load into trucks through belt conveyors in time as per dispatch schedule as well as supply networks/plans. The proposed unit will be located within the Cement Plant Complex at Village Alathiyur, Taluka Sendurai, District Ariyalur, Tamil Nadu. The land area required for the 4th Packer Unit is 0.11ha, out of 121.17 ha of Cement Plant Complex with a total Green Belt of 47.5 ha (39.20% coverage). Total project cost is approx. Rs.26.00 Crores. Proposed employment generation from proposed Packer project will be Nil (there are 470 direct employees and 620 contract employees working in the Plant).

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

Name of Unit	No. of Units	Capacity of each Unit	Production Capacity
Cement Packer Unit-4 th Unit	1	180 TPH	180 TPH

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.

5.5.2 Expansion of sponge iron/sponge pellets (2 nos. of kiln), billets/ingots (2 nos. of furnace), TMT bars & channel/angle (rolling & section mill), CPP (2 MW) and waste heat recovery

boiler (4 MW) manufacturing unit in existing premises at survey no. 221, Village: Vadala. Taluka: Mundra, dist. Kutch, Gujarat of M/s. Nilkanth Concast Private Limited.-Amendment in ToRs [J-11011/85/2008-IA II (I)]

The Terms of Reference (ToRs) for the proposal of M/s. Nilkanth Concast Private Limited were prescribed by the Ministry *vide* letter No. J-11011/85/2008-IA II (I) dated 14th September, 2015. Products along with production capacity as proposed at the time of grant of ToRs are presented in the following table:

Sr. No.	Product	Existing Capacity (TPA)	TOR obtained for additional capacity (TPA)	Total capacity after Proposed Expansion (TPA)
1	Sponge Iron/Sponge Pellets (Kiln)	72,000 (2 Kiln: 100 MT/Day each)	72,000 (2 Kiln: 100 MT/Day each)	1,44,000 (4 Kiln: 100 MT/Day each)
2	Mild Steel, Ingots, Billets, MS Rolled Products, TM Bars, Channel/Angle	1,80,000 (2 Furnace: Rolling Mill)	--	1,80,000 (2 Furnace: Rolling Mill)
3	Captive Power Plant	4 MW	--	4 MW
4	Waste heat recovery boiler- Power Plant	6 MW	--	6 MW
	Grand Total	2,52,000 & 10 MW	72,000	3,24,000 & 10 MW

The project proponent has now proposed to increase the capacity of Mild Steel, Ingots, Billets, MS Rolled Products, TM Bars, Channel/Angle from 1,80,000 TPA (i.e. 15,000 MT/Month) to 3,60,000 TPA (i.e. 30,000 MT/Month), capacity of captive power plant (from 4 MW to 6 MW) and Waste Heat Recovery Boiler (from 6 MW to 10 MW). The details of existing and the proposed capacities are indicated in the following table:

Sr. No.	Product	Existing Capacity (TPA)	TOR obtained for additional capacity (TPA)	TOR Amendment requested for additional capacity (TPA)	Total capacity after Proposed Expansion (TPA)
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1	Sponge Iron/Sponge Pellets (Kiln)	72,000 (2 Kiln: 100 MT/Day each)	72,000 (2 Kiln: 100 MT/Day each)	--	1,44,000 (4 Kiln: 100 MT/Day each)
2	Mild Steel, Ingots, Billets, MS Rolled Products, TM Bars, Channel/Angle	1,80,000 (2 Furnace: Rolling Mill)	--	1,80,000 (2 Furnace: Rolling & Section Mill)	3,60,000 (4 Furnace: Rolling & Section Mill)
3	Captive Power Plant	4 MW	--	2 MW	6 MW
4	Waste heat recovery boiler- Power Plant	6 MW	--	4 MW	10 MW
	Grand Total	2,52,000 & 10 MW	72,000	1,80,000 & 6 MW	5,04,000 & 16 MW

The project proponent has mentioned that the water consumption will increase from 2190 m³/day to 2305m³/day and wastewater generation capacity will increase from 208.5 m³/day to 221.5 m³/day. Wastewater to the tune of 74.2 KL/day from the manufacturing process and other ancillary industrial operations will be reused and recycled back for cooling of horizontal cylinder of sponge iron plant and also used in cooling of hot iron rod in rolling plant. About 110 KL/day effluent (blow down of boiler and cooling tower) will be collected in collection tank and pumped to neutralization tank to neutralize the effluent. Neutralized effluent will be reused for dust-suppression, sprinkling on road and cooling purpose. About 7.3 m³/day of domestic wastewater will be generated, which will be disposed through septic tank & soak pit.

The existing power requirement for the project is 16MW (10 MW from CPP & WHRB + 6 MW from GETCO). Presently there are 4 Nos of D.G. sets available (1700 KVA). After Proposed expansion the total power requirement will be 24 MW(16 MW from CPP & WHRB + 8 MW from GETCO). 4 No. of DG sets will be required with 3000 KVA capacity.

The Committee, after detailed deliberation, recommended the proposal for amendment in the ToRs.

5.5.3 Enhancement of production capacity of 2x27 MVA Ferro-Alloys Plant to produce HC Ferro Chrome/Charge Chrome from 76000 TPA to 96000 TPA without changing furnace capacity at Kapaleswar, Choudwar, Cuttack by M/s Indian Metals & Ferro Alloys Ltd– Amendment in Environmental Clearance [J-11011/1236/2007-IA.II(I)]

The expansion of Ferro Chrome Plant (27 MVA to 54 MVA, 38,000 to 76,000 TPA) proposal of M/s Utkal Manufacturing & Services Ltd. located at Plot No. 47/55 & 560, 507, Khata No. 11 & 908, Mauza Chhatisa- 3 & Kapaleswar, Tehsil Tangi Choudwar, District Cuttack, Orissa was accorded Environmental Clearance by the Ministry *vide* letter No. J-11011/1236/2007-IA.II(I) dated 3rd June 2009. Subsequently, the Environmental Clearance was transferred in the name of M/s Indian Metals & Ferro Alloys Limited from M/s Utkal Manufacturing & Services Ltd.

The proponent has now requested to enhance the production capacity of 2x27 MVA Ferro-Alloys Plant to produce HC Ferro Chrome/Charge Chrome from 76,000 TPA to 96,000 TPA without changing furnace capacity.

The Committee, after detailed deliberation, noted that as the capacity of the plant is proposed to be increased from 76,000 TPA to 96,000 TPA; therefore, this is not a case of amendment in the Environmental Clearance. It is an expansion project. The committee noted that since the increase in the capacity is marginal; the proponent may apply *ab initio* under clause 7(ii) of EIA Notification, 2006 for expansion project. The project proponent also has to submit the compliance status of the existing environmental clearance and implementation status of the plant along with the application.

5.5.4 Expansion of Cement Plant (2.0 MTPA to 5.0 MTPA) and CPP (15 MW to 50 MW) at Gadchandur Korpara, Chandrapur, Maharashtra by M/s Manikgarh Cement – Amendment in Environmental Clearance for partial substitution of ROM coal with pet Coke in Cement Kiln [J-11011/458/2006-IA-II(I)]

The project was accorded Environment Clearance by the Ministry *vide* letter F. No. J-11011/458/2006- IA.II(I) dated 7th January, 2008 for expansion of Cement Plant (2.00 MTPA to 5.00 MTPA) and Captive Power Plant (15MW to 50 MW), located at Gadchandur, Korpana Chandrapur Maharashtra.

The project proponent has requested for amendment in the above mentioned Environmental Clearance for use of Pet coke in the kiln as fuel and provided following justification:

Pet Coke is having a very high calorific value and ash content of less than 1%. However the sulphur content in pet Coke is about 7 – 8.0 % as compared to natural normal indigenous coal that has a sulphur content 1.0 - 3.5 %. Assam coal is having 3 to 5 %. PP has proposed to use pet coke in the kiln upto 100% or the pet coke may be mixed with natural coal to lower down the ash content and to use lower grade limestone.

The reduction of percentage of CaCO_3 in limestone will reduce the CO_2 emission by utilizing pet coke. There will be less coal consumed due to high calorific value in terms of percentage of coal fired to kiln, that further reduces the flue gases discharged into the atmosphere. Overall dust generation becomes less from pre-heater tower.

This addition will not have any adverse affect on environment as the sulphur gets converted into sulphate form and is absorbed in the clinker. Due to this the total SO_x escaping through the stack will not increase.

Further, the SO_3 content in the clinker which is in the form of sulphate reduces the addition of gypsum during cement grinding. Less of gypsum will be required thereby saving of natural resources.

The project proponent further mentioned that SO_3 in limestone is almost negligible. Whatever present it absorbed in clinker with the alkalies/ CaO . Moreover, there is a reduction in CO_2 emissions when waste fuels combusted in cement kiln. Higher oxygen is required to burn pet coke resulting in low CO_2 and CO in the environment.

The Committee, after detailed deliberation, recommended the proposal for amendment in the Environmental Clearance.

5.6 CASE FOR TERMS OF REFERENCE (TOR)

5.6.1 Proposed Integrated Steel Plant of 0.7 MTPA capacity by M/s. Mukand Ltd. at Village- Kanakapur, Taluka & District- Koppal, Karnataka. [J-11011/105/2016-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. Mukand Ltd. has proposed to set up an Integrated Steel Plant capacity of 0.7 MTPA (DRI, BF, met coke ovens, EOF, ladle furnace, vacuum degassing, billet/ bloom caster, wire rod mill/ bar mill, sinter plant, oxygen plant, captive power plant) at Village Kanakapur, Taluka & District Koppal, Karnataka. It is proposed that in the Integrated Steel Plant Billets and Blooms in sizes of 160 x 160 mm to 280 x 320 mm shall be produced. Cast Billets will be rolled into Wire Rods and Bars. It is also proposed to roll heavy section bars from Blooms.

The total land area required for the proposed project is approximately 300 acre, out of which 39 acre is for plant, 77 acre is for storage, 31 acre is for utility including WTP and STP, 2 acre for administrative building, 117 acres for green belt, 5 acre for parking and 29 acre for colony and open area. Tungabhadra dam is reported to be located at a distance of 5 km. (aerial distance – SE). No National Park, Wildlife Sanctuary, Eco Sensitive Areas reported within 10 km of the project.

Total project cost is approx Rs. 2892 crore. The total manpower required for the proposed project will be around 730 permanent executives during operation of the Plant. Employment generation due to the project is direct & indirect.

Total water requirement for the proposed project will be 18 MLD. Source of Water is from downstream of Tungabhadra Reservoir. Total Waste water generation will be 583 KLD. Domestic & Trade effluents shall be treated in Sewage Treatment Plant & Effluent Treatment Plant respectively. Treated water will be reused for process, dust suppression and gardening purposes. Power requirement for the proposed project will be 60 MW, out of which 30 MW will be sourced from the proposed Captive Power Plant and 30 MW from State Utility Grid (KPTCL/GESCOM).

The major raw materials required for the project are iron ore, limestone and coke. The iron ore mines in Bellary - Hospet area are the main source for iron ore, which shall be transported by road to the plant. Limestone will be brought from Bagalkot, Karnataka (Approx. 200 km) by road. Coke shall primarily be imported and transported from the nearest port by road. Other required raw materials will be obtained locally and transported by road to the plant.

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. Public hearing for the project should be conducted by Karnataka Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. The project proponent shall generate fresh baseline data for preparation of EIA and EMP Report.
- v. The project proponent will submit a plan for energy saving in the proposed steel plant.

5.6.2 Proposed cement manufacturing unit of 200 TPD of M/s Zaffron enterprises Pvt. Ltd. located at Village Khonmoh, Tehsil & District Srinagar, Jammu & Kashmir. [J-11011/106/2016-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. Although the proposed project is category 'B' project, listed at S.No. 3(b) of the Schedule of EIA Notification, 2006; however, in view of location of the project at a distance of 2.95 km from the Dachigam National Park, the project is considered as Category 'A' project.

M/s Zaffron Enterprises Pvt. Ltd. proposes to install a new manufacturing unit for 200 TPD. It is proposed to set up the plant for cement Industry based on Vertical Shaft Kiln technology. The proposed unit will be located at Khasra No. - 2040, 2041, 2064 Village: Khonmoh, Tehsil & District: Srinagar, State: Jammu & Kashmir. The land area acquired for the cement manufacturing unit is approx 2.5 ha out of which 0.82 ha land will be used for green belt development. Total project cost is approx Rs. 29.63 Crore. Proposed employment generation from proposed project will be 48 direct employments and more than 300 indirect employments. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
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M/s Zaffron Enterprises Pvt. Ltd	1	200 TPD	200TPD

The electricity load of 1.5 MW will be sourced from J&K Power Department. The proponent has also proposed to install 2 DG Sets with a capacity of 1x150 KVA & 1x100 KVA. Proposed raw material and fuel requirement for project are limestone, gypsum, coal etc. which would be fulfilled by nearby industries as well as IOCL & Reliance Petro Chemicals. Fuel consumption will be mainly Petcoke. Water Consumption for the proposed project will be 100 KLD and waste water generation will be to the tune of 10 KLD. Domestic waste water will be treated into STP and reused for green belt development & Pollution Control Measure. No industrial waste water will be generated from the unit.

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-3 and Annexure - 11:**

- i. Public hearing for the project should be conducted by Jammu & Kashmir Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. Clearance from NBWL shall be obtained before commencement of work.
- iv. Wildlife conservation plan should be prepared in consultation with the DFO and submitted to the Ministry.
- v. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- vi. Natural drainage map to be prepared and superimposed by the layout map of the plant. Project proponent will also prepare and implement a plan incorporating activities for conservation of the drainage.

5.6.3 Expansion of the existing unit and set up DRI Kiln of 1 x 100 TPD and 4 MW (WHRB) Power Plant Jamuria Industrial Estate, Mondalpur P.O. Nandi, Dt. Burdwan, in the state of West Bengal by M/s Kunj Bihari Steel Pvt. Ltd [J-11011/107/2016-IA-II(I)]

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

5.6.4 Manufacturing of Ingots/Billets (60,000 TPA) located at #SP-29, F-20-24, RIICO Industrial Area, Khushkhera (Bhiwadi), Alwar, Rajasthan by M/s Khushkhera Steels Pvt. Ltd. [J-11011/214/2015-IA.II(I)].

At the outset, the Member Secretary informed the Committee that this project has been issued automatic TORs. However, in order to avoid confusion at the time of consideration of the proposal for environment clearance, from the point of additional report/ information, this project was included in the agenda.

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 'B' of the Schedule of EIA Notification, 2006, however, the project site falls within 5 km of boundary of Haryana (i.e 3.5 km in NE direction), therefore, the proposal is appraised at the Central level.

M/s Khushkhera Steels Pvt. Ltd. proposes to a manufacturing unit of MS Billets, at Plot No. SP-29, F-20-24, RIICO Industrial Area, Khushkhera, Tehsil-Tijara, District-Alwar, Rajasthan. It is a Greenfield project for production capacity of 60,000TPA ingots/ billets. It is proposed to install two Induction Furnaces(10 tons each) and and continuous casting machine. The plot area is 5600m². The project site falls in Survey of India of Toposheet No. 33D/ 16. Project boundary coordinates of 4 corners are, (NW) 28° 06' 46.30" N latitude to 76° 47' 31.88" E longitude, (NE) 28° 06' 43.71" N latitude to 76° 47' 40.20" E longitude , (SE)28° 06' 40.57" N latitude to 76° 47'38.93" E longitude and (SW) 28° 06' 40.57" N latitude to 76° 47' 38.93"E longitude .

The total capital cost of the project will be Rs. 3034.00 lacs (including the cost of land, plant machinery, construction and other cost).

Sponge Iron, Scrap, is the main raw materials for the Induction furnace. The Sponge Iron and Scrap will be brought into the plant by trucks and unloaded in the scrap storage bay. The main raw material is shredded MS scrap, which is sufficiently available in the domestic market. Some metals may also be added to produce alloys steel.

The requirement of water for proposed will be 26 KLD. Water for industrial and domestic purpose will be met from RIICO water supply. Industrial waste water will be treated by dual media filtration. Domestic waste water will be routed to septic tank connected with soak pit.

The connected load will be 8000 kVA and contract demand 5500 kVA. Required power connection will be obtained from 33 KV line from the nearest GSS located in the RIICO industrial area, Bhiwadi. The proponent has also proposed to install a DG Set of 200 KVA for power back up. Fuel consumption will be mainly 30 lit/hr.

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-3 and Annexure - 11:**

- i. The project is located within the Notified Industrial area, however, Public hearing for the project should be conducted by Rajasthan Pollution Control Board as per Ministry's OM No. J-11013/36/2014-IA-I dated 4th April, 2016.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

5.6.5 Clinker Production from 2.0 MTPA and Cement of 3.0 MTPA in the proposed Greenfield cement plant of M/s Lok Cement Limited at Kallamalla village, Yerraguntla Mandal, YSR Kadapa District, Andhra Pradesh M/s Lok Cements Ltd. [F.No. J-11011/215/2015-IA.II (I)]

The proposal was considered during its 2nd meeting held on 28th -30th December, 2015 for prescribing TORs, however, automatic ToRs were issued to the project. The file is under submission for approval for grant of ToR letter to the proponent.

5.6.6 Proposed expansion of existing 2 X 100 TPD Sponge Iron Plant by installing 08 MW Captive Power Plant based on 2 X 11 TPH Boiler (Waste Gases) and 30 TPH AFBC Boiler (Firing Mixed Fuel) at Tuidungri, Chowka Panchyat, Chandil Tehsil, Saraikela Kharsawan District Jharkhand of M/s Emaar Alloys Pvt. Ltd. [F.No. J-110011/220/2015-IA.II (I)]

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

31st March, 2016 /Thursday (Indus)

5.7 ENVIRONMENTAL CLEARANCE (EC)

5.7.1 Greenfield integrated Cement project (Clinker 4 MTPA, Cement 6 MTPA, CPP 60 MW and WHRB 15 MW) of M/s UltraTech Cement Ltd. located at village Petnikote, Mandal Kolimigundia, Dist. Kurnool A.P (F. No. J-11011/404/2011-IA II (I)).

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (J.M. EnviroNet Pvt. Ltd.) gave a detailed presentation on the salient features of the project.

The Application was initially received in the Ministry on 22nd June, 2011 for obtaining Terms of Reference (TORs) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 29th November, 2011 and prescribed TORs to the project for undertaking detailed EIA and EMP study for the purpose of obtaining environmental clearance. Accordingly, the erstwhile Ministry of Environment and Forests had prescribed TORs to the project on 22nd December, 2011 and extension of validity of the same was granted by the Ministry 1st April, 2015. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 20th December, 2015.

The Proposed Greenfield Integrated Cement Plant Project[Clinker (4.0 MTPA), Cement (6.0 MTPA) , Captive Power Plant (60 MW) and WHRB (15 MW)] of M/s. UltraTech Cement Ltd. is located at Village Petnikota, Mandal Kolimigundla, District Kurnool, Andhra Pradesh. The total land required for the project is 431.92 ha (including colony), out of which 421.34 ha is

Government land and 10.57 ha is private land and the same is under possession of UTCL. No forest land is involved. No National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger / Elephant Reserve, Wildlife Corridor, Reserved / Protected Forests etc exist within 10 km radius of the project. The topography of the area is undulated and reported to lie between 15° 03' 28" N to 15° 05' 00"N Latitude and 78° 04' 05" E to 78° 05' 31" E Longitude in Survey of India topo sheet no. 57 I/4, 57J/1 and 57E/16, at an elevation of 212 m to 541 m. The ground water table reported to range between 0.47 to 22 m. No River passes through the project area.

For re-utilization of the wasted heat from the exhaust gases of pre-heater/kiln and Cooler, M/s. Petnikota Cement Works (A unit of UltraTech Cement Ltd.) has proposed to install Waste Heat Recovery Boiler of 15 MW capacity near pre-heater and cooler. The main objective of the project is to utilize waste heat from cement production lines, for generating electric power, which will be utilized on-site. The power produced by the project will displace power supplied by the Grid. The project will contribute to the more efficient use of energy at proposed cement plant and will reduce reliance on exhaustible fossil fuel.

The raw materials required for the project include limestone (6.0 MTPA), gypsum(0.30 MTPA), fly ash (0.74 MTPA), slag (1.16 MTPA), bauxite / laterite (0.40 MTPA) and iron ore (0.2 MTPA). The limestone will be transported through covered conveyor belt and rest of the raw materials will be transported through road/ rail.

The water requirement of the project is estimated as 3500 KLD, which will be sourced from the ground water and mine sump water (after development of pits). The power requirement of the project will be 75 MW, which will be sourced from the proposed CPP (60MW) and WHRB (15MW).

Ambient air quality monitoring has been carried out at 8 stations during Winter Season (December, 2014 to February, 2015) and the data submitted indicated that PM₁₀ ranges from 45.9 µg/m³ to 68.6 µg/m³, PM_{2.5} ranges from 19.3 µg/m³ to 36.1 µg/m³, SO₂ ranges from 6.2 µg/m³ to 12.0 µg/m³ and NO_x ranges from 10.9 µg/m³ to 19.5 µg/m³. The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 4.73 µg/m³ with respect to the PM, 6.44 µg/m³ with respect to the SO₂ was 3.58 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 equipment will be totally recycled back to the process. Fly ash generated from CPP will be utilized in manufacturing of PPC grade 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. Out of the total project area of 431.92 ha, an area of 142.53 ha (33%) will be developed into green belt / plantation in order to reduce dust and noise pollution levels and to increase aesthetic beauty of the area.

The Public hearing of the project was held on 10th December, 2015 for proposed Greenfield Integrated Cement Plant Project[Clinker (4.0 MTPA), Cement (6.0 MTPA), Captive Power Plant (60 MW) and WHRB (15 MW)], under the Chairmanship of Joint Collector and Addl. Dist. Magistrate, Kurnool District. The issues raised during public hearing *inter alia* include pollution, land, CSR etc.

The capital cost of the project is Rs. 2500 Crores and the capital cost for environmental protection measures is proposed as Rs.150 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.15 Crores/ annum. 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 opined that the presentation made by the proponent and their Consultant has not covered all the ToRs points. Further, the Committee was not satisfied with the presentation of data in the EIA and EMP report. The proponent was advised to revisit the EIA and EMP report and provide project specific data in the report and submit the revised report for further consideration.

5.7.2 Expansion of existing Sponge Iron plant to Sponge Iron based Integrated Steel Plant by M/s Sundaram Steel Pvt. Ltd., located at Village Balidih, District Bokaro, Jharkhand [EC/ SEIAA / 2014-15/307/2014/460] / [J-11011/109/2016-IA-II(I)]

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/S Grass Roots Research & Creation India (P) Ltd.) gave a detailed presentation on the salient features of the project. The expansion project of M/s Sundaram Steels Pvt. Ltd located in Village Baldih, District Bokaro, Jharkhand was submitted to SEIAA, Jharkahnd on 09.05.2014 for obtaining Terms of Reference (TORs) as per EIA Notification, 2006. The project was appraised by the State Level Expert Appraisal Committee (SEAC) during its meeting held on 04.08.2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the SEIAA, Jharkhand had prescribed TORs to the project on 20.08.2014. Since SEIAA, Jharkhand is not in place, the proposal is

submitted online to the Ministry of Environment, Forest and Climate Change on 10.03.2016.

The Sponge Iron based Integrated Steel Plant project of M/s Sundaram Steels Pvt. Ltd. is located at Village Baldih , District Bokaro, Jharkahnd. The proposal is for expansion of existing Sponge Iron plant to Sponge Iron based Integrated Steel Plant for production of Billet from 27,000TPA(sponge) to 72,000 TPA(billet). M/s Sundaram Steels Pvt Ltd. is presently having a kiln of capacity 1 x 90 TPD Sponge Iron Plant to produce Direct Reduced Iron (DRI). As a part of the expansion program the company has proposed to install additional 1 x 90 TPD with 2 x 12 t of Induction Furnaces, 15 t Ladle Refining Furnace (LRF) and Continuous Casting Machine (CCM) to produce billet as a final product. To keep the initial investment in optimum level, the production capacity of the plant has been fixed as about 72,000 TPA. The ore for the plant would be procured from (Barbil). The ore transportation will be done through Rail/Road

The existing plant is established on the existing land area of approximately 10.1 Ha. The enhancement in the production capacity does not require any additional land area, as the available land area of 10.1 Ha is sufficient for the proposed expansion. The allotted land is in notified industrial area of Bokaro Industrial Area Development Authority. The entire land has been acquired for the project. 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 topography of the area is undulated (flat/undulated) and reported to lies between 23°40'46.54" N to 23°40'45.15 N and Latitude 86°4'20.83" E to 86°4'14.20" E Longitude in Survey of India topo sheet No 73/1,73/2 & 73 E/14 at an elevation of 235m AMSL. The ground water table reported to ranges between 1.7m to 8.0 m below the land surface during the post-monsoon season and 5.3m to 12.65 m below the land surface during the pre-monsoon season.

The water requirement of the project is estimated as 107 m³/day, which will be met from the bore well. The power requirement of the project is estimated as 10 MVA, out of which 9.4 MVA will be obtained from the Damodar Valley Corporation.

Ambient air quality monitoring has been carried out at 8 locations during 1st October to 31st December, 2014 and the data submitted indicated that PM₁₀ ranges from 110.2 µg/m³ to 259.3 µg/m³), PM_{2.5} ranges from 72.2 µg/m³ to 123.5 µg/m³, SO₂ ranges from 6.0 µg/m³ to 30.7 µg/m³) and NOx

ranges from 17.3 $\mu\text{g}/\text{m}^3$ to 55.5 $\mu\text{g}/\text{m}^3$). The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 5.01 $\mu\text{g}/\text{m}^3$ with respect to the PM_{10} , 20.62 $\mu\text{g}/\text{m}^3$ with respect to the SO_2 , Nil $\mu\text{g}/\text{m}^3$ with respect to the NO_x .

It has been reported that a total of 28,494 TPA of waste will be generated due to the project, out of which 2500 TPA(scrap) will be used in plant and rest 25,994 will be sold to contractors for other purposes. It has been envisaged that an area of 3.33 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 proposed expansion of project does not require public hearing, as the project site is located at B-7, Bokaro Industrial Area at Village Baldih, District Bokaro, Jharkhand within the notified industrial area declared by Government of Jharkhand.

The capital cost of the project is Rs 55 Crores and the capital cost for environmental protection measures is proposed as Rs 400 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 132 Lakhs .

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

- i. Status of the forest land should be clarified and a certificate should be obtained from the state forest department.
- ii. The ToR point no 1,2,3,6,10,16 should be explained in detail additionally with respect to TOR 19, the project proponent will produce evidence of having an agreement with the authorised recycler (S) of hazardous waste.
- iii. Ambient Air Quality Monitoring for a period of one month should be conducted and the result so obtained should be compared with the existing data. The incremental increase calculations and modelling should be rechecked for the existing data and submitted.

5.8 FURTHER CONSIDERATION

5.8.1 Increase of Clinker Production(1.0 MTPA to 1.20 MTPA) by modification in Cement Plant and increase in power generation(15MW to 18 MW) project of M/s Deccan Cements Ltd. located at Village Mahankaligudem, Mandal Nereducherla,

District Nalgonda, Telangana(under Clause 7 (ii) of EIA Notification, 2006) [J-11011/572/2010-IA-II(I)]

The above proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) during its 1st meeting held on 18th to 20th November, 2015 for prescribing TORs. After detailed deliberation the Committee suggested that the proposal for expansion may be considered under clause 7(ii) of EIA Notification, 2006 since the expansion is only 20% that too with no additional infrastructure.

M/s Deccan Cement Limited (DCL) is operating Cement Plant (Units I and II) at Village Mahankaligudem, Mandal Neredcherla, District Nalgonda, Telangana at a capacity of 1.0 MTPA (Clinker) & 1.5 MTPA (Cement). The project was earlier accorded Environment Clearance by the Ministry on 27th December 2007. The present proposal is for expansion of clinker plant from 1.00 MTPA to 1.20 MTPA and power generation from 15 to 18 MW by optimizing process operations.

Based on the presentation made and discussions held, the Committee desired that since the existing plant is in operation and the EC was accorded to the project on 27th December 2007, compliance report of the Regional Office should be submitted to the Ministry. In addition, the Committee felt that since there are several patches of forests available in the surrounding areas, a study should be conducted by the project proponent to assess the impact of the existing plant on the surrounding forest areas. The proposal will be further considered once the information is received by the Ministry.

5.8.2 New primary Metallurgical SSI Unit of M/s Tirupati Metals & Minerals, Buti Bori Industrial Area, Dist. Nagpur, Maharashtra- F. No. J-11011/288/2014-IA II (I) –(334/2013)

The matter was considered by the Expert Appraisal Committee in its 47th meeting held on 3rd – 4th September, 2015. During the presentation, the proponent explained the process for three products only and could not able to explain the process details of other products. The Committee therefore recommended the project for production of Medium Carbon Ferro Manganese, Low Carbon Ferro Manganese, Manganese Oxide, Grinding of Manganese Ore and its beneficiation only.

The matter was examined in the Ministry and it was decided that the project should be referred back to Committee to further scrutinize the proposal in terms of number of products proposed by the proponent vis-a-vis expertise available with the proponent.

Based on the presentation made and discussions held, the Committee was of the opinion that the proponent should appear before the committee along with the process consultant who is having thorough knowledge of the process. The Committee advised project proponent to submit the details of each operation along with chemical reaction taking place at each stage of operation. The proponent along with the process consultant should be able to present the details of each process, physical components involved in the process, chemical reactions involved in the process, final product generated from the process along with the rejects generated from the process (solid, liquid and gaseous rejects). The proponent should also prepare and submit an environment management plan for each of the reject coming out of the process. The proposal will be further considered once the information is submitted to the Ministry.

5.9 ANY OTHER ITEM

5.9.1 Mini Steel Plant (1.5 LTPA), Sponge Iron Plant (1.2 LTPA to 1.65 MTPA), Iron Ore Pelletisation Plant (6.0 LTPA) and Captive Power Plant (25MW) at Village Yerrabanahalli, Taluk Sandur, District Bellary Karnataka By M/s KMMI Steel Pvt. Ltd. (KSPL) (Now called Mineral Steel & Power Pvt. Ltd.) regarding Amendment in Environment Clearance (F.No. J-11011/1166/2007-IA.II(I)).

The establishment of Mini Steel Plant of M/s KMMI Steel Private Limited (KSPL) located at Village Yerabanahalli, Taluk Sandur, District Bellary, Karnataka was accorded Environmental Clearance by Ministry *vide* letter No. J-11011/1166/2007-IAII (I) dated 22.09.200, for the following plant facilities:

Sl. No.	Plant Facilities	Capacity
1	Sponge Iron Plant	1.2 LTPA
2	Mini Steel Plant	1.5LTPA
3	Pelletisation Plant	6.0LTPA
4	Captive Power Plant	25 MW (8 MW -WHRB & 17 MW -FBC)

Subsequently on the request of the proponent, the above said environmental clearance was transferred from M/s KMMI Steel Private Ltd. to M/s Minera Steel & Power Private Limited *vide* letter No J-11011/1166/2007-IAII (I) dated 22.07.2015.

The proponent has informed that after obtaining CFE and CFO from Karnataka State Pollution Control Board they have commissioned the following units and the units are in operation:

Sl. No.	Plant Facilities	Capacity
1	Sponge Iron Plant	1.2 LTPA (4x100 TPD)
2	Mini Steel Plant	0.75 LTPA (IF Route)
3	Pelletisation Plant	6.0LTPA
4	Captive Power Plant	8 MW WHRB 10 MW -FBC

It has been explained that presently 4x100 TPD capacity Sponge Iron Plant is in operation using iron ore as primary raw material. Earlier it was considered to use iron ore with Fe content >65% in sponge iron units. As per Supreme Court Order, iron ore is to be procured through e-auction now and the quality of iron ore is poor with low Fe content. As such the industry is facing lot of problem in producing quality sponge iron.

M/s Minera Steel and Power Private Limited has commissioned 6.0LTPA capacity Pellet plant in the month of August 2014 and producing good quality pellets. The company proposes to enhance the efficiency of the production capacity of its Sponge Iron Plant from 1,20,000 TPA to 1,65,000 TPA without any modification in the plant and machinery, but only by change in the raw material mix. Instead of using the conventional iron ore the company now proposes to feed iron ore pellets. With Iron ore as raw material Sponge Iron units work for period of 300 days in a year. Whereas by using pellets Sponge Iron units will be capable of working up to 330 days in a year.

M/s Minera Steel and Power Private Limited requested Ministry to issue amendment in environmental clearance for the enhancement of production of Sponge Iron from 1.20 LTPA to 1.65 LTPA by using pellet instead of conventional iron ore.

Based on the presentation made and discussions held, the Committee was of the opinion that since there is an enhancement of production of Sponge Iron from 1.20 LTPA to 1.65 LTPA, therefore this is not a case of amendment in the EC. However, this is an expansion project. The committee noted that since the increase in the capacity is very marginal; the proponent can apply afresh under clause 7(ii) of EIA Notification, 2006 for expansion project. The project proponent also has to submit the compliance status of the existing environmental clearance and implementation status of the plant.

5.9.2 Integrated steel plant (1 MTPA) along with Captive Power Plant (2 X 250 MW) of M/s Shyam Sel & Power Ltd seeking extension of validity of EC.[J-11011/887/2007-IA-II(I)]

The integrated steel plant (1 MTPA) along with Captive Power Plant (2 X 250 MW) of M/s Shyam Sel & Power Ltd. was accorded environmental clearance by the Ministry *vide* letter No. J-11011/887/2007-IA.II(I) dated 18th March, 2009. The implementation status of the project is presented below:

S. No.	Project Details	Units (E.C. granted vide letter No. J-11011/887/2007-IA II (I), dated 18th March, 2009 by MOEF, New Delhi)	Units are in operation with consent to operate issued by State PCB	Units on completion stage (NOC granted by State PCB)	Requirement of validity extension for the following projects
1	Mini Blast Furnace	2x250 m ³ & 1x450 m ³	-	1x450 m ³	2x250 m ³
2	Sinter Plant	8,00,000 TPA	-	8,00,000 TPA	
3	DRI Kilns	6x100 TPD & 1x500 TPD	2x100 TPD; 2x90 TPD, 2x300 TPD		1x120 TPD
4	Induction Furnace	4x18 T (Continuous Billet cum Bloom Caster) (Note: 6 X 18 T EC obtained from State)	2x18 T, 2 X15 T, 4 X 5 T	-	-
5	Electrical Arc Furnace	2x 45 T (Continuous Billet cum Bloom Caster)	-	-	2x 45 T
6	Power Plant	2x250 MW	21 MW, 43 MW	-	436 MW

7	Pelletization & Beneficiation Plant	6,00,000 TPA bb	6,00,000 TPA	-	-
8	Coke oven plant	0.25 MTPA	-	-	0.25 MTPA
9	Coal washery	1.0 MTPA		-	1.0 MTPA
10	Structurals and Long product	0.3 MTPA	0.103 MTPA	-	0.197 MTPA
11	Ductile iron plant	0.1 MTPA	-	0.1 MTPA	
12	ERW Tubes plant	0.1 MTPA	-	-	0.1 MTPA
13	Seamless Tube Plant	0.1 MTPA	-	-	0.1 MTPA
14	Ferro Chrome & Silico Manganese plant	0.1 MTPA	37920 TPA	-	62080 TPA
15	Stainless/Alloy steel	0.5 MTPA	-	-	0.5 MTPA

It has been informed that after obtaining the environmental clearance, the proponent has decided to implement the total project. Out of the total facilities as mentioned in the Environmental Clearance, the PP has been able to install some of the facilities in phases and they are operating successfully. However, the PP could not achieve the implementation of the entire project as per Environmental Clearance letter mainly due to very tough market conditions and sluggish economy during the period.

It has been mentioned by the PP that now they are in a position to implement the project within next 5 years. Hence, the PP has requested to consider for the issuance of the validity extension of the EC for a further period of 5 years i.e., upto 17.03.2021.

Based on the presentation made and discussions held, the Committee noted that the environmental clearance for the project was accorded by the

Ministry on 18th March, 2009 and the PP made an application on 8th March, 2016 i.e. after expiry of 5 years, but within the period of 7 years. The Committee therefore mentioned that, as per amendment Notification dated 25th April, 2015, the extension of validity can only be provided for further period of 3 years and not for a period of 5 years. In view of this, the Committee recommended the project for extension of validity of EC for further period of 3 years w.e.f 18th March, 2016 i.e. upto 17th March, 2019. The project proponent will also provide a detailed time schedule of completing the project in the extended period of 3 years.

5.9.3 Proposed Integrated Cement Plant (Clinker Production 2.0 MTPA Cement Production 3.0 MTPA Captive Thermal Power Plant 36 MW, Waste Heat Recovery Power Generation 15 MW & Limestone Mining 3.2 MTPA (624 ha.) project of M/s. Shree Cement Limited located near Village Gothra, Tehsil Nawalgarh, District Jhunjhunu, Rajasthan- extension of validity of environment clearance [No. J-11011/1173/2007- IA II (I) dated 15/7/2009]

The Greenfield Integrated Cement Plant (Clinker Production 2.0 MTPA Cement Production 3.0 MTPA Captive Thermal Power Plant 36 MW, Waste Heat Recovery Power Generation 15 MW & Limestone Mining 3.2 MTPA (624 ha.) of M/s. Shree Cement Limited, located near Village Gothra, Tehsil Nawalgarh, District Jhunjhunu, Rajasthan was accorded environmental clearance by the Ministry *vide* letter No. J-11011/1173/2007-IA II (I) dated 15th July 2009.

The proponent has mentioned that the project is under land acquisition stage and no project activity has been started till date. Certified environment clearance compliance report has been issued by Regional Office, MoEFCC, Lucknow *vide* letter No. IV/ENV/R/IND-112/750/2009/1514 dated 21.03.2016.

The Committee noted that the Ministry accorded the environmental clearance to the project on 15th July 2009 and the proponent made an application for extension of validity of environmental clearance on 5th March 2016 i.e. after expiry of 5 years; however within the period of 7 years. In view of delay in acquisition of land the project could not be started. At the request of the project proponent, the Committee provided the opportunity to the proponent, keeping in view the amendment in Notification. Based on the presentation made and discussions held, the Committee recommended the project for extension of validity of EC for further period of 3 years w.e.f. 15th July, 2016 i.e. upto 14th July, 2019. The project proponent will also provide a detailed time schedule of completing the project in the extended period of 3 years.

5.9.4 Cement Plant(3500 TPD) project of M/s Trumboo Cements Pvt. Ltd. located at Village Khrew, District Pulwama, Srinagar, J&K - extension of validity of ToRs[J-11011/5/2013-IA-II(I) dated 25th April, 2013].

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 for his absence by the applicant.

5.9.5 Ferro Alloy Plant (1x9 MVA Submerged Arc Furnace) at Mauza Basudebpur, District Bankura, West Bengal by M/s Metsil Exports Pvt. Ltd. - Change in product mix to produce Ferro Alloys namely H.C. Ferro Chrome along with Silico Manganese, Ferro Manganese & Ferro Silicon with the same approved capacity [J-11011/371/2009-IA II (I)].

The Ferro Alloy Plant (1x9 MVA Submerged Arc Furnace) of M/s Metsil Exports Pvt. Ltd. located at Mauza Basudebpur, District Bankura, West Bengal was accorded environmental clearance to by the Ministry *vide* letter No. J-11011/371/2009-IA II (I) dated 21.06.2010. The clearance is granted for production of 17,400TPA of SiMn, 22,600TPA of FeMn & 7600 TPA of FeSi by 9 MVA Submerged Arc Furnace.

As informed by the proponent that the plant was operated for nearly 1 year and four months and is closed since 13.12.2013 due to unprecedented high power cost of WBSEDCL and change of power utility company. The proponent has now installed 132 KVA DVC Power Substation at plant premises.

It was informed by the proponent that they have one Submerged Electric Arc Furnace, which is capable of producing Ferro Alloys namely Silico Manganese, Ferro Manganese, Ferro Silicon and High Carbon Ferro Chrome. The Plant has been installed as per the approval and Consent to Operate; however, due to the severe market conditions and unprecedented low selling prices less than production costs, the proponent could not able to operate the plant. Now since they have a tie-up with overseas buyers, who are willing to take High Carbon Ferro Chrome from them on regular basis and on long term basis; therefore, with this arrangement the proponent is optimistic to sustain the proposed production of High Carbon Ferro Chrome.

It has been informed that the production process is similar for all the products and more or less the capacity utilisation and pollution and emission levels are the same. The production of Silico Manganese and High Carbon Ferro Chrome, there is the same power consumption of around 4000 Units per Ton of material including auxiliary power. Hence the production from this

9 MVA Furnace for High Carbon Ferro Chrome and Silico Manganese is the same. There is no change in the furnace, its design and other parameters are more or less same for production of High Carbon Ferro Chrome. The quantity of production of High Carbon Ferro Chrome shall be 17,000 TPA i.e. the same as per the Environment Clearance. However the gas emission in case of Ferro Chrome production shall be 10-15% lower.

The waste material (slag) will be dumped at a separate dumped yard, which shall be used for land filling and road construction. Presently the unit has suspended operation and already laid off its labourers and incurring huge losses on account of non-operation of its Plant and the labourers are also jobless. In order to have viability and also provide jobs to nearby people, we wish to produce High Carbon Ferro Chrome and requested the Committee to include this product mix High Carbon Ferro Chrome in the environmental clearance. Further the Company will also abide by the norms stipulated by the Pollution Control Department for inclusion of High Carbon Ferro Chrome in our Consent to Operate approval.

Based on the presentation made and discussions held, the Committee recommended the proposal for production of 17,000 MT per annum of High Carbon Ferro Chrome along with the existing capacities of 17,400 TPA of SiMn, 22,600 TPA of FeMn & 7600 TPA of FeSi by existing 9 MVA Submerged Arc Furnace with the following conditions:

- i. TCLP test should be conducted for the raw material and the slag and the report should be submitted along with 6 monthly compliance report to the Ministry and the Regional Office of the Ministry.
- ii. The project proponent should install 24x7 air monitoring devices to monitor air emission, as provided by CPCB and submit report to Ministry and its Regional Office.
- iii. Zero' effluent discharge shall be strictly followed and no additional wastewater shall be discharged outside the premises. Domestic wastewater shall be treated in septic tanks followed by soak pit and used for green belt development.
- iv. 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.
- v. The project proponent shall provide for LED lights in their offices and residential areas.

- vi. All the stipulated environmental safeguards in the environmental clearance letter No. J-11011/371/2009-IA II (I) dated 21.06.2010 shall be effectively implemented and complied with.

5.10 CASE FOR TERMS OF REFERENCE (TOR)

5.10.1 Enhancement in production capacity of Integrated Cement Project[Clinker (2.0MTPA to 4.5 MTPA), Cement (2.5MTPA to 5.2 MTPA), CPP (40 MW), WHRS (10 MW to 12 MW) and D.G. Set (2 x 6 MW)] by M/s. UltraTech Cement Ltd. located at Village(s) Tonki, Temarni, Sondul and Golpura, Tehsil-Manawar, District- Dhar, Madhya Pradesh [J-11011/86/2012-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(b), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s. UltraTech Cement Limited has proposed enhancement in production capacity of Integrated Cement Project - Clinker (2.0 to 4.5 MTPA), Cement (2.5 to 5.2 MTPA), CPP (40 MW), WHRS (10 to 12 MW) and D.G. Set (2 x 6 MW) at Villages - Tonki, Temarni, Sondul and Golpura, Tehsil - Manawar, District - Dhar (Madhya Pradesh), based on Dry Process Technology for Cement manufacturing with Pre-Heating and Pre-Calcliner Technology. The total area for the Integrated Cement Project will be 231.28 ha (which includes Plant and Colony Area 211.96 ha and Conveyor corridor between plant and proposed captive Sitapuri Mine - 19.32 ha) out of which 76.32 ha i.e. 33% of the total project area will be developed under greenbelt / plantation. Total project cost is approx Rs. 3200 Crores. Proposed employment generation from proposed enhancement project will be 2600 persons including skilled (350 persons), semi-skilled and unskilled category and contractual labour (2250 persons).

The proposed Enhancement capacity for different products are as follows :

S. No.	Units	Existing Granted Capacity	Total Capacity after Enhancement
1.	Clinker (MTPA)	2.0	4.5
2.	Cement (MTPA)	2.5	5.2

3.	CPP (MW)	40	40
4.	WHRB (MW)	10	12
5.	D.G. Set (MW)	2 x 6	2 x 6

Total power required for proposed enhancement capacity will be 54 MW which will be procured from CPP, WHRB and 132 KV Grid Power from Manawar Substation.

Proposed raw material requirement are limestone and clay, which will be sourced from captive limestone mines, bauxite from Katni, iron ore from Bhopal Iron Foundries, gypsum from Nagaur/ Bikaner, Rajasthan and flyash from CPP and TPP, Khandwa and fuel requirement for project are Coal (Indegenous and Imported), Pet coke and HSD.

The proponent has informed that they have started collection of baseline data and they may be allowed to use the same for preparation of EIA and EMP report. The Committee had agreed to the request of the proponent.

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 to be conducted by Madhya Pradesh Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

5.10.2 **Production of 150 ton per day of kraft paper using locally available hard wood along with captive power plant of 5 MW by M/s Rajmax Paper Ind LLP located at Plot No. S. No. 451,422,452, 449, 450 & 453, Taluka. Halvad, District. Morbi, Sundargadh, Gujarat [J-11011/108/2016-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 Rajmax Paper Ind LLP has proposed 150 ton per day kraft paper along with captive power plant of 5 MW using locally available hard wood located at S. No. 451,422,452, 449, 450 & 453, Taluka Halvad, District Morbi, Sundargadh, Gujarat. The land area acquired for the proposed plant is 34,349 m² out of which 16,965 m² land will be used for green belt development.

Total project cost is approx 49.2 crores rupees. The project would provide direct employment to about 100 people and indirect employment to about 50 people. The proposed capacity for different products for new site area as below:

Sr. No.	Product Name	Capacity
1.	Kraft Paper	150 MT/day
2.	Captive Power Plant	5 MW
	By-product	
2.	`Sodium Lignosulphonate	30 MT/day

The electricity load of 1500 KWh & 5 MW will be procured from Gujarat Electricity Board & Captive generation from CPP. Company has also proposed to install one 500 KVA DG Set. Water Consumption for the proposed project will be 3825 KLD (Domestic + Industrial) and waste water generation will be 1012 KLD (Domestic + Industrial).

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 to be conducted by Gujarat Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to

implement the commitment and financial allocation thereto should be clearly provided.

- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. The process flow sheet covering details of the mass balance indicating inputs (wood and chemicals) and outputs (pulp & lignosulphonates) should be submitted.
- v. Water balance on the use of fresh water, requirement of process water during various unit operations, recycled water should be submitted.
- vi. The characteristics of the discharged effluent from ETP which is claimed to be recycled back in the process should be submitted in respect of TDS, COD and BOD.
- vii. The quality requirement/specifications of lignosulphonates of the user industry and quality of the product obtained from the present process needs to be incorporated.

5.10.3 Expansion of Asbestos Cement Sheet manufacturing unit (72,000 TPA to 1,75,000 TPA) of M/s HIL Limited, located in Industrial Area, Jasidih, District Deoghar, Jharkhand [F.No J-11011/01/2016-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. 4(c), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

M/s. HIL Ltd. proposes to expand its existing Asbestos Cement Sheets & Accessories production from 72,000 TPA to 1,75,000 TPA based on Hatschek process technology. The proposed expansion will be located within existing premises of 21.53 Acres at Industrial Area, Jasidih, District Deoghar, Jharkhand. No additional land area is required for the proposed expansion project. More than 7.1 Acres (33% of total land area) of land is being used

for green belt development. Total project cost for proposed expansion is approximately Rs. 17 Crores. The proposed expansion would provide indirect employment to 50 people for cement feeding and loading. Details of production capacities are as under:

Name of Product	Existing Production Capacity	Proposed Expansion Capacity	Total Capacity
Asbestos Cement Sheets & Accessories	72,000 Ton / Annum	1,03,000 Ton/Annum	1,75,000 Ton/Annum

The electricity load of 1070 KVA is being procured from Jharkhand State Electricity Board. No additional power will be required to operate the project after proposed expansion. HIL has installed 1 No. 1010 KVA & 1 No. 625 KVA DG Sets to meet the emergency power requirement.

Proposed raw materials for project are Cement (58275 TPA), Chrysotile Asbestos Fibre (8838 TPA), Slag (13423 TPA), DWR (1995 TPA), MMF002 (403 TPA), Pulp (2520 TPA), Flyash (44940 TPA), FR2 (2100 TPA). No fuel is required for the operation of the project. Raw materials requirement would be fulfilled by indigenous market except Chrysotile Asbestos Fibre, which will be imported. Fuel consumption will be mainly for operation for DG Sets.

Water consumption for the proposed project will be 189 KLD. No industrial waste water will be generated in the process. Only 1.8 m³/day of domestic waste water will be generated. This waste water will be diverted into a septic tank followed by soak pit inside the existing premises.

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 project is located within the Notified Industrial area, however, Public hearing for the project should be conducted by Gujarat Pollution Control Board as per Ministry's OM No. J-11013/36/2014-IA-I dated 4th April, 2016.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.

- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. Health report of existing employees should be submitted along with EIA report

5.10.4 Manufacturing of Manganese Oxide, Manganese Dioxide and Ferro Alloys unit at B-16/9, B-16/10 MIDC, Butibori, District Nagpur, Maharashtra by M/s Raghav Minerals[J-11011/211/2015-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. Raghav Minerals proposed to install a new Manufacturing unit of Manganese Oxide & Manganese Dioxide and Ferro Alloys by Thermite Process. It is proposed to set up the plant for Manganese Oxide & Manganese Dioxide, MnSO₄, ZnSO₄ based on induction furnace and Ferro Alloys based on Thermite process. The proposed plant will be located at Plot no. B - 16/9, B - 16/10, MIDC Butibori, Hingna, District Nagpur, Maharashtra. The total 2000 sq.mtr land is already being leased along with constructed shed from the MIDC, Butibori which is an industrial land. Total project cost is approx Rs. 157 Lacs. The proposed project creates direct employment and indirect employment to 30 people. Following table presents the list of products along with the capacities:

Sr. No.	Name	Quantity
By Installing Furnace		
1.	Manganese oxide	600 T/Month
2.	Manganese dioxide	400 T/Month
3.	MnSO ₄	200 T/Month
4.	ZnSO ₄	200 T/Month
By Thermite Process		
5.	Ferro Alloys Medium Carbon	200 T/Month

Total power requirement for the unit in terms of load shall be 100 HP. Power shall be available from Electricity Board.

The raw material required are Manganese ore (1200 TPM), Coal (300 TPM), Sulphuric acid (140 TPM). It is estimated that 11 m³/day of water would be required for the project, which will be sourced from MIDC . Domestic waste water will be treated septic tank followed by soak pit and industrial waste water generated from the scrubbing and ziggling process will be treated and reused in the process.

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 project is located within the Notified Industrial area; however, public hearing for the project should be conducted by Gujarat Pollution Control Board as per Ministry's OM No. J-11013/36/2014-IA-I dated 4th April, 2016.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

5.10.5 Manufacture and process of Manganese oxide, Manganese Dioxide and various Ferro Alloys at Plot No. C/156, MIDC Butibori, District Nagpur, (M.S.) M/s. Singh Ferro Alloys [J-11011/170/2015-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. Singh Ferro Alloys is proposed to manufacture and process Manganese oxide, Manganese Dioxide and various Ferro Alloys (By Thermite Process). The proposed unit will be located at Plot No. C/156, MIDC Butibori, District Nagpur, Maharashtra. The latitude and longitude of the proposed project are 20°56'45.91"N and 78°56'49.35"E respectively. The land required for the proposed project is 600 sq mt. A Shed of 250 sq mt is already constructed by MIDC. Total project cost is approx 150 Lacs. The proposed project creates direct indirect employment to 40 people. The proposed capacity for different products are as below:

Sr. No.	Name	Proposed
1.	Manganese oxide	1000 MTPA
2.	Manganese dioxide	1000 MTPA
By Thermite Process		
3.	Ferro Titanium OR	600 MTPA
4.	Low/medium carbon ferro manganese OR	1200 MTPA
5.	Ferro molybdenum OR	250 MTPA
6.	Ferro vanadium OR	250 MTPA
7.	Medium Carbon ferro manganese	1200 MTPA

The power requirement for the proposed project will be 125HP, which will be supplied by State Electricity Board. The raw material required are manganese ore, coal / charcoal, ilmenite sand, silico manganese, aluminum powder, aluminum scrap, steel / iron scrap, molybdenum concentrate, flourspur, rutile / zirconium, titanium scrap, limestone powder, titanium dioxide.

The total water requirement for the project will be 5 KLD, which will be sourced from MIDC Butibori. Domestic waste water will be treated septic tank followed by soak pit and industrial waste water generated from the scrubbing and zipping process will be treated and reused in the process.

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 project is located within the Notified Industrial area; however, Public hearing for the project should be conducted by Gujarat Pollution Control Board as per Ministry's OM No. J-11013/36/2014-IA-I dated 4th April, 2016.

- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA.I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and CSR related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

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 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 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 NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.

- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

7. Impact Assessment and Environment Management Plan

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for 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.

8. Occupational health

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

- iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

9. Corporate Environment Policy

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
- iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

11. Enterprise Social Commitment (ESC)

- i. Adequate funds (atleast 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.

12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

13. 'A tabular chart with index for point wise compliance of above TORs.

14. The TORs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 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 PELLET PLANT

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

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

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

LEATHER/SKIN/HIDE PROCESSING INDUSTRY

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

COKE OVEN PLANT

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

ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE

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

METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

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

**LIST OF PARTICIPANTS OF EAC (I) IN 5th MEETING OF EAC
(INDUSTRY-I) HELD ON 30th – 31st March, 2016**

S.No	Name and Address	Position	Attendance	Signature
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	
Members				
2.	Dr. R. K. Jain, Director, Central Pulp and Paper Research Institute	Member	P	
3.	Director, Central Leather Research Institute	Member	A	
4.	Dr. Sunil Pashin, Representative of Indian Meteorological Department	Member	A	
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	P	
9.	Dr.G.V.Subrahmanyam	Member	P	
10.	Prof. Arun Pandey	Member	A	
11.	Shri Santosh Raghunath Gondhalekar	Member	P	
12.	Shri Ashok Upadhyay	Member	A	
13.	Shri Vijay Prakash Saha	Member	P	
14.	Dr.Satish C.Garkoti, Scientist'F', MoEFCC	Member Secretary	P	
15.	Shri Amardeep Raju, Scientist 'D', MoEFCC	MoEFCC	P	
