

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

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SUMMARY RECORD OF THE TENTH (10th) MEETING OF EXPERT APPRAISAL COMMITTEE HELD ON 29th – 31st August, 2016 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The tenth 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 29th – 31st August, 2016 in the Ministry of Environment, Forest and Climate Change. Shri Ashok Upadhyay, Member of EAC has expressed his inability to attend the meeting due to tour abroad. Shri Santosh Raghunath Gondhalekar, Member of EAC has also requested for leave on 29.08.2016. The list of participants is annexed.

The Chairman after welcoming the Committee Members informed that the matter regarding nomination of vice-Chairperson for conducting the business in the absence of Chairperson is pending for a long time. The Chairman asked the Member Secretary to provide the procedure for the same. The Member Secretary informed that Appendix VI of EIA Notification, 2006 reads as under:

“5. The Chairperson shall nominate one of the Members as the Vice Chairperson who shall preside over the EAC in the absence of the Chairman /Chairperson.”

In the light of the above clause, the Chairman floated the name of Dr. Jagdish Kishwan for the position of Vice-Chairman, which was supported by all the members present during the meeting. Thereafter, the Chairperson nominated Dr. Jagdish Kishwan as the Vice Chairperson of the Expert Appraisal Committee (Industry I) in accordance with Clause VI of EIA Notification, 2006. Subsequently, the discussions on each of the agenda items were taken up ad-seriatim.

Confirmation of the minutes of the 9th Meeting

The minutes of the 9th meeting as circulated were confirmed subject to following modifications:

Item No. 9.5.3

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

For	Read
“In view of the above the Committee appraised the proposal for the addition of 3 rd and 4 th Packer for Operational Advantage and	“In view of the above the Committee appraised the proposal for the addition of 4 th Packer in Alathiyur Cement Plant in Ariyalur District and 3 rd Packer in Ramasamy Raja Nagar Cement Plant in

recommended the proposal under Clause 7(ii) for amendment in the existing environmental clearance.”	Virdhunagar District for Operational Advantage and recommended the proposal under Clause 7(ii) for amendment in the existing environmental clearance.”
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Item 9.11.2

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

S.No.	For	Read
1.	At page No. 42, Specific Condition No. (vii), “Total make up water requirement of the water from Brahamani River shall not exceed 1,76,256 m ³ /day and prior permission shall be obtained from the concerned department. ”	At page No. 42, Specific Condition No. (vii), “Total make up water requirement of the water from Brahamani River shall not exceed 2,27,352 m ³ /day and prior permission shall be obtained from the concerned department.”
2.	At page No. 44, Specific Condition No. (xix), “At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment.”	At page No. 44, Specific Condition No. (xix), “At least 2.0 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment.”
3.	At page No. 42, line 3, “The capital cost of the project is Rs. 5419.11 Crores and the capital cost for environmental protection measures is proposed as Rs. 54200 Lakhs.”	At page No. 42, line 3, “The capital cost of the project is Rs. 4565.32 Crores and the capital cost for environmental protection measures is proposed as Rs. 456.5 Crores.”

CONSIDERATION OF PROPOSALS:

29th August, 2016 /Monday

10.3 ENVIRONMENTAL CLEARANCE (EC)

10.3.1 Expansion of Existing Sponge Iron Plant into an Integrated Steel Plant of M/s M.P.S. Steel Castings (P) Ltd., located at Wise Park, Kanjikode, Palakkad, Kerala. [F.No-J-11011/02/2015-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA and EMP consultant (M/s .Vimta Labs Limited, Hyderabad) gave a detailed presentation on the salient features of the project. M/s. M.P.S Steel Castings Pvt. Ltd. (hereinafter referred to as MPSSCPL) proposed expansion of its existing sponge iron plant & captive power plant (CPP), located at Wise Park Industrial Estate (Pudussery central village), Kanjikode, Palakkad Taluk and District, Kerala. The application for the proposed expansion was

initially received in the Ministry on 16th January, 2015 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 10th February, 2015 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry had prescribed TORs to the project on 28th April, 2015. Based on the TORs prescribed to the project, the project proponent submitted an online application for environmental clearance to the Ministry on 5th August 2015. The existing plant is running on the basis of Consents issued by the State Pollution Control Board.

M/s. M.P.S Steel Castings Pvt. Ltd has proposed to carry out expansion of existing sponge iron plant into an Integrated Steel Plant in the existing industrial premise, which is located at Wise Park Industrial Estate (Pudussery central village), Kanjikode, Palakkad Taluk and District. The expansion of Steel plant is carried out by the establishment of new melt shop and re-rolling mill. The expansion features installing 2 x 25 MT Induction Furnace and rolling mill. The production capacity of the plant after expansion will be 90,000 TPA of Sponge iron, 1,50,000 TPA of intermediate products, 1,50,000TPA of rolled products and 10 MW power. The existing industrial premise located in an area of about 11.33 ha and is sufficient to carry out the proposed expansion. The land has been located in a notified industrial estate. No forest land involved. No land has been acquired for the proposed expansion activities. Geographically the plant falls within 10°47'11.41" & 10°47'06.12" North latitude and 76°46'42.30" & 76°46'42.06" East longitude. The entire area falls in Survey of India topo sheet nos. 58 B/9, 58 B/10, 58 B/13, 58 B/14. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. Following table present the details of the existing and the proposed units:

Products	Existing	Proposed	After Expansion
Sponge iron	90, 000 TPA	---	90,000 TPA
Intermediate product MS Billets	---	1,50,000 TPA	1,50, 000 TPA
Rolled products - TMT, rods, angles, channels, rounds & flats	---	1,50,000 TPA	1,50,000 TPA
Power plant – WHRB & FBC	10 MW	---	10 MW

The raw materials used in the sponge iron plant are Iron pellets, Coal, Limestone/Dolomite. Sponge iron, MS Scrap and Coal will be used in Melting Shop. MS Billets will be used for re-rolling mills.

S. No.	Raw materials description	Estimated requirements TPA		Source	Transportation mode
		Existing	Proposed		

Sponge Iron Plant					
1	Pellets	1,20,000	--	Mangalore	by road
2	Coal	81,000	--	South Africa	Ship, followed by train and road
3	Limestone/ Dolomite	3,240	--	Dindigul	Train followed by road
Melt shop					
1	Sponge Iron	--	90,000	DRI Plant	In plant transportation
2	MS Scrap	--	60,000	Local market	By road
3	Coal	--	300	Indonesia	Ship, followed by train and road
Re-rolling mills					
1	MS Billets	--	1,50,000	Direct charging from SMS	In plant transportation
Cogeneration power plant					
1	Waste flue gases	5.5 MW/hr	--	Sponge iron Kiln	--
2	Coal	25,200	--	Indonesia	Ship, followed by train and road

The total water demand after the proposed expansion is 364.33 KLD, which will be obtained from Western India- Kinfra Supply. Considering water resource management, the quantum of treated water re-used in the process will be 142.41 KLD. Thus the daily fresh water requirement amounts to 221.92 KLD. The total power requirement after the proposed expansion is 22 MW which will be sourced from Kerala State Electricity Board (22 MW) and captive power plant (10 MW). There will not be any sale of power to the KSEB after the proposed expansion; the entire power will be utilized for plant consumption.

Ambient air quality monitoring has been carried out at 8 locations during 1st March 2015 to 31st May 2015 and the data submitted indicated that PM₁₀ ranges from 8.8 µg/m³ to 21.4 µg/m³, PM_{2.5} ranges from 41.5 µg/m³ to 59.3 µg/m³, SO₂ ranges from 10.6 µg/m³ to 17.6 µg/m³ and NO_x ranges from 12.7 µg/m³ to 24.1 µg/m³. The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 0.12 µg/m³ with respect to the PM₁₀, 12.3 µg/m³ with respect to the SO₂, 0.12 µg/m³ with respect to the NO_x.

The project is going to be expanded in the industrial land, which is located in a notified industrial estate and no R&R is involved.

The solid wastes generated in the plant includes 25.0 TPD of slag, 18.5 TPD of ash, 4.5 TPD of charcoal/dolochar, 10.0 TPD of returnable scrap, 30 kg/day of solar evaporation pan residue. Slag and ash will be used in cement manufacturing plants. Charcoal/ dolochar will be reused in boiler, solar evaporation pan residue will be disposed at secured facility. It has been

envisaged that an area of 9.5 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 has been exempted since it is located in a notified industrial estate. The capital cost of the project is Rs. 113 Crores and the capital cost for environmental protection measures is proposed as Rs.127.08 Lakhs. There is no pending litigations involved with the proposed expansion.

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

- i. Detailed revised process flow diagram should be submitted along with the capacities at each stage.
- ii. Existing and the proposed stack emission data should be revisited and resubmitted
- iii. Revised layout plan showing internal roads, green belt, parking, entry and exit points, connectivity with the main road should be submitted. The parking area for the two wheelers, 4 wheelers and trucks should be inside the plant premises.
- iv. Work out the open space and provide exact area required for establishing the proposed unit. This should be reflected in the layout map.
- v. Rework the land-use break-up of the plant.
- vi. Existing green belt is scanty, and needs improvement. Intimate the extent of total land available for green belt development, prepare a green belt plan, and as agreed by PP, plant at least 5 acres of additional green belt- 4 acres within the plant premises, and 1 acre outside
- vii. The subject of the project should be corrected and submitted.
- viii. The water balance calculations should be revised and submitted. The treated effluent should be reused in process to the maximum extent.
- ix. Monitoring report for the compliance of the CTE/CTO conditions from the SPCB.
- x. Management plan for disposal of solar evaporation pan residue should be submitted. Since the residue is soluble salts of various chemicals, it can not be disposed as land fill.

10.3.2 Proposed Sponge iron plant of 3x100 TPD (90,000 TPA), Induction furnace 200 TPD (60,000 TPA), rolling mill 200 TPD (60,000 TPA) and Captive Power plant (6MW) at Sy. No. 83A & 76 Village Belagal, Taluk & District Bellary, Karnataka by M/s Sri Sai Saphagiri Sponge Pvt. Ltd. [F.No-J-11011/43/2014-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/s Green Circle, INC.) gave a detailed presentation on the salient features of the project. The Proposed project was initially received in the Ministry on 22nd November 2013 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the 17th Reconstituted Expert Appraisal Committee (Industry) during its meeting held on 18th – 19th March, 2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance.

Accordingly, the Ministry of Environment and Forests had prescribed TORs to the project on 19th May 2014. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 2nd August 2016.

The project of M/s Sri Sai Sapthagiri Sponge Pvt. Ltd. located in Village Belagallu, Tehsil Bellary, District Bellary, Karnataka is for setting up of a new Sponge Iron Unit, Rolling Mill, Induction Furnace and Captive Power Plant for production of Sponge iron (90,000 TPA), TMT bars (60,000 TPA), Induction furnace (60,000 TPA) and Captive power plant (6 MW). The proponent has informed that it is a Greenfield project and no work has been started at the site.

The proposed production is as under:

S.. No.	Name of Products	Proposed	
		Unit Configuration (TPD)	Production Capacity (TPA)
1	Sponge Iron	300 TPD	90000 TPA
2	TMT Bars	200 TPD	60,000 TPA
3	Induction furnace (Ingots).	200 TPD	60,000 TPA
4	Captive Power Plant	6 MW (5 WHRB and 1 AFBC)	

The total land required for the project is 4.86 ha (48562.32 sq.m.), which is already acquired for the proposed project. No forestland involved. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed. The Allipur kere, a water body is at a distance of 8.08 km in NE from project site.

The topography of the area is flat and undulated and reported to lies between 15°06'34" N Latitude and 76°48'34" E Longitude at an elevation of 670m above MSL. The ground water table reported to ranges between 1.22m to 17.61 m below the ground level during the post-monsoon season and 6.78 m below the ground level during the pre-monsoon season. Bellary reserved forest is at 5.5 Km (S) from the project site. No national park/wildlife sanctuary etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna

Raw materials such as Iron-Ore, Coal and Limestone will be imported from Goa, Chennai and Mangalore ports. The raw materials required for the production of the sponge iron are the iron ore fines, coal, limestone and bentonite. The company intends to use Iron ore which is abundantly available in Bellary-Hospet sector and coal from South Africa, China, Indonesia and SCCL, Andhra Pradesh. Following table presents the raw material requirement and the product /by-product generated from the plant:

S. No	Input Material (TPA)	Product/By-product (TPA)
1	Iron-Ore (1,0,8000)	Sponge Iron (60,000)
2	Coal (51,000)	Dolochar (24,000)
3	Limestone (1800)	Fly Ash (9000)
		Sponge Iron fines (1,800)

There is no generation of wastewater from the proposed project. Waste Heat Recovery Boiler (WHRB) is proposed for power generation. The expected wastes includes Sponge Iron fines, Fly Ash, Scrap, Dolochar etc. shall be generated from the project site which will be handed over to authorized vendors. The Iron ore will be sourced from Bellary-Hospet sector and coal from South Africa, China, Indonesia and SCCL, Andhra Pradesh. The ore transportation will be done through road.

The water requirement of the project is estimated as 578 m³/day, out of which 15 m³/day of fresh water requirement will be obtained from the borewell and the remaining requirement of 563 m³/day will be met from the Bellary waste water treatment plant. The power requirement of the project is estimated as 750 KVA, out of which 750 KVA will be obtained from the GESCOM.

Ambient air quality monitoring has been carried out at 8 locations during October'2014 to December'2014 and the data submitted indicated that PM₁₀ ranges from 54µg/m³ to 93 µg/m³, PM_{2.5} ranges from 20 µg/m³ to 44 µg/m³, SO₂ ranges from 12.3 µg/m³ to 16.2 µg/m³ and NOx ranges from 16.9 µg/m³ to 24.1 µg/m³. The result of the modelling study indicates that the maximum increase of GLC for the proposed project is 0.9 µg/m³ with respect to the PM₁₀, 0.4 µg/m³ with respect to the SO₂, 0.7 µg/m³ with respect to the NOx.

It has been reported that there are no inhabitants in the core zone of the project. Hence No R&R is involved.

A total of 2500 tons/m³ of waste will be generated due to the project, out of which 2500 tons/m³ will be used in road and green belt and no waste will be dumped in the earmarked dump yard. It has been envisaged that an area of 16024 sq.m (1.6 ha) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The Public hearing of the project was held on 18.01.2016 at the plant premises for setting up of proposed plant, under the chairman ship of Additional Deputy Commissioner, Ballari. It was mentioned in the proceedings of the Public Hearing that M/s Sri Sai Sapthagiri Sponge Pvt Ltd is an existing industry engaged in the manufacturing of sponge iron (1X50 TPD Kilm). This plant has been established during 2008 without obtaining CFE/CFO from the board and without obtaining environmental clearance from SEIAA/MoEFCC. Hence the board has issued closure directions to the plant under the provisions of Water Act & Air Act. Also filed two criminal cases against the industry namely CC No. 1244/2012 and PC No. 107/2015 at JMFC, Ballari for the said violation.

The Committee noted that the public gathered had stopped the presentation as well as public hearing process and requested for postponement of the public hearing meeting. It is further mentioned in the proceedings that the public did not allow conducting public hearing, making presentation and objected the expansion of M/s Sai Sapthagiri Sponge Pvt. Ltd. and submitted representations in writing. None of the public spoke in the meeting. The representation includes the issues such as non installation of air pollution control equipments, damage caused to agricultural fields, employment to local public, health issues etc.

Finally the Chairman of the Environmental Public Hearing informed the gathering that since no one is willing to express his views on the project; hence he will not conduct the hearing and informed that the said matter will be submitted to the concerned authorities for further action.

The capital cost of the project is Rs 98 Crores and the capital cost for environmental protection measures is proposed as Rs 560 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 28 Lakhs. The proponent has mentioned that there is no court case to the project or related activity.

Based on the presentation made and discussions held, the Committee deferred the consideration of the proposal on the following grounds:

- i. Since the public hearing could not be held and the chairman had stopped the public hearing process in the mid way, therefore the Committee advised PP to submit detailed reply alongwith written comments obtained from the public (translated in English). The matter will be again discussed in the EAC meeting along with the video recording of the public hearing.
- ii. The Committee also noted that the EIA report does not cover the component of slag, its quantity and its management plan. Therefore, the Committee desired that EIA report should be revised and submitted including component of slag.
- iii. The subject of the proposal should also be revised.

10.4 FURTHER CONSIDERATION

10.4.1 Application for prior Environment Clearance for the Alumina Refinery with a production capacity of 3 MTPA at Kusumshila in Rayagada district of odisha by M/s Larsen & Toubro Ltd. [F. No. J-11011/218/2016-IA.II(I)].

The matter was earlier considered during the 8th meeting of Expert Appraisal Committee(EAC) (Industry) held on 27th – 28th June, 2016 . The Committee has decided that the site selection criteria and the site suggested by the proponent should be revisited. The present site selected by the proponent is very close to the forest area with dense forests (as seen on google map). Therefore, it was suggested by the Committee that feasibility of more sites should be studied and a site which is reasonably away from the forest lands with dense forests should be selected by the proponent. Therefore, the Committee recommended deferring the proposal till the information regarding suitability of other sites is submitted to the Ministry.

The project proponent submitted the requisite information vide letter NoL&T/ARP/MOEFCC/2016-17/15 dated 30th August, 2016.

It has been mentioned that the main plant area has been moved away from the boundary of Reserve Forests. A minimum of 0.8 km distance has been kept from the RF. Total land requirement has been reduced to 1355 Ha from the earlier 1398 Ha. The total forest land requirement (Village Forest, having canopy density of less than 10%) has been reduced to 208 Ha from the earlier 397 Ha. The plant layout will be made in such a way that the main chimney will be at least 2 km away from the boundaries of Proposed Reserve forests. Revised break-up of the land is as following:

Sr. No.	Facility	Area (ha)
1	Main Plant (Including Red Mud Storage during initial period & Process Water Lake)	602.81
2	Red Mud (Future)	286.97
3	Ash Pond	89.97
4	Water Reservoir	55.74
5	Railway Corridor	79.8
6	Mine Access & Conveyor	74.3
7	Mine Corridor	65.67
8	Township	40.0
9	Rehabilitation Colony	60.0
	Total	1355.26

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 Odisha 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. Robust red mud management plan including R&D for its utilisation and recovery of precious metals should be prepared based on world class practices.
- v. Land acquisition details as per OM No.22-76/2014-IA-III dated 07.10.2014 should be submitted.
- vi. Forest clearance for the proposed forest land should be obtained.
- vii. Natural drainage lines passing through the site should not be disturbed, and if need be, pillars should be used to raise the structures coming on the drainage lines to provide adequate clearance for natural flow.
- viii. Management plan for recovery of precious material should be prepared.
- ix. Layout map should be superimposed by contour lines and natural drainage.
- x. A brief note giving the rationale for selection of the instant site vis a vis other alternative sites considered should be provided.
- xi. Project Proponent should submit a Plan for raising the green belt on the requisite extent of the area. Preference should be given to inclusion of local broad-leaved tree species in the green belt to make it more effective in control of pollution.

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

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA and EMP consultant (M/s Chandigarh Pollution Testing Laboratory) gave a detailed presentation on the salient features of the project. The proposal was initially

received in the Ministry on 06.11.2012 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 05.03.2013, 19.11.2015 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry had prescribed TORs to the project on 16.01.2016. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 17.05.2016. It is a Category "B" project; however, being located in the 'Critically Polluted Area' of Ludhiana, the proposal is considered at the central level.

The existing capacity of the unit is 29,000 TPA of MS Ingots. The PP now want to enhance the capacity of their unit by replacing existing Induction Furnace of 4 TPH by 10 TPH (2 Nos.) capacity each. After expansion capacity of the unit will be 84,000 TPA of MS Ingots/Billets. The total land required for the project is 6965.8 sq mt. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed. 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 and reported to fall between 30°52'56" N Latitude to 75°55'36" E Longitude in Survey of India topo sheet No. H43J13, at an elevation of 253 m AMSL. The ground water table reported to vary between 20 m below the ground level during the post-monsoon season and 40 m bellow the ground level during the pre-monsoon season.

The water requirement of the project is estimated at 20 KLD, which will be obtained from the tube well. The power requirement of the project is estimated as 5,922.846 KW, which will be obtained from the PSPCL (Punjab State Power Corporation Limited).

Ambient air quality monitoring has been carried out at 8 locations during April to June 2013 and one month study was carried out in the month of January, 2016. The data submitted indicated that PM₁₀ ranges from 60.5 µg/m³ to 89.16 µg/m³, PM_{2.5} ranges from 20.1 µg/m³ to 48.9 µg/m³, SO₂ ranges from 7.1 µg/m³ to 15.4 µg/m³ and NO_x ranges from 17.0 µg/m³ to 29.1 µg/m³. The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 0.04 µg/m³ with respect to the PM₁₀, 0.004 µg/m³ with respect to the SO₂ and 0.04 µg/m³ with respect to the NO_x.

It has been reported that there is no people in the core zone of the project so no R&R is involved.

It has been reported that a total of 10 TPD of waste will be generated due to the project. It will be first be stored in impervious tanks and then sent to low lying area and can be used for road making.

The Public hearing is exempted as the proposed industrial unit is located in notified industrial area according to the Department of Industry Punjab Notification No. 8/159/78-41BI-82/1972 dated on 12th March 1982.

The capital cost of the project is Rs 11.0 Crores and the capital cost for environmental protection measures is proposed as Rs 64 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 8.3 Lakhs. The proponent has mentioned that there is no court case to the project or

Based on the presentation made and discussions held, the Committee deferred the consideration of the proposal on the following grounds:

- i. The power requirement for the existing plant and the proposed plant should be re-estimated and submitted.
- ii. The existing capacity of the plant and the proposed plant capacity along with the units should be presented in a tabular format.
- iii. Comfort letter should be obtained from the electricity board for the supply of power for the required capacity.
- iv. Revise the data presented in the EIA report with the presentation as there is mismatch in the data.
- v. AAQM data collected during the monitoring should be compared with the SPCB data.
- vi. Compliance report for CTO from SPCB should be submitted.

10.5 ANY OTHER ITEM

10.5.1 Environmental Clearance for setting up a Sulphuric Acid plant of 125 TPD capacity, M/s Steel Authority of India Ltd. [F. No. J-11011/757/2007-IA II (I)].

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA and EMP consultant gave a detailed presentation on the salient features of the project. The Proposal is for setting up of a new sulphuric acid plant of 125 TPD capacity. Rourkela Steel Plant (RSP) of M/s SAIL obtained EC for expansion cum modernization (1.9 MTPA to 4.2 MTPA production of crude steel) and hot metal production of 4.5 MTPA on 29.01.2008. The EC is valid till 28.01.2018.

It was envisaged to procure sulphuric acid from market at the time of RSP's 4.2 MT expansion in 2007-08. So new sulphuric acid plant was not considered during expansion. However, reliable and consistent supply of sulphuric acid from open market was not available; therefore, to meet the requirement of steel plant, a new 125 TPD sulphuric acid plant in place of existing old 60 TPD plant was conceived in 2012.

S. No	Sulphuric Acid Plant is required for the following	Quantity
1	Recovery of Ammonia from Coke Oven gas and making Ammonium Sulphate	65.5 T/day
2	Acid Pickling in Cold Rolling Mills	25.0 T/day
3	Water Treatment units	2.0 T/day
	Total Acid required	92.5 T/day
	Capacity of Plant considering 330 working days	116.0 T/ day and 90% efficiency

The Committee after ascertaining the facts from the project proponent as also the stipulation laid down in the EC letter dated 29.01.2008 opined that the PP has already established the plant; therefore, it is a case of violation. However, the Committee suggested that the PP should produce the data in support of their claim that there will not be any increase in the pollution load and also submit the details of the clean technology to be adopted for reducing the overall pollution load from the steel plant. The proponent should also produce a letter

approaching SPCB in 2012 and their advice for consideration. The Committee may take a view in the matter on submission of the above information.

10.5.2 Establishment of 1x50 TPH AFBC boiler as standby along with originally installed WHRB Boiler to feed steam to 13 MW TG by M/s Jindal Stainless Limited at Jajpur, Odisha [J-11011/155/2005-IA-II(I) and J-11011/281/2007-IA-II(I)] – Extension of validity of EC and Amendment in EC.

Environmental clearance to the integrated steel plant of M/s Jindal Stainless Limited at Kalinga Nagar Industrial Complex, Danagadi, District Jajpur, Odisha was accorded by the Ministry *vide* letters No. J-11011/155/2005/IA.II(I) dated 5th August, 2005 and No. J-11011/281/2007-IA.II(I) dated 1st November, 2007. The implementation status of the project is presented in the following table. The PP has requested for extension of validity of EC and amendment in the EC.

EC Granted for the Project	Capacities with Specifications	OSPCB, granted Permission to Establish after EC for Expansion Proposal	Plant facilities Installed by JSL within the validly Period and Operating with CTO	Plant facilities not Installed by JSL within the validly Period	Re-Validation Required	Amendment Required
Sinter Plant	1 X 180 m ²	1 X 180 m ²	No	1 X 180 m ²	Required	Not Required
Coke Oven battery (Recovery Type)	2 X 0.425 MTPA	2 X 0.425 MTPA	1 X 0.425 MTPA	1 X 0.425 MTPA	Required	Not Required
Blast Furnace	1 X 1600 m ³	1 X 1600 m ³	No	1 X 1600 m ³	Required	Not Required
PCM	2 X 1800 TPD	2 X 1800 TPD	No	2 X 1800 TPD	Required	Not Required
Fe-Mn Plant	2 X 27.6 MVA	2 X 27.6 MVA	1 X 27.6 MVA	1 X 27.6 MVA	Required	Not Required
Si-Mn Plant	2 X 27.6 MVA	4 X 27.6 MVA	2 X 27.6 MVA	2 x 27.6 MVA	Required	Not Required
Power Plant based on Waste Gas						
Power Plant based on Waste Gas of Blast	1 X 12 MW	1 X 12 MW	No	1 X 12 MW	Required	Not Required

Furnace						
Power Plant based on Waste Gas of Ferro Alloys Plant	5 X 13MW	5 X 13 MW	1 X 13 MW	4 X 13MW	Required	5 X 13 MW WHRB and 1 x 50 TPH AFBC Boiler instead of 5 X 13 MW WHRB.

The Committee noted that the EC was accorded by the Ministry *vide* its letter No. J-11011/155/2005/IA.II(I) dated 5th August, 2005 and J-11011/281/2007-IA.II(I) dated 1st November, 2007, therefore as per amendment Notification dated 29th April, 2015, the ECs are expired as no extension was taken within the validity period of 5 years (now 7 years). Therefore extension of validity of EC and amendment in the EC cannot be provided. The PP has to apply afresh for obtaining ToRs to implement the balance facilities which have not established during the validity period of EC.

10.5.3 Expansion of integrated Cement Plant (from 2.5 MTPA to 8.25 MTPA capacity) and EHRB (form 7 MW to 27 MW) and CPP (from 30 MW to 160 MW) of M/s Chettinad Cement Corp. Ltd. at villages Sangem & kallur, Taluka Chincholli, Dist. Gulbarga, Karnataka.-ADS [J-11011/57/2011-IA.II(I)].

The environmental clearance for the project of M/s Chettinad Cement was granted by the Ministry *vide* letter No.J-11011/57/2011- IA II (I) dated 20th October, 2015. The project proponent has requested for correction in the EC letter issued to them. The proponent has requested for total 13 corrections in the EC letter. The request of the PP was thoroughly scrutinized w.r.t. minutes of the meeting, EIA report submitted by them and the final EC letter issued to the PP.

The request of the proponent was examined in the Ministry and it was decided that since along with the corrections to be incorporated in the EC letter, the PP has requested to delete two specific conditions from the EC letter, therefore the proposal should be referred to EAC for consideration.

The project proponent has requested for following corrections:

S.No.	Page & Para No. and the details provided in EC granted on 20.10.2015	Correction to be incorporated	Reference (Final EIA Report/EC)
1	Page Number 1 and Para 2 The existing project obtained EC <i>vide</i> letter No. J - 11011/57/2011 IA .II (I) dated 21.04.2011 and 05.03.2012.	The referred sentence is to be removed as the referred letters correspond to ToR and not EC. <i>The ToR reference is already given in the first para of EC letter dated 20.10.2015.</i>	A copy of the EC granted by the Ministry for the proposed expansion enclosed herewith.

2	<p><u>Page Number 1 & Para 3.0</u> In the table showing the details of expansion, the proposed additional capacity of Cement Plant is shown as <u>5.5 million tons per annum</u></p>	The proposed additional capacity of Cement Plant is to be corrected as <u>5.75 million tons per annum.</u>	Chapter 1, Page Number. 1.3. Para 1.3.2 & Page No. 2.15, Para 2.5 of Final EIA Report submitted to the Ministry which shows the Proposed additional capacity of Cement Plant as <u>5.75 million tons per annum</u>
3	<p><u>Page Number 2 & Para 5.0</u> The total water requirement for proposed expansion will be <u>130 m3/day</u> for dust suppression and for greenbelt development, which will be sourced from mine pit water and ground water source.</p>	To be corrected as “The total water requirement for proposed expansion of Captive Limestone Mine will be 130 m3/day for dust suppression and for greenbelt development, which will be sourced from mine pit water and ground water source”.	Chapter 4, Page Number 4.10/4.11, Para 4.2.1 showing the details of water requirement of entire project with split up figures for Cement Plant, Captive Power Plant and Captive Limestone Mines.
4	<p><u>Page Number 2 & Para 5.0</u> The total waste water generation Cement Plant and Colony of the expansion project will be 975 m3/d (including mines)</p>	To be corrected as “The total waste water generation from Cement Plant, WHRB, Captive Power Plant, Workshop, Colony and Captive Limestone Mines of the expansion project will be <u>979 m3/day.</u>	Chapter-4, Page Number 4.12 & Para 4.2.2 showing the details of waste water generation of entire project with split up figures for sewage and industrial effluent from Cement Plant, Captive Power Plant and Captive Limestone Mines.
5.	<p><u>Page Number 2 , Para 6.0</u> In the table showing waste water, under Process/Unit, it has been mentioned against S.No 1, the Process waste water is from Cement and Plant</p>	To be corrected as “Waste water from Cement Plant, WHRB, Captive Power Plant and Workshop ” against S.No 1.	Chapter-4, Page Number 4.12 & Para 4.2.2 showing the details of waste water generation of entire project with split up figures for sewage and industrial effluent from Cement Plant, Captive Power Plant and Captive Limestone Mines.
6.	<p><u>Page Number 2 , Para 6.0</u> Out of the entire 1285 m3/d of treated waste water generated, an amount of 250 m3/d will be utilized for cooling cement plant equipment and for</p>	To be corrected as “Out of the entire 1285 m3/day of treated waste water generated, an amount of 250 m3/day will be utilized for cooling Cement Plant equipment, ash handling and dust	Please refer Chapter 10, Page Number 10.17 & Para 10.2.2.2 showing the details of proposed utilization of waste water generated from the entire project

	handling ash, 127 m ³ /d will be used in dust suppression in CHP, 908 m ³ /d will be used for greenbelt development.	suppression in CHP, 127 m ³ /day will be used for ash conditioning and 908 m ³ /day will be used for greenbelt development.”	with split up figures for various proposed usage.
7.	<u>Page Number 3 , Para 7.0</u> Of the total area of 177.28 ha, an area of 51.5 ha (33 % of the total are) will be developed as greenbelt as per CPCB guidelines.	To be corrected as “Of the total Plant area of 133.55 ha, an area of 51.5 ha shall be developed as greenbelt within the plant premises as per CPCB guidelines”.	Chapter-2, Page Number 2.14 & Para 2.4 showing the details of extent of land for Plant, Colony and Mines. [33 % of 177.28 ha will be 58.5 ha. With intended greenbelt area of 6.7 ha in colony area, the total greenbelt in Plant & Colony will be 58.2 ha (51.5 + 6.7) out of total area of 177.28 ha, which works out to be 32.8 % (≈ 33 %) of greenbelt]
8.	<u>Page Number 3 , Para 8.0</u> Fly ash would be utilized in Cement Plant and any balance would be sent to Raichur TPP	To be corrected as “The entire fly ash generated from the Captive Power Plant will be utilized in Cement manufacturing and the shortfall in the Fly Ash requirement will be sourced from other Thermal Power Plants.”	Chapter 2, Page Number 2.31 & Para 2.8.2.1 showing the details of requirement of Fly Ash (2.318 mtpa). Chapter 10, Page number 10.23 & Para 10.2.3.2 showing the details of generation of Ash (0.6237mtpa). As shown above, the generation of Ash is less than the requirement of Fly Ash, necessitating sourcing of Fly Ash from outside sources to meet the shortfall. (F/Point 8)
9.	<u>Page Number 3, Para No 9.0</u> a. Schedule - I Fauna: Monitor Lizard	To be corrected as <u>“Common Indian Lizard</u> To be corrected as “A Wildlife Conservation	Final EIA Report, the Annexure 18 showing Biological Study Report & Wildlife

	<p>b. A Wildlife Conservation Plan for the existing project is under implementation for Rs. 250 lakhs and for regeneration of degraded forest in Sy. No. 23/1 of Ganganpalli of Chincholi Taluk (Total Cost of WL Conservation Plan = Rs. 306.80 lakhs)</p> <p>c. Construction of nala bund (2) of Rs. 1 lakh each</p>	<p>Plan for the existing project is under implementation for Rs 250 lakhs and Rs 56.80 lakhs for afforestation in the unclassified forest in Sy. No. 23/1 of Ganganpalli of Chincholi Taluk (Total cost of WL Conservation Plan = Rs. 306.80 lakhs)</p> <p>Construction of nala bund (1) of Rs 2 lakhs each</p>	<p>Conservation Plan (Page Number 25, Para 4.3.2) (F/Point 9a)</p> <p>Please refer in Final EIA Report, the Annexure 18 showing Biological Study Report & Wildlife Conservation Plan, (Page Number 35, Conclusion Part)</p> <p>Please refer in Final EIA Report, the Annexure 18 showing Biological Study Report & Wildlife Conservation Plan (Page Number 34, Para 7.4) (F/Point 9b)</p>
10.	<p>Page Number 3 , Para 10</p> <p>a. The total cost of the project is Rs. 4967 crores and the cost of proposed expansion project is Rs. 2010 crores of which 5% (Rs. 100.5 crores) is earmarked for CSR for the next 25 years and an expenditure of Rs. 4.02 crores is proposed per year.</p>	<p>To be corrected as “The total cost of the project is Rs. 2610 crores. The cost of proposed expansion project is Rs. 2010 crores of which 5% (Rs. 100.5 crores) is earmarked for CSR for the next 25 years and an expenditure of Rs. 4.02 crores is proposed per year”.</p>	<p>The project cost of existing plant is Rs 600 crores. Hence, the total project cost will be Rs 2610 crores. The existing plant EC can please be referred.(Page Number 1, Para 2). A Copy of the existing plant EC is enclosed herewith as Annexure 2.</p> <p>Please refer Chapter 8, Page Number 8.1 , para 8.1 showing the proposed expansion project cost and CSR cost.</p>
	<p>b. It was stated that there are <u>159</u> land losers, but no displaces. Of the <u>159</u> land</p>	<p>The project involves expansion of existing capacities within the</p>	<p>Please refer Annexure 25c of the Final EIA Report</p>

	<p>losers, <u>80</u> have been employed so far.</p>	<p>existing premises only and no additional land is required to be acquired for the proposed expansion.</p> <p>However, correct figures for the existing plant are as indicated here. “There are <u>127</u> land losers, but no displaces. Of the <u>127</u> land losers family, <u>83</u> have been employed so far.”</p>	<p>submitted to the Ministry. The response of Chettinad Cement indicated against S.No 1 in Page Number 1 shows that 65 % of the land givers have been provided with employment.</p>
<p>11.</p>	<p><u>Page Number 4, Specific Condition No vi</u></p> <p>Possibilities shall be explored for the proper and full utilization of gases generated from the kiln in Waste Heat Recovery Boiler (WHRB) and a feasibility report shall be prepared and submitted to the ministry and its Regional Office at Bangalore within 3 months from the date of issue of the letter.</p>	<p>This condition is to be removed as already the existing Cement Plant is provided with WHRB and the possibility of proper and full utilization of kiln gases for generation of power has been established. The installation of additional WHRB, to utilize the gases from the Kilns that are going to be established as part of proposed expansion, has also committed by the proponent. The EC granted for the proposed expansion includes the WHRB facility to utilize gases from the additional kilns.</p>	<p>The EC granted for the proposed expansion. (Page Number 1, Para 3, S.No 3 of the Table)</p>
<p>12.</p>	<p><u>Page Number 5, Specific Condition No x</u></p> <p>The proponent shall obtain prior approval of the <u>CGWA</u> for drawl of groundwater for the expansion project</p>	<p>To be corrected as “The proponent shall obtain prior approval of the Karnataka Ground Water Authority (KGWA) for drawl of groundwater for the expansion project”</p>	<p>The CGWA website http://cgwa-noc.gov.in may please be referred where the list of States not regulated by CGWA are indicated. It is stated in the website that “CGWA does not Issue NOC for Groundwater</p>

			<i>Withdrawal in these States / UTs. For issue of NOC in these States/UTs, you may contact at address given below ” For Karantaka State, the Groundwater Withdrawal NoC is to be obtained from Karnataka Ground Water Authority. Please refer the attachment provided herewith as Annexure 3.</i>
13.	<u>Page Number 6, Specific Condition No xviii</u> Landless Labour and small farmers also required to be compensated and the details of these to be submitted as part of the compliance report submitted to MoEF & CC, RO, Bangalore	This condition is to be removed as the project involves expansion of existing capacities within the existing premises and no additional land is required to be acquired.	

After detailed deliberations, the Committee recommended the proposal for corrections in the EC letter. As far as the deletion of conditions in the EC letter is concerned, the Committee did not agreed for deletion of the conditions and directed the proponent to comply with the conditions stipulated in the EC and submit the compliance report to the Ministry periodically.

10.5.4 Expansion of Ferro Alloy plant (High Carbon Ferro Chrome, 65,000 TPA to 1, 30, 000 TPA) at Randia, District Bhadrak, Orissa by M/s Ferro Alloys Corporation Limited.- Extension of validity of EC [J-11011/594/2008.-IA.II(I)].

The environmental clearance for the project of expansion of Ferro Alloys Plant (for production of High Carbon Ferro Chrome/Charge Chrome from 65,000 TPA to 1,30,000 TPA) by installing 45 MVA SEAF in addition to the existing 45 MVA SEAF was accorded by the Ministry vide letter No. J-11011/594/2008-IA- II (I) dated 04.05.2009.

The above EC was amended for reduction of permitted capacity from 1,30,000 TPA to 1,15,000 TPA High Carbon Ferro Chrome /Charge Chrome by installation of 27 MVA SEAF instead of permitted of 45 MVA SEAF *vide* letter No. J-11011/594/2008-IA- II (I) dated 21.11.2012. It has been explained by the PP that the project could not be executed because of recession in steel market, non-availability of chrome ore, power crisis and financial crunch.

The above mentioned EC is valid till 03.05.2016 as per MoEFCC Notification S.O. 1141(E) dated 29.04.2015. The PP has applied for extension of validity of EC vide online application No IA/OR/NCP/1055/2008 dated 22.04.2016.

The Committee recommended the proposal for extension of validity of EC issued vide letter No. J-11011/594/2008-IA- II (I) dated 04.05.2009 for further period of 3 years i.e. upto 03.05.2019. The Project Proponent shall furnish the time schedule for completion of the project by 3rd May 2019.

10.5.5 Cement Plant (Cement Plant 1.91 MTPA; 1.50 Clinker), Coke Oven Plant (1.5 LTPA) and Captive Power Plant (50 MW) near Village Padhiarka, Taluka Mahuva, District Bhavnagar, Gujarat by M/s Nirma Ltd.- Extension of validity of EC [F. No. J-11011/992/2007- IA II (I)].

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

10.5.6 Expansion of Ferro Alloy Plant by installing SAF (9 MVAx1= 40 TPD) for manufacture of Ferro Silicon/Ferro-Manganese at Plot No. 1405, Ramgarh Industrial Area, Marar Village, Ramgarh District in Jharkhand by M/s Bihar Foundry and Casting Limited- Amendment in EC [F. No. J-11011/384/2010-IA-II (I)].

The Environmental clearance for the project was accorded by the Ministry vide letter No. J-11011/384/2010-IA.II(I) dated 31st Octoberm 2011.

The Bihar Foundry & Casting Ltd, has proposed for Amendment for production of Ferro Chrome using the same existing process with the same raw ingredient as chrome ore, magnesite, quartz etc. All the existing products namely Silico Manganese / Ferro Silicon / Ferro Manganese and proposed product Ferro Chrome will be produced as per the requirement from time to time any one of the four products will be produced within the overall EC permissible capacities.

S. No.	Name of the Project	Existing Products	Amendment Product
1	Ferro Alloy (2x5 MVA)	26 TPD (Silico / Manganese)	Ferro Chrome
2	Ferro Alloy (7.5 MVA)	30 TPD (Silico / Manganese)	Ferro Chrome
3	Ferro Alloy (9 MVA x 1)	40 TPD (Ferro Silico / Ferro Manganese)	Ferro Chrome

After detailed deliberation the Committee advised the project proponent to apply under clause 7(ii) of EIA Notification 2006, as amended, as the proposal is regarding change in the product mix.

10.6 CASES FOR TERMS OF REFERENCE (TOR)

10.6.1 Bangur Cement Unit at capacity of Clinker 3.0 Million TPA (Unit-XI), 23 MW WHRS and Cement 4-4 Million TPA at Village- Bhivgarh, Jawangarh & Ras-II, Tehsil Jaitaran, Dist Pali (Rajasthan) by M/s Shree Cement Ltd. [F.No-J-11011/212/2016-IA.II(I)].

Consideration of the proposal was deferred on the request of the Project Proponent. The proposal will be taken up as and when a request is received by the PP.

10.6.2 Expansion of Ferro Alloy plant from by M/s Tirumala Balaji Alloys Pvt. Ltd. at Sector – B, Jindal Industrial Park, Punjipathra Village, Gharghoda Tehsil, Raigarh District, Chhattisgarh. [F.No-J-11011/213/2016-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.

Tirumala Balaji Alloys Pvt. Ltd. is Ferro alloys plant located in Plot Nos.: 111,112,113 & 114 [Khasra Nos. 172(P) 206(P) 207(P), 208(P) 209 (P), 210 (P), 211 (P), 213 (P), 214(P)], Sector – B, OP Jindal Industrial Park (notified), Punjipathra Village, Gharghoda Tehsil, Raigarh District, Chhattisgarh. Environment Clearance for the existing project was not required as the plant was established in 2004. (as per EIA Notification 1994 EC required for capital investment more than Rs. 100 Crores, for Greenfield projects).

CTE for the project was issued vide Order No: 560/R.O/TS / CECB /2004 dated 30th June 2004 & amended was issued on 18th February, 2005 for Ferro Alloy Plant of 2 x 9 MVA Capacity (SEAF) for producing Fe-Mn - 28000 TPA (OR) Si-Mn - 28000 TPA (OR) Fe-Cr - 28000 TPA.

The Project proponent has now requested for expansion of existing plant as per the following table:

S.No	Particulars	Permitted capacities as per CTE obtained vide dated 30 th June 2004 & CTO renewed by CECB	Proposed Expansion
	Plant Configuration (Submerged Electric Arc Furnaces)	2 x 9 MVA	1 x 9 MVA
1	Ferro Manganese (Fe-Mn)	28,000 TPA	20,000 TPA
OR			
2	Silico manganese (Si-Mn)	28,000 TPA	14,000 TPA
OR			
3	Ferro Chrome (Fe-Cr)	28,000 TPA	15,000 TPA
OR			
4	Ferro Silicon (Fe-Si)	Nil	15,000 TPA

It has been explained that 15 acres of land has been taken on lease from M/s. Jindal Steel & Power Limited. Chhattisgarh State Industrial Development Corporation (CSIDC) has given 218.253 Ha. of land to M/s. JSPL on lease for development of industrial Park & its amenities. Expansion will be taken up in the existing plant premises only. The estimated project cost for proposed expansion will be Rs. 20 Crores.

Water required for the proposed expansion project will be 32 KLD and same will be sourced from Ground water source. As the project area falls under safe zone as classified by Central Ground Water Authority (CGWA), the availability of water for the project is not an issue. Power required for existing plant is being sourced from Jindal Steel & Power Ltd. and for proposed expansion also it will be sourced Jindal Steel & Power Ltd.

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 and Annexure – 11.**

- i. The Public Hearing for the project should be conducted by Chhattisgarh Environment Conservation 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.

10.6.3 Expansion from 1,20,000 TPA to 2,07,360 TPA MS Billets / Rolled products by replacement of existing 4 x 8 Tons Induction Furnaces with 4x12 Tons Induction Furnaces at Village Debipur, P.O. Kalyaneshwari, District Burdwan of West Bengal by M/s BMA Stainless Limited. [F.No-J-11011/192/2013-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. Though it is a Category 'B' project (Secondary Metallurgical Industry). However, due to location of project within 5 km from the interstate boundary (boundary of Jharkhand and West Bengal- 1.3 KM), it became Category 'A' and considered in the Ministry.

Environmental Clearance for the existing units was granted by the Ministry *vide* letter No. J-11011/192/2013-1A-II (I) dated 29.09.2014. It has been proposed to enhance the capacity of BMA Stainless Limited from 1,20,000 TPA to 2,07,360 TPA Billet / Rolled product by capacity enhancement of existing unit. The detail of the existing and the proposed unit is presented in the following table:

Plant	Existing as per the Present Environment Clearance		Additional production as per the proposed expansion		Total (after the proposed expansion)	
	Unit	Capacity	Unit	Capacity	Unit	Capacity

Induction Furnace	4x8 Tons	1,20,000 TPA	Replacement of existing Induction Furnace	87,360 TPA	4x12Tons	2,07,360 TPA
Continuous Casting Machine (CCM)	2 Strand, 4/7 m radius	1,20,000 TPA	-	87,360 TPA	2 Strand, 4/7 m radius	2,07,360 TPA
Producer Gas plant	1 x 3750 Nm ³ /hr	27,00,000 Nm ³ /month			1 x 3750 Nm ³ /hr	27,00,000 Nm ³ /month
Rolling Mill	1x20 TPH	1,20,000	Modification of existing Rolling Mill	87,360 TPA	1x30 TPH	2,07,360 TPA

Water requirement shall be met from Damodar Valley Corporation (DVC), Borewell and Rain water harvesting pond. Permission from DVC shall be obtained for withdrawal of 0.8 MGD water.

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 and Annexure – 11.**

- i. The Public Hearing for the project should be conducted by West Bengal 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. Compliance report for the earlier EC should be submitted.

10.6.4 Expansion of Cement Plant production capacity from 0.594 MTPA to 0.990 MTPA (no increase in clinker production) at Lumshnong, Khliehriat, District: East Jaintia Hills (Meghalaya) by M/s Star Cement Ltd. (formerly Cement Manufacturing Company Ltd.) [F.No-J-11011/214/2016-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. Though it is a Category 'B' project (cement grinding unit). However, due to proximity of the Narpuh Wildlife Sanctuary, it became Category 'A' and considered in the Ministry.

M/s Star Cement Ltd. has proposed an expansion of Cement Production Capacity from 0.594 MTPA to 0.990 MTPA (with no increase in clinker capacity). It is proposed to install a pre-grinder for the cement mill which would only increase the cement capacity. The proposed expansion unit is located at Village Lumshnong, Tehsil Khliehriat, District East Jaintia Hills, Meghalaya. The total plant area is 35 Ha, out of which 11.9 Ha land has already been developed under green belt which will be further maintained. Total Cost of the Expansion Project is Rs 62 Crore rupees. The existing project has a total requirement of 130 employees and will need additional 15 persons.

Details of the products with capacities are given as :

S. No.	Product	Existing Capacity (MTPA)	Additional capacity (MTPA)	Total capacity after proposed expansion (MTPA)
1	Clinker	0.792	Nil	0.792
2	Cement	0.594	0.396	0.990

The existing power requirement is 12.5 MW and additional requirement of 3.0 MW will be procured from MPL (Meghalaya Power Limited). Additional raw material requirement for the proposed expansion project is 800TPD of Clinker, 384 TPD of Fly Ash & 12 TPD of Gypsum. Therefore, the total raw material required after the proposed expansion will be 2250 TPD of Clinker (Source: Captive), 720 TPD of Fly Ash (Source: Subsidiary Power Plant adjoining the plant) & 30 TPD of Gypsum (Source: Bhutan).

The existing water consumption is 440 KLD (plant + colony), and an additional 10 KLD of water is required for the proposed expansion (only for domestic use). No wastewater will be generated from the cement manufacturing process. 240 KLD of domestic waste water will be treated in STP and reused in greenbelt development/plantation.

Based on the presentation made and discussions held, the Committee asked the project proponent to apply for the expansion under clause 7(ii) of EIA Notification, 2006 alongwith the supporting documents that there is no increase in pollution load .

10.6.5 Installation of 1.30 MTPA Iron Ore Beneficiation Plant along with 0.80 MTPA Jigging Plant Proposed by M/s Usha Martin Limited at Village & Tehsil Barajamda, District West Singhbhum, Jharkhand. [F.No-J-11011/219/2016-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. Usha Martin Limited (UML) proposes to install a new manufacturing unit for Iron Ore Beneficiation Plant and Jigging Plant. It is proposed to set up the beneficiation plant of capacity 1.30 MTPA and jigging plant for sinter feed of capacity 0.80 MTPA. The process of beneficiation will consist mainly of washing, screening, primary grinding to liberation size,

gravity separation, magnetic separation and dewatering. While the jigging process comprise of washing followed by gravity separation at coarser fractions. The proposed unit will be located in an area of 55.47 Ha at Thana No – 775, Bokna - Sheet No – 3, Khata No – 2 & Plot No – 572, Near Barajamda Village, Noamundi Tehsil West Singhbhum District, Jharkhand. 18.23 Ha of land will be used for green belt development. Total project cost is about 173.02 Crore rupees. Proposed employment generation from proposed project will be 145.

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

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Iron Ore Beneficiation Plant	1	240 TPH	1.3 MTPA
Jigging Plant	1	200 TPH	0.8 MTPA

The total electric connected at maximum demand is 7000 KVA. It is proposed to receive power from State Electric Sub-Station or Captive Power Plant. For emergency Power requirement DG Set of 500 KVA Capacity is proposed to install. UML will use iron ore from their own mines estimated having 100 million tonnes reserves, out of which 90 million tonnes are of low grade assaying 53-58% Iron. The low grade at the rate of 3.0 MTPA will be used in the proposed plant. Water requirement for the proposed project will be 3820 m³/day and the same will be sourced from Karo River. No generation waste water generation from process. Waste water generated from domestic uses is treated in septic tank followed by soak pit.

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 and Annexure – 11.**

- i. The Public Hearing for the project should be conducted by Jharkhand 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.

At the end of the proceedings of the day, Shri Vijay Prakash Saha, Member, EAC discussed the process of nomination of Vice Chairman and opined to take consent of all the members of the Committee. The Chairman clarified that as per the relevant notification, the nomination of the Vice Chairman has to be made by the Chairman from amongst the members who is to chair the proceedings in the absence of the Chairman. Hence, the notification is amply clear that the nomination of the Vice Chairman is as per the wisdom of the Chairman.

10.7 ENVIRONMENTAL CLEARANCE (EC)

10.7.1 Expansion of Integrated Steel Plant Project at Village Palgam, Kaushalgarh, Chowka-Kandra Road, P.O. Ghatdulmi, Tehsil Chandil, District

**SaraikelaKharsawan, Jharkhand by M/s Divine Alloys & Power Co. Limited.
[F.No-J-11011/492/2010-IA.II(I)].**

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/s Vardhan Environet) gave a detailed presentation on the salient features of the project. The application for ToR of Mini Integrated Steel plant with CPP of M/s Divine Alloys & Power Co. Limited, located in Village Palgam, P.O Ghatdulmi, Tehsil Chandil, District Saraikela – Kharsawan, Jharkhand was initially received in the Ministry on 19.10.2010 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 22nd – 23rd February, 2011 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment and Forests had prescribed TORs to the project on 13th April, 2011.

The final EIA after grant of ToRs and public hearing was submitted to MOEFCC on 04.03.2013 and the case was taken up for appraisal during 27th meeting of EAC held on 13th - 14th November, 2014. The Committee observed that EIA-EMP report has been prepared by a consultant – Pacific Scientific Consultancy Pvt. Ltd. which has a Category ‘B’ accreditation. It was further noted that environmental data has been collected in November 2009. The Committee after deliberations deferred the consideration of the proposal and decided that the EIA-EMP Report should be revalidated along with one month fresh baseline data by a Category ‘A’ accredited consultant. Accordingly, the EIA has been revalidated by Vardan Environet, Category ‘A’ accredited consultant and fresh one season (March to May 2016) baseline data has been collected by Vardan Envirolab, accredited by NABL and recognized by MoEF& CC.

The project of M/s Divine Alloys & Power Co. Limited located in Village Palgam, P.O Ghatdulmi, Tehsil Chandil, Dist Saraikela – Kharsawan, Jharkhand is for expansion of existing project. The present production capacity of the plant is 21000 TPA. The details of existing and proposed plant capacity are as follow:

Production Facility	Plant Size	Production (TPD)	Production (TPA)
EXISTING			
Induction Furnace	1x 5 TPH,	70TPD	21000TPA
PROPOSED			
Sponge Iron Plant	2x100 TPD	200 TPD	60,000 TPA
Captive Power Plant	7.0 MW		55,44,0000 KWH/Annum
Mini Blast Furnace	1 x35 M ³ , 1 x 125 M ³	70TPD + 250TPD	96,000TPA
Sinter Plant		300 TPD	90,000 TPA
Induction Furnace	1x15 TPH , 1x12 TPH	210TPD 168 TPD	63,300 MT/Annum 50,400 MT/Annum
CCM	6/11 with two strands	700 TPD	2,14,500 TPA
BOF Converter	1 x 20 Tonnes/ Heat	272 TPD	81,610TPA
Pig Casting Machine	1 x 60 TPH		
Coke Oven Plant	38 Ovens (Non Recovery Type)	366 TPD	1,10,000 TPA

Production Facility	Plant Size	Production (TPD)	Production (TPA)
Coal Washery Complex	40 TPH Jig		
Rolling Mill	35 Tons	700 TPD	206,000 Rolled Products

Total area for the proposed integrated project available is 48.77 acres i.e., 197364.87m². No forestland involved. The entire land has been acquired for the project. The Subarnarekha river is at a distance of 2.0 Km east of the project site. The topography of the area is flat and lies between 22° 55'09.85"N Latitude and 85°09'33.11"E Longitude in Survey of India topo sheet No. 73 F/13, at an elevation of 150-250m AMSL. The ground water table reported to ranges between 1.6-7.10 m below the land surface during the post-monsoon season and 5.23-12.20 m below the land surface during the pre-monsoon season. 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 water requirement of the project is estimated as 2200m³/day or 88.3m³/hour. Permission for drawl of 88.3 m³/hr (6.96 million cubic meter on annual basis) from Swarnrekha River obtained from Water Resource Deptt., Govt Of Jharkhand. The power requirement of the project is estimated as 27.5 MW. In which company will setup own power plant of 20 MW in the same location through their associate concern M/s Divine Vidyut Limited and the proposed project there will be 7 MW Captive Power Plant which will use the steam from 3 nos. of steam through a common steam feeding System.

Ambient air quality monitoring has been carried out at 8 locations during March to May, 2016 and the data submitted indicated that PM₁₀ ranges from 37.3 µg/m³ to 90.4 µg/m³, PM_{2.5} ranges from 25.5 µg/m³ to 47.2 µg/m³, SO₂ ranges from 3.2 µg/m³ to 11.3µg/m³ and NOx ranges from 11.1 µg/m³ to 32.9 µg/m³. The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 6.12µg/m³ with respect to the PM₁₀, 5.50µg/m³ with respect to the SO₂ and 5.08µg/m³ with respect to the NOx.

The waste generation quantity along with the reuse / recycle and disposal methodology for the additional solid waste (after the proposed expansion of DAPCL is presented in below table:

Type of Waste	Generation	Recycle / Reuse	Sold	Dumped	Mode of Disposal
Coal Washery Middlings+Reject	92400	-	92400	-	Will be sold to Brick Kilns
BF Slag	38400		38400	-	Will be sold to Cement Plants
BF Flue Dust	6000	6000	-	-	Recycle thru. Sinter Plant
BOF Slag	4294	4294	-	-	Road Construction, Rail ballast, slag splashing etc.

Type of Waste	Generation	Recycle / Reuse	Sold	Dumped	Mode of Disposal
BOF Dust	1390	1390	-	-	Recycle thru. Sinter Plant
Sinter Return Fines	32400	32400	-	-	Recycle thru. Sinter Plant
Sinter Fines from ESP	5000	5000	-	-	Recycle thru. Sinter Plant
Dolo Char	10900	5450	5450	-	50% shall be used in CPP and remaining 50% in Sinter Units
Induction Furnace Slag	15860	-	-	15860	Filling of low lying area
Mil Scale	4800	4800	-	-	Recycle thru. Sinter Plant
Total	211444	59334	136250	15860	93% Utilisation

About 28% of the solid wastes shall be recycled or reused whereas about 65% shall be sold. Only Induction Furnace slag shall be used for filling of low lying area, rest shall be dumped. It has been proposed that an area of 16.1 Acres (33% of total area) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

The Public hearing of the project was held on 05.11.2012 for production of 2,06,000 million TPA of rolled products and setting up of Mini Integrated Steel plant with CPP under the Collector, district Saraykela Kharsawa.

The capital cost of the project is Rs 286.37 Crores and the capital cost for environmental protection measures is proposed as Rs 10.95 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 21.1 Lakhs. A total amount of Rs. 5.71 Crores (2 percent of the total project cost of Rs. 286 crore) would be utilized for CSR program. No R&R is involved. Manpower of around 500 will be required to operate and maintain the plant facilities including its technical/ administration needs. 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. Title of the project should be revised and submitted.
- ii. Coal linkage details should be provided.
- iii. Contour map of the area should be superimposed on the layout map and submitted.
- iv. Submit the numbers of bag filters installed in the existing plant and proposed for the proposed expansion project.
- v. The air quality monitoring site map shown during the meeting should be revised and submitted
- vi. The predicted values for the air quality parameters should be rechecked.

- vii. Quantitative assessment of equipments to be installed at each source of pollution should be mentioned in tabular format.
- viii. Water balance statement should be revised and submitted. A schematic water balance diagram should be prepared and submitted.
- ix. Revised layout plan indicating the water harvesting structure should be submitted.
- x. Approval letter from the irrigation department/concerned department for drawl of water from the river along with its quantity should be submitted.
- xi. Technical details of the settling pond proposed at the Coal washery should be submitted.
- xii. Project Proponent will provide a list of flora and fauna in the area duly authenticated (by the Forest Department or any other competent authority) with a view to ensuring their conservation.

10.7.2 Manufacturing of Mild Steel and Alloy Steel Billets & its Re-rolling, having granted capacity of 2400 MT/month by M/s Jay Bharat Metcast Pvt. Limited at Village Morai, Near GIDC Vapi, Taluka Pardi, District Valsad, Gujarat. [F.No-J-11011/168/2015-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/s Eco Chem Sales & Services, Gujarat) gave a detailed presentation on the salient features of the project. The proposed expansion project mild steel & alloy steel billets of M/s Jay Bharat Metcast Pvt. Ltd. located in Village Morai, Tehsil Pardi, District Valsad, State Gujarat was initially received in the Ministry on 02.07.2015 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 11th August 2015 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry had prescribed TORs to the project on 14th August 2015. Based on the TORs prescribed to the project, the project proponent submitted an online application for environmental clearance to the Ministry on 15.07.2016. Though it is a Category 'B' project ; however, due to location of project within 5 km from the interstate boundary (UT of Daman), it became Category 'A' and considered in the Ministry.

The project of M/s Jay Bharat Metcast Pvt. Ltd. located in Village Morai, Tehsil Pardi, District Valsad, Gujarat is for enhancement of production of mild steel & alloy billets, re-rolling mild steel & alloy steel TMT bars. Following table present the details of the existing and the proposed capacity:

Sr. No.	Product	Capacity, TPM		
		Existing	Proposed	Total after expansion
1	Mild Steel & Alloy Steels Billets	2400	10900	13300
2	Re- Rolling Mild steel and Alloy Steel – TMT Bars, Round and Bars, Square Bars and structural Steel	13300	0	13300

The total land required for the project is 22450 m². No forestland involved. The entire land has been acquired for the project. The Kolak River passes near the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

The topography of the area is flat and undulated and reported to fall between 20°25'39.14" N Latitude & 72°54'21.36" E Longitude in Survey of India topo sheet No. F43 S15 & S11, at an elevation of 21 m AMSL. The ground water table reported to vary between 5-10 meter below the land surface during the post-monsoon season and 0-5 meter below the land surface during the pre-monsoon season. 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 fresh water requirement of the project is estimated as 197 m³/day, which will be obtained from the bore well. The power requirement of the project is estimated as 14000 KVA, which will be obtained from the Gujarat Electricity Board.

Product	Name of Raw Material	Raw Material consumption in MT		
		Per ton of product	Per month	
			Existing	Total After Proposed Expansion
For Mild Steel & Alloy Steels Billets	M S Scrap	0.958	2300	12742
	Sponge iron	0.125	300	1662
	Ferro silica	0.002	4.8	26.6
	Silico Manganese	0.012	29.0	160.66
	Total	1.0982	2633.8	14591.26
For Re- Rolling Mild steel and Alloy Steel – TMT Bars, Round and Bars, Square Bars and structural Steel	M S Ingots or M S Billets	1.00	13300	13300

Ambient air quality monitoring has been carried out at 8 locations during October 2015 to December 2015 and the data submitted indicated that PM₁₀ ranges from 67.4 µg/m³ to 102.4 µg/m³, PM_{2.5} ranges from 25.8 µg/m³ to 54.2 µg/m³, SO₂ ranges from 17.5 µg/m³ to 31.3 µg/m³ and NO_x ranges from 20.2 µg/m³ to 31.4 µg/m³. The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 0.2249 µg/m³ with respect to the PM₁₀, 0.3929 µg/m³ with respect to the SO₂ and 0.1409 µg/m³ with respect to the NO_x.

It has been envisaged that an area of 2000 m² 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 08.07.2016 for production of 26600 TPA of mild steel & alloy billets and re-rolling mild steel & alloy steel TMT bars under the chairmanship of additional collector and additional district magistrate. The issues raised during public hearing *inter alia* include employment to the local people after expansion, transportation of coal, control measures for the pollution, health of the people, etc.

The capital cost of the project is Rs 962 Lakhs and the capital cost for environmental protection measures is proposed as Rs 40 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 5 Lakhs. The proponent has mentioned that there is no court case to the project or related activity.

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

- i. The project proponent shall install 24x7 air monitoring devices to monitor air emission, as provided by CPCB and submit report to Ministry and its Regional Office.
- ii. Used oil shall not be reused for lubrication and disposed to the authorized vendor.
- iii. Air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³.
- iv. In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant etc. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.
- v. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of practice issued by the CPCB shall be followed.
- vi. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standards notified under Environment (Protection) Act shall be followed. The reports shall be submitted to the Ministry's Regional Office, CPCB and SPCB.
- vii. A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.
- viii. For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves, eye protection etc.

There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc

- ix. Efforts shall further be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly.
- x. All the effluents shall be treated and used for dust suppression and green belt development. No effluent shall be discharged outside the premises via drains and 'zero' discharge shall be adopted. Domestic wastewater will be treated in the Sewage Treatment Plant.
- xi. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.
- xii. The proponent shall prepare a detailed CSR Plan for every year for the next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.
- xiii. Trucks carrying coal and other raw material shall be covered with tarpaulin to prevent spreading of dust during transportation.
- xiv. Greenbelt of 20-30 meters in width should be provided all around the periphery of the site. Greenery shall be developed around storage yards, around plants, either side of roads of the industry as per CPCB Guidelines.
- xv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

- xvi. In addition to xii above, Government land outside the plant premises will be planted by the Project Proponent with trees of local species, and proper tree guards will be used for the safety of the plants.
- xvii. Project Proponent will obtain a comfort letter from Gujarat State Electricity Board for supply of requisite amount of power matching capacity of its plant.

FURTHER CONSIDERATION

10.7.3 Asbestos Fiber Cement Sheet plant (1,20,000 TPA) located at plot No. A1, Industrial area, Village & Taluka Bihiya, District Bhojpur, Bihar by M/s Ramco Industries Ltd [J-11011/17/2010-IA II (I)].

The proposal was earlier considered by the Expert Appraisal Committee (Industry) during its 2nd meeting held on 28th – 30th December, 2015 and desired additional information on the following for further consideration of the proposal:

- i. Photographs of the site showing construction of water harvesting structures as per the specific condition of the environment clearance letter dated 17.01.2011.
- ii. The certificate from the State/Central Ground Water Board showing increasing trend of ground water level at the site and authentic rainfall data from meteorology department
- iii. Compliance report from the regional office of MoEFCC should be submitted.

Based on the information submitted, the proposal was reconsidered by the EAC. It was informed that (i) RIL in the year 2011 have established rain water harvesting storage pond of capacity 800m³ and 3 nos of rain water recharge pits for storing and recharging of ground water. Apart from storing the water, the proponent is recharging ground water aquifer up to 14,802 m³, which is around 50 %, (ii) as per clause 4.5 of CGWB groundwater report (2013), the whole of the district Bhojpur comes under safe category in view of the ground water resource development. RIL has obtained certified copy of ground water level trend in Bihiya block, Bhojpur district by Public Health and Engineering Department (PHED), Bihiya, Bhojpur district. During pre-monsoon period, the water level varies between 4-8 m and post monsoon, the water level varies between 2-4 m. Also as per CGWB groundwater report (2013) clause 5.2, the entire area in the district of Bhojpur is highly potential with plenty of ground water available at shallow depth. Rainfall in this region varies from 650 mm to 1000 mm per year. As the rainfall in this region is highly seasonal, ie. from mid of June to mid of September every year, it is not possible to store the entire water for plant operation for full year. M/s Ramco Industries Limited has obtained certified copy of rainfall data from Public Health and Engineering Department (PHED), Bihiya, Bhojpur district. Also authentic rainfall data taken from India Meteorological department, Ministry of Earth Sciences shows rainfall varies from 650 mm to 1000 mm per year. Groundwater characteristics of our area are found well within the drinking water standards of IS 10500:2012, (iii) Regional Office, Ranchi visited Ramco Industries limited, Bihiya plant on 22.07.2016 and issued Compliance report vide letter No 105-76/11/EPE/632 dated 22.07.2016. The report has raised certain concerns regarding cement transportation, asbestos bags handling etc. The PP has presented point wise reply for the concerns raised in the compliance report. The Committee agreed to the justifications provided by the PP and advised to comply with all the EC conditions and observations of the RO, report.

The Committee after detailed deliberations, recommended the proposal for amendment in the EC for deleting the specific condition that “After 5 years operation of plant, no ground water shall be used and only rain water shall be used”. The Committee agreed to recommend the permission to M/s Ramco Industries Limited to continue abstraction of ground water as the project area falls under safe block, with the following condition:

- i. Quarterly monitoring report to be submitted to the RO, Ranchi.

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

Proposal was earlier considered by the Expert Appraisal Committee(Industry) during the 9th meeting held on 27th – 29th July, 2016 and desired additional information on the following for further consideration of the proposal:

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

The proponent *vide* letter dated 30.12.2015 submitted the information and reconsidered. Based on the information submitted, presentation made and discussions held the Committee recommended the project for environment clearance subject to stipulation of the following specific conditions and any other mitigation measures, as prescribed by the Ministry for environmental protection:

- i. The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.
- ii. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters

etc. shall be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology.

- iii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- v. A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.
- vi. For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves, eye protection etc. There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc
- vii. Vehicular pollution due to transportation of raw material shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material.
- viii. 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
- ix. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act,1986.
- x. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.
- xi. A time bound action plan shall be submitted to reduce solid waste generated due to the project related activities, its proper utilization and disposal

- xii. A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xiii. Green belt shall be developed in at least 33% of the project area by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines. 10 to 15 m wide green belt should be developed all along the boundary of the site and both the side of the road.
- xiv. All the commitments made to the public during Public Hearing/public consultation meeting shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xv. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.
- xvi. The proponent shall prepare a detailed CSR Plan for every year for the next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.
- xvii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xviii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- xix. 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.

xx. The project proponent shall provide for LED lights in their offices and residential areas.

10.7.5 Proposed 1.5 MTPA Clinker and 2.0 MTPA Cement Plant with 35 MW Captive Power Plant at Jamuna Village, Rampur Baghelan Tehsil, Satna District in Madhya Pradesh by M/s Jaiprakash Associates Limited-[J-11011/374/2011-IA.II(I)].

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

10.8 ANY OTHER ITEM

10.8.1 Expansion of Cement Plant (2.0 MTPA to 2.6 MTPA clinker) at village Suli, Tehsil Arki, District Solan, Himachal Pradesh by M/s Ambuja Cements Limited-[J-11011/792/2007 – IA.II(I)].

The Proposal was earlier considered by the Expert Appraisal Committee(Industry-I) during its 45th meeting held on 11th - 12th August, 2015 regarding extension of validity of Environmental Clearance. The proponent applied for extension of validity of EC through online application after the validity period of EC of 7 years (as per amendment notification dated 29th April, 2015). The project was accorded Environmental Clearance by the Ministry *vide* letter No. J-11011/792/2007-IA II (I) dated 29.02.2008.

The Committee noted that the covering letter requesting extension of validity of EC was of 25th May, 2015; whereas, the online application was made on 25th June, 2015. The Committee after detailed deliberation referred the matter to the Ministry for taking a view.

The Ministry has decided to grant the extension of validity of EC for further period upto 28.02.2018. However, since EAC has not provided its recommendation in its 45th meeting, the matter was again referred back to EAC for recommendation.

Based on the presentation made and discussions held, the Committee recommended the proposal for extension of validity of EC for further period upto 28.02.2018. The Project Proponent shall furnish the time schedule for completion of the project by 28th February 2018.

10.8.2 Expansion of Cement Plant (1.2 MTPA) by adding new Clinker production unit (2.72 MTPA) alongwith Thermal power Plant (15 MW) and Captive Power Plant (33 MW) by M/s Ambuja Cement Limited (Unit Bhatapara), located at, Village Rawan, Tehsil & District Baloda Bazar Chhattisgarh - Use of fuel (such as Petcoke, Coal and Lignite) in existing Thermal Power Plant (15 MW) and Captive Power Plant (33 MW) [J-11011/355/2005-IA.II(I)].

The Proposal was earlier considered by the Expert Appraisal Committee (Industry-I) during its 4th meeting held on 24.02.2016 and recommended the proposal for amendment in the Environment Clearance for use of Fuel Mix (Coal, Petcoke & Lignite) instead of only coal, in existing Captive Power Plant (15 MW & 33 MW) with the following additional conditions:

- i. The project proponent shall ensure capturing of 90% of the SO_x and NO_x.

The proponent applied for amendment as the cost of production by pet coke & lignite is cheaper as compared to coal and the proposed change shall not result in any adverse impact on environment.

Based on the recommendations, the file was processed and it was decided to refer back the proposal to the committee again for detailed discussion and technical evaluation for use of pet coke in the captive power plants. Though the Ministry has approved the use of pet-coke in the cement kiln; however, the Ministry wants to re-assure on the use of pet-coke in the captive power plants.

The proponent and their Consultant made the presentation and explained that a medium sized thermal power plant (or captive power plant) upto 50 MW is mostly equipped with CFBC boiler (Circulating Fluidised Bed Combustion Boiler) for Petcoke firing or multi fuel firing whereas 100 MW or 500 MW & above thermal power plants are equipped with Pulverized Coal fired boilers (PCPF) with sub- critical or Super critical or Ultra super critical pressures & temperatures. The CFBC thermal power plants are used as captive power plants (CPPs) upto 50 MW to meet variable loads of their respective units. Mostly nowadays CFBC boiler is preferred due to its compatibility with 100% Petcoke and multi fuel firing.

The proponent has further explained that for CFBC Boiler, despite the sulphur content in fuel reaching upto 8%, the environmental performance of the CFBC boilers is excellent allowing achieving low emission limits without external DeSOx & DeNOx installations. Sulfur dioxide emitted during combustion is absorbed *in situ* by adding limestone of size less than 1.0 mm. The NOx is eliminated in CFBC Boilers, as a combustion temperature ranges around 850°-900⁰ Centigrade, whereas the thermal NOx is produced at an elevated temperature above 1100°C. Studying the potential of alternative fuels such as Petcoke fired CFBC boiler technology appears to be the perfect solution, as the fuel flexibility of the CFBC boiler is very high, which leads to economical operation of thermal power plant. Fuel is burned as it mixes with other materials, mostly limestone in case of Petcoke firing and ash if coal is present, in an upward flow of combustion air. Because of high turbulent and excellent mixing sorbents, air and fluidized material in the furnace it is possible to achieve a uniform temperature throughout the furnace chamber and long residue time of fuel particles. Combustion efficiency is increased by CFB solid separators. Fluidized material and unburnt fuel go out of the furnace to cyclone separators and return to the lower part of furnace. In this part of combustion chamber, the limestone is fed as sulfur sorbent. Furnace temperature is kept in a suitable range of 850° - 900°C. The main features showing advantages for utilities to use CFBC technology, *inter alia* include:

- i. **High combustion efficiency:** long solids residue time in the furnace relatively low furnace temperatures are below the ash softening temperature due to excellent fluidization and recirculation of fuel with bed material the opportunity of burning up particles of fuel is remarkable.
- ii. Excellent combustion stability over a wide boiler load range.
- iii. Relative low concern of high melting temperature Vanadium and Nickel compounds.
- iv. Non Volatile heavy metals will be completely retained in fly ash & bottom ash.
- v. **Fuel flexibility:** The opportunity to fire a mixture of fuels (a high ash content as well as high Carbon content)
- vi. Very low emissions.

Based on the explanation provided by the proponent, the Committee decided that use of pet coke can be allowed only in the CFBC boiler with a capacity not exceeding 50 MW. The

proponent shall ensure that the SOx and NOx emissions should meet the standards prescribed by the Ministry.

10.8.3 Proposed Expansion of Mosabani Copper Ore Concentration Plant from 0.612 MTPA to 0.9 MTPA of M/s Hindustan Copper Ltd at Village Badia, Block Mosabani, District East Singhbhum, Jharkhand - Extension of validity of ToR-[J-11011/228/2016-IA.II(I)].

The Mosabani Concentrator Plant is operating with “Consent to Operate” from Jharkhand State Pollution Control Board. Prior to 1994, the highest quantity of throughput from Mosabani plant was 0.888 Mt (achieved during 1988-89) and after 1994 the highest quantity of throughput was 0.778 Mt (achieved in 1996-97).

The ToRs were granted by State Level Environment Impact Assessment Authority (SEIAA), Jharkhand *vide* letter No. 297 dated 05.03.2014 for the above expansion proposal. The revised ToRs were issued by SEIAA *vide* letter No. EC/SEIAA/2013-14/25/2013/66 dated 09.02.2016.

The PP has requested for extension of validity of ToRs for expansion of Mosabani Concentrator Plant from 0.612 MTPA to 0.9 MTPA of M/s Hindustan Copper Limited, as the ToR was issued on 05.03.2014 with a validity period of 2 years. The PP has applied at the central level as the SEIAA, Jharkhand is not constituted.

The Committee while considering the proposal noted that the ToRs prescribed to the project on 05.03.2014 by SEIAA, Jharkhand are valid till 04.03.2017 in accordance to Ministry’s OM dated 8th October, 2014 wherein, the Ministry has increased the validity of ToRs from 2 years to 3 years and with outer limit of four years for all other projects. Therefore the committee decided that there is no need for extension of validity of ToRs as the ToR letter dated 05.03.2014 is already valid till 04.03.2017.

10.8.4 Expansion of Steel Plant along with Captive Power Plant (18 MW) at Village Taraimal, Post Gerwani, Tehsil Tamnar, District Raigarh, Chhattisgarh by M/s Shri Shyam Ispat (India) Pvt. Ltd [J-11011/161/2009-IA.II(I)].

The proposal is for seeking extension of validity of environmental clearance, accorded to the project by the Ministry *vide* letter No. J-11011/161/2009 IA-II (I) dated 15.09.2009 up to 14th September 2019. M/s Shri Shyam Ispat (India) Private Limited presented the plant configuration for which Environmental Clearance was obtained and the implementation status of the project, as under:

S.No.	Units	Existing / Consented Capacities Prior To Issue Of EC	Proposed Expansion for which EC accorded 15/09/2009	Total Capacity After Expansion	Status of Implementation of Expansion

S.No.	Units	Existing / Consented Capacities Prior To Issue Of EC	Proposed Expansion for which EC accorded 15/09/2009	Total Capacity After Expansion	Status of Implementation of Expansion
1	Sponge Iron through DRI process	90,000 TPA (2 x 50 TPD & 2 x 100 TPD) Implemented and in operation and having valid CTO from CECB	30,000 TPA (1 x 100 TPD)	1,20,000 TPA	Implementation of 1 x 100 TPD work is under progress & 70% of the work has been completed and production is expected by January, 2017
2	M.S. Billets	60,000 TPA	---	60,000 TPA	Implemented and in operation
3	Rolled Products	60,000 TPA	---	60,000 TPA	Yet to be implemented and will be completed by December 2017
4	Power Generation WHRB FBC	6MW 4MW	-- 14 MW	24MW 6MW 18MW	<p><u>WHRB Power Plant</u></p> <ul style="list-style-type: none"> We have installed 4 MW WHRB connected to 2 x 100 TPD Kilns and in operation. Installation of remaining 2 MW WHRB based power plant is under progress & 70% of the work has been completed and production is expected by January, 2017. <p><u>FBC Power Plant</u></p> <ul style="list-style-type: none"> Out of 18 MW of FBC, 12 MW FBC based power plant has been implemented and is having valid CTO from CECB. It is requested to drop remaining 6 MW FBC based power plant.

It has been explained by the PP that after obtaining the Environmental Clearance, part of the facilities have been implemented. However, the implementation of the balance portion of the above referred EC could not be completed due to severe recession in steel sector (sluggish market condition) and fall in cash flow of the company during the past few years. PP further mentioned that 70% of the work has been completed for 1 x 100 TPD DRI & 2 MW WHRB Power plant and production is expected by January, 2017.

Based on the presentation made and discussions held the Committee recommended extension of validity of EC for further period of 3 years upto 14.09.2019.

10.9 CASE FOR TERMS OF REFERENCE (TOR)

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

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. 2(b), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

The proposal is for establishing uranium bearing mineral recovery plant to process copper tailings received from Concentrator Plant of M/s Hindustan Copper Limited (HCL) and recover the uranium bearing minerals with a rated throughput (dry) of 4,05,000 t/yr (1st phase) and 9,00,000 t/yr (2nd phase).

The copper tailings containing very low U₃O₈ in the range of 0.006 to 0.008%. Uranium Corporation of India Limited (UCIL) had set up a pilot plant at Mosabani in April 1980 to recover mineral concentrate from copper tailing on experimental basis. A full fledged Uranium Recovery Plant at Mosabani of UCIL was commissioned in January 1987. Total 96 number wet concentrating tables were installed to treat 2000 tonnes per day of copper tailing. Meanwhile, HCL closed down their mines and concentrator plant at Mosabani in year 2002 due to variable copper demand. Consequently Uranium Recovery Plant was also stopped due to non-availability of copper tailings from Mosabani concentrator plant. Further there was no possibility of restarting the mines and concentrator plant of HCL at Mosabani in near future, UCIL also closed down the Mosabani Uranium Recovery Plant in April 2002. Accordingly UCIL informed Jharkhand State Pollution Control Board in April 2003 for discontinuation of the Plant.

Subsequently, HCL restarted production from the mines and Concentrator Plant and also proposed expansion in future; therefore, UCIL has decided to reinstall the recovery plant at Mosabani to process 4,05,000 t/yr of copper tailing in the 1st phase and with ultimate capacity of 9,00,000 t/yr in the 2nd phase.

The uranium concentrate from the proposed recovery plant will be transported to Jaduguda Ore processing plant through 20 t trucks. Environmental Clearance to Jaduguda Mine and Ore Processing Plant was accorded by the Ministry *vide* letter No. J-11015/710/2007-IA.II (M) dated 6th May, 2011 for 2500 TPD ore processing capacity.

No waste generation is envisaged. The tailings from HCL will be received through covered pipeline and after processing, again will be sent back to HCL through covered pipeline.

The Plant will be operated 300 days for 3 shifts per day. The project is a recovery of uranium bearing mineral from copper tailings and directly depends on throughput, therefore life of the proposed project depends on the throughput availability in form of tailings. However, design life of plant is estimated to be 20 years.

The water requirement of 766 m³/d including drinking water at site will be sourced from Subarnarekha River (~2 Km away). Power requirement will be 0.75 MW for 1st phase and 1.20 MW for 2nd phase. The power will be drawn from Jharkhand State Electricity Board. For Emergency power requirement a diesel generator set (180kVA, 415V) has been proposed.

The total cost of the project is estimated to be Rs. 49.93 crore for 1st phase and Rs. 95.00 crore for 2nd phase. UCIL's CSR budget for 2015-16 is Rs.2.65 Crore.

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

- i. Public hearing to be conducted by the Jharkhand 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. Study on Alpha & Beta activity in air, water, soil & biological samples and External Gamma radiation should be studied and submitted.

10.9.2 Expansion cum modification of M/s Super Smelter Ltd., for 0.85 MTPA Integrated Steel Plant with 184 MW CPP at Jamuria Industrial Estate under ADDA, Village Ikra, P.O Mondalpur, Tehsil Jamuria, District Bhurdhwan, West Bengal. [F.No-J-11011/86/2008-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 Super Smelter Ltd., has existing Integrated Steel Plant at Jamuria Industrial Estate in Village- Ikra, PO- Mondalpur, District Burdwan, West Bengal. The project lies at 23⁰ 41' 27.65'' N latitude and 87⁰ 05' 54.51'' E longitude. The location is well connected with road and rail. NH-2 (Grand Trunk Road) is only 4 Km away from the proposed site. The nearest cities Raniganja and Asansol are 3 km away from the proposed site.

The plant has existing 0.6 MTPA pellet plant, 1X400 m³ /hr oxygen plant, 2X100 TPD, 3X300 TPD DRI unit, 2X25 T Induction furnace 1X45 T AOD, 2X9 MVA submerged arc

furnace, 0.3 MTPA rolling mill, 22 MW WHRB & 37 MW CFBC/AFBC. The integrated steel plant obtained Environmental Clearance for 0.85 MTPA. The proponent now intends some modification & expansion in the project keeping in view the market condition and value of steel. Now the company proposes 2 MTPA beneficiation plant, 1X0.6 MTPA pellet plant, and 2X500 TPD DRI kiln. The product-mix shall be 0.25 MTPA Alloy steel, 0.30 MTPA Mild steel & 0.3 MTPA Stainless Steel. Following table present the existing and the proposed configuration:

S. No.	Plant Facilities	Configuration For which EC granted (J-11011/86/2008-IA II (I), 1 st Aug, 2008)	Existing Configuration (Units Commissioned as per EC)	Modification Proposed in EC configuration	Expansion Proposed with Configuration	Final Configuration	Remark /Justification for modification or expansion
1	Coal Washery	0.9 MTPA	Nil	Nil	Nil	0.9 MTPA	To be commissioned
2	Coke Oven(NR Dry Quenching)	0.5 MTPA	Nil	Nil	Nil	0.5 MTPA	To be commissioned
3	Iron Ore Beneficiation	Nil	Nil	Nil	2 MTPA	2 MTPA	To meet scarcity of Graded Iron ore
4	Pellet Plant	0.6 MTPA	0.6 MTPA	Nil	0.6 MTPA	1.2 MTPA	To meet additional requirement
5	Sinter Plant	2X35 m ²	Nil	1X60 m ² 1X15 m ²	Nil	1X60 m ² 1X15 m ²	This change is as per change in MBF size
6	Oxygen Plant	1X120 TPD	1 X400 m ³ /hr (13TPD)	Nil	Nil	1X120 TPD	Partly commissioned and balance will be commissioned.
7	Lime Plant	1200 TPD	Nil	Nil	Nil	1200 TPD	To be commissioned

8	DRI unit	3X100 TPD, (NOC from SPCB, WB), 2X350 TPD & 1X100 TPD	2 X 100 TPD 3 X 300 TPD Configuration Changed vide NOC 73042, SPCB, WB 19/5/2010	Nil	2X500 TPD	2 X 100 TPD 3 X 300 TPD 2 X 500 TPD	surplus DRI from expansion to be sold.
9	MBF	2X380 m3	Nil	1 X 380 m3 1 X 65 m3	Nil	1 X 380 m3 1 X 65 m3	Capacity reduced to match IF per requireme nt
10	Induction Furnace (IF)	Nil	2 X 25 T	Nil	4X20 T 2X25 T	4 X 20 T 4 X 25 T	All EAF will be changed to IF due to In availability of quality scrap and process advantages : No Hot metal charging No Oxygen, carbon injection No larger & hotter fume
11	EAF+AOD+ CCM	1X50 T (EAF+LF+CCM) 1X50 T (EAF+AOD+LF+ CCM) 1X40 T (EAF+AOD+LF+ CCM)	1 X 45 T AOD				

12	SAF (Ferro Alloy Plant)	4X9 MVA (Fe-Cr) 2X9 MVA (Fe-Mn, Si-Mn)	2 X 9 MVA	Nil	Nil	4X9 MVA (Fe-Cr) & 2X9 MVA (Fe-Mn, Si-Mn)	Partly commissioned and balance to be commissioned
13	Rolling Mill	0.3 MTPA (MS) 0.3 MTPA (AS) 0.25 MTPA (SS)	0.3 MTPA	Nil	Nil	0.3 MTPA (MS) 0.3 MTPA (AS) 0.25 MTPA (SS)	Partly commissioned and balance to be commissioned.
14	CPP (WHRB)	34 MW (DRI-22+BFG-12)	DRI 22 MW	BFG(-)5 MW	DRI- 20 MW CO gas-7MW	54 MW (DRI- 42 MW,BF & CO gas-12 MW)	MBF capacity decreased Coke Oven gas heat recovered
15	CPP (CFBC/AFBC)	2X62.5 MW	37 MW	Nil	8 MW	133 MW	Capacity enhancement to meet expansion Power

The total land available for the project is about 288.44 acres. Out of which 240 acres of land is existing, where all the units for which EC has been already obtained will be commissioned. And the proposed expansion will be carried out in 48.44 acres of land. The source of water for the plant operations is Ajay River through Asansol Durgapur Development Authority (ADDA). The total water requirement for the proposed project shall be around 11,210 cum/ day. The power load of total project (existing & proposed units) is about 174 MW. Out of the total requirement power met by CPP will be 166 MW and the remaining will be sourced from state power grid if plant is running in 100% load.

The total man power requirement for plant operation on completion of the proposed expansion will be around 1850. The cost of the project is estimated to be around Rs. 2200 Crores.

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

- i. Public hearing to be conducted by the West Bengal 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.

10.9.3 Proposed 1 x 15 MW Nett (Gross 17 MW) coal based Captive Power Plant, 5000 TPA Ferro Titanium, 3000 TPA Ferro Manganese, 12 TPD Aluminum powder plant & 2.4 TPA Scandium Oxide Recovery Plant of M/s Saraf Agencies Pvt. Ltd. at Chhatrapur, district Ganjam of Odisha. [J-11011/658/2007-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.

Environmental Clearance for the project of production of High Titanium Slag & Titanium Dioxide Pigment has been granted by the Ministry *vide* letter no. J-11011/658/2007-IA II (I), dated 16.03.2016. Consent to Establish from SPCB was also has been obtained. Under phase – II M/s Saraf Agencies Pvt. Ltd. proposes to install a new manufacturing unit for Titanium Project. It is proposed to set up the plant for 1x15 MW Nett (Gross 17 MW) Coal Based Captive Power Plant, 5000 TPA Ferro-Titanium, 3000 TPA Ferro Manganese, 2.4 TPA Scandium Oxide Recovery Plant & 12 TPD Aluminium Powder Plant based on Chinese technology. The proposed unit will be located at Village Kanamana, Chandrapada, Tikiriaberhampur, Arjyapalli, Sriramachandrapur, Taluka Chatrapur, District Ganjam, State Odisha. The land area acquired for the plant is 105.2 Ha out of which 34.8 Ha land will be used for green belt development. Total project cost is approx 193.3 Crore rupees. Proposed employment generation from proposed project will be 179. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity Unit of each	Production Capacity
Ferro Titanium	1	5000 TPA	5000 TPA
Ferro Manganese	1	3000 TPA	3000 TPA
Captive Power Plant	1	1 x 15 MW Nett (Gross 17 MW)	1 x 15 MW Nett (Gross 17 MW)
Scandium Oxide Recovery Plant	1	2.4 TPA	2.4 TPA
Aluminium Powder Plant	1	12 TPD	12 TPD

The total water requirement for the phase – I of the project is 7700 m³/day and for the phase-II the water requirement will be 1610m³/day. Therefore the total water required will be 9310 m³/day. The power requirement is 23000 KVA for phase- I and 555 KVA for the phase –II project. The source of water will be Rushikulya River for which the permission is yet to be obtained. Power will be sourced from SOUTHCO, Chatrapur. The cost of the project 193.3 cr.

The proponent has requested to exempt the conduct of public hearing for the proposed expansion, which the Committee has declined.

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

- i. Public hearing to be conducted by the Odisha 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.

10.9.4 Proposed Cement Plant Expansion with a capacity of 1.5 to 2.2 MTPA of Clinker and 2.25 to 3.55 MTPA of Cement at Village Amilia, Tehsil Maihar, District Satna, Madhya Pradesh of M/s KJS Cement Pvt Ltd. [J-11011/607/2008-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee(Industry-I) 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. KJS Cement Pvt Limited proposes expansion of its existing cement manufacturing unit capacity from 1.5 to 2.20 MTPA of Clinker and 2.25 (OPC/PPC) to 3.55MTPA of Cement (OPC/PPC) through debottlenecking and process optimization. Existing plant is based on dry process technology for cement manufacturing with pre heating and pre-calciner technology. It is proposed to set up a new cement grinding mill of 170 TPH capacity and a railway siding to cater inward & outward logistic needs. After debottlenecking and optimization of the process, the Plant will be able to produce clinker @ 7020 TPD on an average of 330 working days basis, the total annual output of clinker will be about 2.2 MTPA.

The proposed unit will be located at Village Amilia, Taluka Maihar, District Satna, Madhya Pradesh. No additional area is required for the proposed plant expansion. The existing land area of the cement plant is 91 Ha, out of which, 31. Ha land is allocated/used for green belt development. Total project cost is approx. Rs 320 crores. M/s KJS presently employs 514 persons. Proposed employment generation from proposed expansion project will be 30 direct

employment and 100 indirect employment during construction and installation. The additional electricity load of 39 MW will be met from the existing 27 MW CPP and MPSEB grid.

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

- i. Public hearing to be conducted by the Madhya Pradesh Pollution Control Board.
- ii. Layout map of the project should be submitted alongwith a green belt area demarcated on the map.
- iii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iv. 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.

10.10 ENVIRONMENTAL CLEARANCE (EC)

10.10.1 Setting up of a green field cement plant[(3.00 million TPA of clinker, 7.0 million TPA of cement(0.70 MTPA OPC, 2.80 MTPA PPC and 3.50 MTPA PSC)] by M/s JSW Cement Limited, located at Village Bhimnagar, Taluk Seedam, District Gulbarga, Karnataka [F.No-J-11011/271/2012-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA and EMP consultant (M/s Bhagavathi Ana Labs Pvt. Ltd.) gave a detailed presentation on the salient features of the project. M/s JSW Cement Limited (JSWCL) proposes to set up a green field cement plant adjoining the ML area. The project was prescribed Terms of Reference (ToRs) for preparation of EIA and EMP report *vide* letter No. J-11011/271/2012-IA(II), dated 20th February, 2013. However, as the proposed cement plant area was falling in the mineral bearing area within the captive Mine Lease (ML) area, JSWCL proposed to relocate the proposed cement plant outside the captive ML area. The revised ToRs were prescribed *vide* letter No. J-11011/271/2012-IA II(I), dated 26th May, 2015 for relocation of the proposed project site to an area of 303.19 acres of single crop agricultural land. Further, during the EIA studies, it was found that the proposed project site is in Bhimnagar Village, Sedam Taluka instead of Mogla Village, Chitapur Taluka in Gulbarga District of Karnataka State. There is no change in the project site location, Sy. Nos. and coordinates submitted earlier. A corrigendum in this regard was issued *vide* letter No. J-11011/271/2012-IA II(I), dated 21st June, 2016. Based on the TORs prescribed to the project, the project proponent submitted an online application for environmental clearance to the Ministry on 2nd August, 2016.

M/s JSW Cement Limited (JSWCL) proposes to set up a green field cement plant adjoining ML area with a production capacity of 3.0 million tonnes per annum (MTPA) of Clinker and 7.0 MTPA of cement[0.70 MTPA Ordinary Portland cement, (OPC), 3.50 MTPA Portland slag cement (PSC) and 2.80 MTPA Portland Pozzolona Cement (PPC)]. The project is located at Village Bhimnagar, Taluka Sedam, District Gulbarga, Karnataka. The total area proposed for the integrated cement plant is 303.19 acres, out of which the proposed plant will be set up in an area of 107 acres. The land use for the proposed plant site is under single crop

private agriculture land category and Consent of land owners has not been obtained. The proposed plant site is generally flat. There are no wildlife Sanctuary / National Park/ Biosphere Reserve/ Tiger Reserves and Elephant corridor) exists within or 10 km radius of the project site.

Public Hearing for the proposed project was conducted on 27th May, 2016. The capital cost of the project is Rs. 2036 Crores and the capital cost for environmental protection measures is proposed as Rs. 4575 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 365 Lakhs.

During the presentation, the Committee has observed that:

- (i) The cost of the project is at variance in various documents submitted and presented. While deliberation, the proponent has mentioned that it included the cost of mining project, as well.
- (ii) The valid document to substantiate the fact that there are no wildlife Sanctuary / National Park/ Biosphere Reserve/ Tiger Reserves and Elephant corridor) exists within or 10 km radius of the project site has not been attached as part of EIA and EMP report or other document.
- (iii) The consent documents of land owners providing land for the project has not been attached as part of EIA and EMP report or other document.
- (iv) During the presentation, the representation from the project proponent was at very junior level. The Committee was of the view that senior level representation and technical professionals should also form part of the presentation team.

Based on the presentation made and discussions held, the Committee deferred further consideration of the project and asked the project proponent to address all the above observations. The proposal will be considered further on receipt of above information.

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

The consideration of the proposal was deferred at the request of the project proponent.

10.10.3 Expansion of Continuous Cast Copper Rod Plant capacity from 2, 40,000 TPA to 4, 84,000 TPA by setting up of a new CCR plant of 2,44,000 TPA capacity by M/s Hindalco Industries Ltd. located at Village(s) Lakhigam and Dahej, Tehsil Vagra, District Bharuch in Gujarat [F.No-J-11011/927/2008-IA.II(I)].

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (Eco Chem Sales & Services, Surat) gave a detailed presentation on the salient features of the project. The proposed expansion project was initially received in the Ministry on 24.09.2015 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 19.11.2015 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry prescribed TORs to the project on 08.1.2016. Based on the TORs prescribed to the project, the project proponent submitted an online application for environmental clearance to the Ministry on 08.08.2016.

The project of M/s Hindalco Industries Limited, Unit of Birla Copper located at Village Dahej-Lakhigam, Tehsil Vagra, District Bharuch, Gujarat is for enhancement of Continuous Cast Copper Rod Plant capacity from 2, 40,000 TPA to 4, 84,000 TPA by setting up of a new CCR plant of 2,44,000 TPA capacity. The existing plant was accorded environmental clearance by the Ministry letter No. J-11011/927/2008-IA.II(I) dated 11th February, 2009. The total plot area is 327ha, which is in the possession of the proponent and land required for the expansion is 0.468 ha. The unit is located in the GIDC industrial area and no agriculture land, grazing land, Government land or forest land is involved. Out of the total land requirement of 327 ha, an area of 26.532ha is utility area, wherein the expansion would be carried out. The topography of the area is flat and reported to lie between 21°41'50.55" to 21°42'56.89" N Latitude and 72°32'10.48" to 72°33'05.92" E Longitude, at an elevation of 6.4 m AMSL. The ground water table reported to range between 10m-15 m below the land surface during the post-monsoon season and 5m-10m below the land surface during the pre-monsoon season. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. reported to be located within 10 km of the project area. The area also does not report to be a corridor for Schedule-I fauna.

The targeted production capacity of the Continuous Cast Copper Rod is 0.484 million TPA. The ore for the plant would be procured from own country or imported. The ore/raw materials transportation will be done within Birla copper premises. The water requirement of the project is estimated to be 408 m³/day, and the same will be sourced from the GIDC water supply. The power requirement of the project is estimated as 25 MW which will be sourced from the existing Captive Power Plants. No R&R is involved.

Ambient air quality monitoring has been carried out at 8 locations during March 2016 to May 2016 and the data submitted indicated that PM₁₀ ranges from 67 µg/m³–96.1 µg/m³, PM_{2.5} ranges from 36.5 µg/m³–53.8µg/m³, SO₂ ranges from 9.1 µg/m³-18.3 µg/m³ and NO_x ranges from 14.3 µg/m³ –25.6µg/m³. The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 0.28482 µg/m³ with respect to the PM₁₀, 0.49749 µg/m³ with respect to the SO₂ and 0.17849 µg/m³ with respect to the NO_x.

It has been reported that no waste will be generated due to the project. Out of the total project area of 327ha, an area of 117.15 ha including an area of 0.15 ha for the proposed expansion will be developed as green belt. The Public hearing of the project is exempted.

The capital cost of the project is Rs 240 Crores and the capital cost for environmental protection measures is proposed as Rs 20 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 05 Lakhs. The proponent has mentioned that there is no court case to the project or related activity.

Based on the presentation made and discussions held, the Committee observed that the project proponent has not provided compliance report of the existing plant from the Regional Office of the Ministry, which is one of the mandatory requirements for decision. The Committee, therefore, deferred further consideration of the project and advised the project proponent to expedite submission of compliance report from the Regional Office for consideration of the Committee.

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

The proposal was considered by the Expert Appraisal Committee and the project proponent and their EIA-EMP consultant (M/S EMTRC Consultants Private Limited) gave a detailed presentation on the salient features of the project. M/s Rashmi Metaliks Limited (RML) has established 0.9 Million Tons Per Annum (MTPA) Iron Ore Pelletization Plant at village Gokulpur, PO Shyamraipur, PS: Kharagpur, District Paschim Midnapur, West Bengal after obtaining the NOC/ Consent to Establish from West Bengal Pollution Control Board on 12.08.2010. Consent to Operate was obtained from West Bengal Pollution Control Board on 02.08.2012 to produce 0.6 MTPA (50000 tons per month) Pellets. The Consent to Operate was amended on 22-08-2014 to produce 0.9 MTPA (75000 tons per month) Pellets. Pursuant to NGT Order – 05 of 2014 dated 27-05-2014 and MOEF letter No.J.11011/12/2014-IA.II (I) dated 08-09-2014, West Bengal Pollution Control Board intimated RML to obtain Environmental Clearance for the operating 0.9 MTPA Pellet Plant from MoEF, Govt. of India as per provision of EIA Notification 2006. The Terms of Reference was issued by MOEF&CC on 12.2.2015. Based on the TORs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 27.10.2014.

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

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

The topography of the area is flat and falls between Latitude is 22°31'31" N and Longitude is 87°17'21" E in Survey of India Toposheet No 73N/7 at an elevation of 30 m AMSL. The

water requirement of the project is estimated as 120 m³/day. RML will use ground water. Permission to draw groundwater is available from State Water Investigation Directorate. The power requirement of the project is 5 MW which will be obtained from the Grid.

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

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

The capital cost of the project is Rs 170 Crores and the capital cost for environmental protection measures is 770 Rs Lakhs. The annual recurring cost towards the environmental

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

The proposal was earlier considered in the 9th meeting of Expert Appraisal Committee (Industry-I). It was informed by the Member Secretary to the Committee that the TOR for the project was issued on 12.02.2015. PP vide letter dated 3.08.2015 requested for transfer of TORs from M/s Rashmi Metaliks Limited to M/s Orissa Metaliks Pvt Ltd. Ministry *vide* its letter dated 14th October, 2015 issued a letter in respect of transfer of ToRs from M/s Rashmi Metaliks Limited to M/s Orissa Metaliks Pvt Ltd. Further, the proponent again requested the Ministry to transfer the ToRs from M/s Orissa Metaliks Pvt Ltd. to M/s Rashmi Metaliks Limited; however, no hard copy of affidavits were received by the Ministry. The PP handed over the hard copies during the last meeting. In view of the above, it has been decided by the Committee that the appraisal of the project will done, once the formalities for transfer of ToR takes place.

Later the file was processed and the ToR letter was transferred from M/s Orissa Metaliks Pvt Ltd. to M/s Rashmi Metaliks Limited.

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

- i. The project proponent shall install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.
- ii. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology.
- iii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- v. The PP shall install scrubber or upgrade the existing scrubbers within one year to reduce SO_x emission which will be verified by the regional office.
- vi. Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- vii. A statement on carbon budgeting including the quantum of equivalent CO₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be

prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.

- viii. For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves, eye protection etc. There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc
- ix. The internal roads should be designed such that the fire tenders should reach upto 10 meters of any unit.
- x. 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
- xi. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent.
- xii. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.
- xiii. A time bound action plan shall be submitted for reduction in solid waste, its proper utilization and disposal.
- xiv. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Chennai.
- xv. A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xvi. Green belt shall be developed in 50 acres of land of existing integrated steel plant by planting native and broad leaved species in consultation with local DFO and local communities as per the CPCB guidelines.
- xvii. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's

Regional Office. An amount of at least Rs. 4.25 crores will be set aside by the Project Proponent with a detailed plan for the ESC activities to be carried out in next 4 years.

- xviii. The proponent shall prepare a detailed CSR Plan for every year for the next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company. The plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included.
- xix. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xx. 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.
- xxi. The project proponent shall provide for LED lights in their offices and residential areas.
- xxii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

10.11 ANY OTHER ITEM

10.11.1 Expansion of Cement Plant (Cement 3.3 MTPA to 6.5 MTPA, Clinker 2.5 MTPA to 6.5 MTPA) along with CPP (30 MW to 80 MW) and WHRB (15 MW) at village Rawan, Tehsil Simga, District Raipur, Chhattisgarh by M/s UltraTech Cement Limited [J-11011/262/2009-IA.II(I)]

Environmental clearance to the project of expansion of Cement Plant (Cement 3.3 MTPA to 6.5 MTPA, Clinker 2.5 MTPA to 6.5 MTPA) along with CPP (30 MW to 80 MW) and WHRB (15 MW) was granted by the Ministry *vide* letter No. J-11011/262/2009-IA II (I) dated 17th March, 2011. Further the EC was transferred from M/s Grasim Industries Limited to M/s UltraTech Cement Limited *vide* Ministry's letter of even No. dated 5th September, 2016.

The project proponent is proposing for Amendment in Environmental Clearance regarding use of Fuel Mix (Petcoke along with coal in different proportion in Existing Cement Plant & Captive Thermal Power Plant).

Category	Existing	After Proposed Amendment
Fuel for Cement Plant (Kiln)		
Fuel	Coal	Coal/Petcoke
Proportion in Mix Fuel %	100%	Either 100 % Coal or 100 % Petcoke
Fuel Consumption (TPD)	2609	2609/1691
Fuel for Captive Power Plant		
Fuel	Coal	Coal : Petcoke
Proportion in Mix Fuel	100%	50 : 50 10 : 90 0 : 100
Fuel Consumption (TPD)	1204	602 : 256 120 : 460 0 : 512

It has been explained by the PP that use of pet coke (due to high calorific value and low ash content) ensures using low grade limestone and conserving high grade limestone, thereby enhancing the life of mines. Existing and proposed quantity of limestone will be same but LSF (Lime Saturation Factor) will be reduced from 1.03 to 0.97 and limestone reject generation will be zero as all material will be utilized to reduce LSF and ultimately life of mines will be increased by 12 years. Further there will be reduction in mineral gypsum consumption due to absorption of 'S' in clinker (Existing 0.08 MTPA and proposed 0.075 MTPA mineral Gypsum i.e. conservation of 5000MT/year). There will be reduction in fossil fuel consumption to produce the same amount of energy as pet coke has higher calorific value. The low particulate matter & fugitive emission; as the ash content in the Petcoke is negligible and less running hours of mill.

Based on the presentation made and discussions held the Committee recommended the amendment in environmental clearance for use of petcoke in cement plant and CPP.

10.11.2 Expansion of Smelter Plant from 100,000 TPA to 360000 TPA and Captive Power Plant from 267.5 MW to 967.5 MW 'at Hirakud, "—Sambalpur, Orissa by M/s Hindalco Industries Limited- Amendment for EC-[J-11011/400/2006-IA.II(I)].

M/s Hindalco Industries Limited – Hirakud (HIL- Hirakud) is operating integrated Smelter Plant (216 KTPA) and Captive Power Plant (CPP) (467.5 MW) in Odisha. HIL- Hirakud is getting the required coal from its own Garepalma mines at Chhattisgarh and MCL coal mines at different locations. It is now proposed to use Pet Coke in blend with Coal in a ratio upto 70% on weight basis. Pet Coke will be either imported or purchased from the Indian Refineries. HIL – Hirakud seeking permission for utilisation of Pet coke replacing up to 70% of the existing coal requirement.

It has been justified by the PP that Talabira-I coal mine was the only source of coal for CPP units of Hirakud. Pursuant to de-allocation of Talabira-I Coal Block, supply from this source is no longer available to HIL- Hirakud from 1st April 2015; necessitating heavy

dependence on E-auction coal from domestic sources. As a result, there is a drastic increase in power cost from Rs.1.80 to Rs.3.67 per kwh thus shooting up the cost of production of Aluminium by 30%. Hirakud incurred a total loss of Rs. 235 crores in FY-16.

Hindalco has been allocated coal mines at Chhattisgarh, which is far away from Hirakud. At present HIL- Hirakud is sourcing 30% coal from own coal mines and 70% through E-auction. However, still the landed cost of the coal to the unit is much higher as compared to the landed cost of Petcoke available through imports and/or from the nearby refineries. The use of proportionate pet coke and lime in blend with coal in CFBC boilers would result in substantially lesser generation of fly ash as compared to use of 100% coal. The proponent will comply with the latest emission norms notified by the MOEFCC on 7th December 2015.

HIL- Hirakud CFBC boilers are technically suitable to feed pet coke, agro waste and other biomass as a fuel along with coal in different ratio complying with all emission norms prescribed by CPCB /MOEFCC. Hence, we propose to use pet coke, agro waste and other biomass as an alternate fuel in a mix with coal in eco-friendly manner in our CFBC boilers.

For capturing the sulphur dioxides, in 1968 the technology of Limestone injection was developed by USA and same was patented to consume the Petcoke (worlds largest production in US) produced in the oil refineries. 98% of sulphur dioxide can be captured by injecting the limestone in the furnace at the temperature range of 790 Deg C to 900 Deg C. Worldwide the limestone injection technology is being adopted to effectively capture the sulphur dioxide and to keep the emissions within the norms.

Gaseous SO_x from petroleum coke combustion are primarily sulfur dioxide. Sulphur capture in CFBC Boilers process is achieved by adding Limestone. Furnace temperature of CFBC boilers remain in between 820 Deg C to 900 Deg C, which is ideal for absorption of SO₂ generated during the process of combustion of petcoke.

- $S + O_2 \rightarrow SO_2$ (formation of SO₂)
- $CaCO_3 + \text{heat} \rightarrow CaO + CO_2$ (calcination)
- $SO_2 + CaO + 1/2O_2 \rightarrow CaSO_4$ (Sulphation)

The high retentions of sulphur (98%) shall be achieved with petcoke-coal blends in the CFBC boilers. Calcium carbonate in limestone is converted to calcium oxide by calcination. The CaO then reacts with the sulfurdioxide by the combustion process. Fluidised bed combustion with limestone particles can lower the SO_x emission. Gaseous sulphur emission react with lime stone particles to form CaSO₄

Based on the presentation made and discussions held the Committee recommended the amendment in environmental clearance for use of petcoke in CFBC boiler with following conditions:

- (i) The proponent shall ensure that the use of pet coke shall not be beyond 70%.
- (ii) The proponent shall ensure that the use of limestone (Calcium Carbonate) shall not be less than 70%.
- (iii) The proponent shall carryout a study regarding use of petcoke in CPP in different proportions through a premiere Institution and submit report to Ministry.

10.11.3 Integrated cement project Clinker (2MTPA), Cement (3MTPA), Captive Power Plant (35 MW) and WHRB (8 MW) of M/s Talvadi Cements Ltd at Village Bari Puraini, Tehsil Raghuraj Nagar, Dist Satna, Madhya Pradesh [J-11011/142/2014-IA.II(I)]

Integrated Cement Project- Clinker (2.0 MTPA), Cement (3.0 MTPA), Captive Power Plant (35 MW) & WHRB (8.0 MW) of M/s. Talavadi Cements Limited located at Village(s) Bari & Puraini, Tehsil Raghuraj Nagar, District Satna, Madhya Pradesh was prescribed ToRs by the Ministry *vide* letter No. J-11011/142/2014-IA-II (I) on 11th August 2014. The said letter provided the validity of TORs for a period of two years. M/s. Talvadi Cements Limited applied for seeking extension of the validity ToRs for further period of 1 year.

Based on the presentation made by the proponent, the Committee noted that as per Ministry's OM dated 8th October, 2014 the validity period of ToRs has been increased from two years to three years. This validity period could be further extended by a maximum period of one year by following the process as stated therein. As in the instant project was prescribed TORs by Ministry on 11th August 2014, which is valid up to 10th August, 2017. The proponent may apply for further extension of validity of ToRs for another period of 1 year, if required within the validity period following the due process.

10.11.4 Expansion of Sponge Iron Plant (3, 00, 000 TPA to 6, 00, 000 TPA) and Ferro Alloy Plant (72, 000 TPA) by M/s Rashmi Cement Ltd, locate at Village Jitusole (J.L No 702 & 703. Jitusole Junglokhas J.L. No. 731 and Baghmudi J.L No. 928), District Paschim Medinipur, West Bengal. [J-11011/604/2008-IA.II(I)]

The plant of M/s Rashmi Cement Limited located in Village Jitusole, Tehsil Garhsalboni, P.S-Jhargram, District Paschim Mednipur, State West Bengal got environment clearance by Ministry *vide* letter No J-11011/604/2008.I A II (I) dated 12.02.2009 for expansion of Sponge Iron Plant (3,00,000 MTPA to 6,00,000 MTPA), Ferro Alloy (72000 MTPA) as per EIA Notification, 2006. The project got extension of the validity of environment clearance for another period of 3 years i.e. up to 11th-February 2019.

PP mentioned that due to the present recession, it is not viable to produce Ferro Alloys like Silico manganese, Ferro Manganese and Ferro Silicon at their Plant. PP have made a cost comparison of various Ferro Alloys and found that in the present circumstance, High Carbon Ferro Chrome can better margin and the PP can survive through the present recessionary conditions.

M/s Rashmi Cement Limited have EC permission for 14 X 100 TPD + 2 X 350 DRI for producing 6,00,000 TPA Sponge Iron and 6 x 9 MVA SEAF for producing 72,000 TPA Ferro Alloys (FeMn, FeSi, SiMn) and the same Plant can produce High carbon Ferro Chrome of around 72,000 TPA with 10-15% less slag production. For production of ferro Chrome no change in the equipment is needed. At present the plant is producing 10 X 100 TPD + 1 X 350 TPD DRI Kiln with 28 MW WHRB based CPP and 24,000 TPA Ferro Alloy by using 2 x 9 MVA SEAF after obtaining necessary 'Consent' from W.B.P.C.B. The details of the existing and the proposed amendment required is mentioned in the following table:

S. No	Details as per EC awarded		Unit Under Operation		Amendment in EC desired	
	Details	Product	Details	Product	Details	Product
1	DRI	Sponge Iron	DRI	Sponge Iron	-	-

	(14x100 TPD + 4x350 TPD)	6,00,000 TPA	(10X100 TPD + 1X350 TPD)			
2	Ferro Alloy (6x9 MVA) SEAF	Ferro Alloy (Fe Mn, FeSi, SiMn) 72,000 TPA	Ferro alloy (2x9 MVA) SEAF	Ferro Alloy (Fe Mn, FeSi, SiMn) 24,000 TPA	Ferro Alloy (6x9 MVA) SEAF	Product Mix (Including of Ferro Chrome with Ferro Alloy) with same EC approved capacity e.i. 72,000 TPA
3	Power Plant	25 MW	25 MW	CPP	-	-

The proponent explained that there is only a change in the product mix and the present pollution control equipment will be capable of maintaining the same air pollution control level of less than 100 mg/Nm³. There is no noise pollution and also there is no water pollution in the production process. Only air is required to be filtered in the Pollution Control System and a suitable and efficient pollution control system have already been installed in the Plant premises.

Based on the presentation made and discussions held, the Committee asked the proponent to prepare EIA and EMP report to substantiate their claim that there is no increase in pollution load. The EIA and EMP report so prepared will be further considered by the Committee. Under Section 7 (ii) of EIA Notification as it is a case of change in product mix with no increase in pollution load.

10.11.5 Enhancement of Clinker Production Capacity (2 to 2.5 MTPA) and change in product Mix from 4.8 MTPA (1.1 MTPA OPC & 3.7 MTPA of PSC) to 4.8 MTPA of OPC/PSC/GGBS of M/s JSW Cement Ltd., at village Bilakalagudur, Mandal Gadivemula, District Kurnool, Andhra Pradesh.-Amendment for EC [J-11011/889/2007-IA.II(I)]

M/s JSW Cement Limited is currently operating 4.8 MTPA capacity cement manufacturing unit at Village Bilakalagudur, Mandal Gadivemula, District Kurnool, Andhra Pradesh. The details of environmental clearance obtained by the proponent are as under:

- (i) Greenfield project(2.0 MTPA clinker, 2.2 MTPA Cement and 36 MW Captive Power Plant) of M/s JSW Cement Limited was initially accorded environmental clearance by the Ministry *vide* letter No. J-11011/889/2007-IA.II (I) dated 25.08.2008.
- (ii) Expansion of Cement Grinding from 2.2MTPA to 4.8 MTPA (for slag grinding unit) was accorded for Environmental clearance by the Ministry *vide* letter No J-11011/159/2010-IA-II(I) dated 13.05.2011.
- (iii) Expansion of Clinker capacity from 2.0MTPA to 2.5 MTPA and change in product mix in cement- 1.1 MTPA Ordinary Portland Cement (OPC) and 3.7 MTPA PSC to 1.1 MTPA OPC and 3.7 MTPA Portland Slag Cement (PSC)/ Ground Granulated Blast Furnace Slag (GGBS) was accorded environmental clearance *vide* letter No. J-11011/889/2007-IA.II (I) dated 09.03.2016.
- (iv) Extension of validity of EC for Captive Power Plant was granted *vide* letter No. J-11011/889/2007-IA.II (I) dated 06.01.2014

The project proponent has requested for amendments in environmental clearance for the following

- i. Use of Pet coke as alternative fuel in addition to coal in kiln of cement plant and boiler of power plant
- ii. Change of Boiler technology from AFBC to CFBC
- iii. Change of Condensate Cooling System from water cooled to air cooled
- iv. Addition of PPC as finished product.

The proponent has presented the environmental and economic benefits of the proposal. In Atmospheric Fluidized Bed Combustion (AFBC) technology, the furnace pressure is atmospheric pressure. The furnace gas goes through a cyclone and is let out to the atmosphere. Whereas in Circulating Fluidised Bed Combustion (CFBC) technology, the furnace is pressurised and the furnace gas is re-circulated to capture the unburnt carbon, to increase the thermal efficiency of the boiler. Hence this is an improved version of FBC. Use of petcoke will result in fossil fuel conservation. With the use of air cooled condenser, fresh water consumption will be reduced.

Based on the presentation made and discussions held the Committee recommended the amendment in environmental clearance with following conditions:

- (i) The proponent shall ensure that the use of pet coke shall not be beyond 70%.
- (ii) The proponent shall ensure that the use of limestone (Calcium Carbonate) shall not be less than 70%.

10.11.6 Expansion of Cement Grinding Unit from 4.6 to 6.6 MTPA at Jojobera Cement Plant, Village: Jojobera, P.O. Rahargora Jamshedpur, District: East Singhbhum (Jharkhand) by M/s. Lafarge India Ltd.-prescribing of ToRs regarding [J-11011/638/2008-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. Lafarge India Limited is proposing an expansion of Cement Grinding Unit from 4.6 to 6.6 MTPA at Village: Jojobera, P.O. Rahargora Jamshedpur, District: East Singhbhum (Jharkhand), within the existing plant premises. The total plant area is 54.147 ha; no additional land is required for the proposed expansion as the same will be done within the existing plant premises. 18.45 ha i.e. approx. 33 % of the total project area has already been developed under greenbelt/ plantation. Total cost of the project after expansion is 218.036 Crores. Employment generation after proposed expansion project is 1347 persons. Details of the products with capacities are given in the table below:

Product	Existing Capacity (MTPA)	Granted Capacity as per 9th meeting of EAC held on 27th-29th July 2016	Additional capacity (MTPA)	Total capacity after Expansion (MTPA)
PSC	4.0 (Max.)	4.0 (Max.)	1.5 (Max.)	5.5 (Max.)
PPC	1.0 (Max.)	1.0 (Max.)	1.0 (max.)	2.0 (Max.)
Composite Cement	-	1.0 (Max.)	.5 (max.)	1.5 (Max.)
Total Overall Production	4.6	4.6 (Max.)	2.0 (Max.)	6.6*

**The Overall production will not exceed 6.6 MTPA*

Total power required after proposed expansion capacity will be 45 MW which will be procured from TISCO (Tata Iron and Steel Company). Proposed raw material requirement are Clinker which will be sourced from Lafarge's Sonadih, Arasmeta Cement Plant, Chattisgarh, Gypsum from Chemical from IFFCO & PPL-Odisha and Vizag Mineral-Imported, etc., Flyash and Slag from Tata Power Ltd., Jamshedpur. Total water requirement after the proposed expansion capacity will be 1700 KLD which will be sourced from JUSCO (Jamshedpur Utilities and Services Company).

The project proponent has mentioned that as per OM No. J-13012/12/2013-IA-II (I) dated 24.12.2013 regarding 'Guidelines for consideration of proposals for grant of environmental clearance under Environmental Impact Assessment (EIA) Notification, 2006 and its amendments regarding categorization of Category 'B' projects/activities into Category 'B₁' & 'B₂', the instant project falls under Category 'B₂' as it is a stand-alone grinding unit and transportation of raw material is through Railways. The Committee was therefore requested to consider the project as Category 'B₂' project and given EC. Based on discussions held the Committee referred the matter to Ministry to ascertain the applicability of the above referred OM pursuant to the order of Hon'ble NGT in minor mineral matter.

Executive Summary

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

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

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

1. Executive Summary
2. Introduction
 - i. Details of the EIA Consultant including NABET accreditation
 - ii. Information about the project proponent
 - iii. Importance and benefits of the project
3. Project Description
 - i. Cost of project and time of completion.
 - ii. Products with capacities for the proposed project.
 - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
 - iv. List of raw materials required and their source along with mode of transportation.
 - v. Other chemicals and materials required with quantities and storage capacities
 - vi. Details of Emission, effluents, hazardous waste generation and their management.
 - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
 - viii. Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided
 - ix. Hazard identification and details of proposed safety systems.
 - x. Expansion/modernization proposals:
 - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB shall be attached with the EIA-EMP report.
 - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
4. Site Details
 - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
 - ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
 - iii. Co-ordinates (lat-long) of all four corners of the site.

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

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

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

6. **Environmental Status**

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations

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

7. Impact Assessment and Environment Management Plan

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

included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
- xii. Action plan for post-project environmental monitoring shall be submitted.
- xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

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 PELLETT PLANT

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

ADDITIONAL TORs FOR CEMENT INDUSTRY

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

ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE

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

METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

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

LIST OF PARTICIPANTS OF EAC (I) IN 10th MEETING OF EAC (INDUSTRY-I)
HELD ON 29th – 31st August, 2016

S.No	Name and Address	Position	Attendance			Signature
			29 th	30 th	31 st	
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	P	
Members						
2.	Dr. R. K. Jain, Director, Central Pulp and Paper Research Institute	Member	A	A	A	
3.	Director, Central Leather Research Institute	Member	A	A	A	
4.	Dr. Sunil Pashin, Representative of Indian Meteorological Department	Member	A	A	A	
5.	Representative of Central Ground Water Board	Member	A	A	A	
6.	Dr. G. Bhaskar Raju	Member	P	P	P	
7.	Prof. Naresh Chandra Pant	Member	A	A	A	
8.	Dr. Jagdish Kishwan, IFS(Retired)	Member	P	P	P	
9.	Dr.G.V.Subrahmanyam	Member	P	P	P	
10.	Prof. Arun Pandey	Member	A	A	A	
11.	Shri Santosh Raghunath Gondhalekar	Member	A	P	P	
12.	Shri Ashok Upadhyay	Member	A	A	A	
13.	Shri Vijay Prakash Saha	Member	P	P	P	
14.	Dr.Satish C.Garkoti, Scientist'F', MoEFCC	Member Secretary	P	P	P	
15.	Shri Amardeep Raju, Scientist 'D', MoEFCC	MoEFCC	P	P	P	
