

Minutes of the 37th Meeting of the Expert Appraisal Committee (Industry-1) held during 14th&15thJune, 2012 at IOCL Conference Room, 5th Floor, Core 6, Scope Complex, Lodhi Road, New Delhi -110003.

37.0 Opening Remarks of the Chairman

At the outset, Chairman welcomed the members of the Expert Appraisal Committee (Industry-1). Thereafter, agenda items were taken up for discussion.

37.1 Confirmation of the Minutes of the 36th Meeting of the Expert Appraisal Committee (Industry-1) held on 24th& 25th May, 2012.

The Minutes of the 35th Meeting of the Expert Appraisal Committee (Industry-1) held on 24th& 25th May, 2012 were confirmed.

37.2.0 Consideration of the Projects

14th June, 2012

Proposals for Environmental Clearance

37.2.1 Proposed Ferro Alloy Plant of 21,859 TPA by installing 6 MVA (Phase-I) and 9 MVA (Phase-II) submerged arc furnace at Village Ghutgoria, P.S: Barjora, District Bankura in West Bengal by M/s Samarpan Steel Pvt. Limited- regarding Environmental Clearance

The project authorities and their consultant, M/s CTRAN Consulting Private Limited, Bhubaneswargave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 15th Meeting of the Expert Appraisal Committee (Industry-1) held during 25th - 27th October, 2010 for preparation of EIA/EMP. All the Ferro Alloy Plants are listed at S. No. 3(a) under Primary Metallurgy Industries under Category A of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Samarpan Steel Pvt. Ltd. have proposed for a Ferro Alloy Manufacturing Unit of 21,859 TPA by installing 6 MVA (Phase-I) and 9 MVA (Phase-II) submerged arc furnace at Village Ghutgoria, P.S: Barjora, District Bankura in West Bengal. The total land acquired is 10.05 acres of which 3.37 acres will be developed under green belt. Nearest habitation is Ghutgoria village at 2.0 Km NE and nearest town is Durgapur at 15 Km NE. No national park/wild life sanctuary/reserve forest is located within 10 km radius of the project site. Total cost of the project is Rs. 35.76 Crores of which Rs. 1.75 Crores & Rs. 6.5 Lacs will be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures.

The details of the products along with their capacity are given below:

Facility	Plant configuration	Products	Production Capacity (TPA)
Submerged Electric Arc furnaces	1 x 6 MVA (Phase 1)	Ferro Manganese	3,497
		Silico Manganese	5,246
		(or)	
		Ferro Silicon	6,600
	1 X 9 MVA (Phase 2)	Ferro Manganese	5,246
		Silico Manganese	7,869
		(or)	
		Ferro Silicon	9,900

Ferro Manganese, Silico Manganese and Ferro Silicon will be produced in submerged arc furnace (SAF). The production capacity of the combined Ferro Alloy products will not exceed 21,859 TPA. Mn Ore, Coking coal/Coke, Dolomite and Quartzite are the raw materials that will be used. The raw materials will be thoroughly mixed and charged into the furnace. Power (17,200 KVA) will be sourced from Damodar Valley Corporation (DVC)/West Bengal State Electricity Distribution Company Limited (WBSEDCL). D.G. set (1x125 KVA & 1X150 KVA) will be installed for emergency power supply.

Ambient air quality monitoring was carried within the study area for PM, SO₂ and NO_x. The maximum values of these parameters are 85µg/m³, 7.4 µg/m³ and 49.4 µg/m³ respectively. The predicted maximum incremental ground level concentrations (GLCs) due to the proposed project are 8.71 µg/m³, 0.34 µg/m³ and 2.09 µg/m³ respectively. The resultant concentrations of these parameters are within the prescribed standards. Dust and fume extraction system with cyclone followed by bag filters will be provided to the submerged arc furnaces. High efficiency bag filters will be installed to control the emissions from the SAF. The emissions will be dispersed through 2 No.s of chimneys of adequate height. Fugitive emissions due to transportation will be controlled by water sprinkling on the roads. Raw materials and products will be kept in covered sheds.

Total fresh water requirement is 80 m³/day, which will be sourced from the ground water within plant premises and mainly used in cooling purpose. The treated effluent will be used for slag cooling, dust suppression and green belt development. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and zero discharge will be adopted. Solid waste like bag filter dust will be reused in process. The slag generated from the production of Ferro Manganese will be used for manufacturing of Silico Manganese. Silico Manganese Slag will be given to civil contractors and also to be supplied for brick manufacturing. Waste oil will be reused in plant for lubrication purpose or sold out to authorized recyclers/reprocessors. Acoustic enclosures will be provided to D.G. sets to control noise.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the West Bengal Pollution Control Board (WBPCB) on 17th April 2012. The issues raised in the public hearing were regarding provision of employment to local people, pollution control measures, depletion of ground water, local development etc. which were addressed in the EIA/EMP report.

The Committee after detailed deliberations sought the following information for reconsideration without calling the project proponent:

- Impact of raw materials transportation and management plan to minimize the same
 - Colored satellite image of the project site
 - Break up of small, medium and large farmers from whom the land was acquired. If small farmers are involved, a detailed R&R plan.
 - Source of coal and chemical & trace element analysis
 - Grain size analysis of quartzite
 - Revised OHS plan
 - Certificate from local DFO regarding the elephant corridor
 - Trace element management plan
- 37.2.2 Integrated Cement Plant (3.0 MTPA), Lime stone mining (4.5 MTPA 499.96 ha.), Power Plant (50 MW) at Village Barana and Harsh, Tehsil Bilara District Jodhpur, Rajasthan by M/s Murli Industries Limited - regarding Environmental Clearance**

The proponent informed that they will not be able to attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

37.2.3 Expansion of Aluminium Smelter Plant from 0.26 MTPA to 0.72 MTPA and Captive Power Plant from 650 MW to 1650 MW at Village Lapanga, Rengali, C.D. Block, District Sambalpur in Orissa by M/s Aditya Aluminium (A Division of M/s Hindalco Industries Limited) - regarding Environmental Clearance

The project authorities and their consultant, M/s Vimta Labs, Hyderabad, gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 2nd Meeting of the Expert Appraisal Committee (Industry-1) held during 17th –18th August, 2009 for preparation of EIA/EMP. The Aluminium Smelter Plants are listed at S. No. 3(a) under Primary Metallurgy Industries under Category A of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Aditya Aluminium (A Division of M/s Hindalco Industries Limited) have proposed for expansion of Aluminium Smelter Plant from 0.26 MTPA to 0.72 MTPA and Captive Power Plant from 650 MW to 1650 MW at Village Lapanga, Rengali, C.D. Block, District Sambalpur in Orissa. Total land requirement for the Smelter & CPP project is 1347.35 ha (3,330 acres) and the expansion project will be established in the existing premises. About 95% of the land was acquired and registration for the balance land is under process. Forest clearance for the diversion of forest land of 119.264 ha was accorded on 10.2.2011. The R&R plan prepared as per the R&R policy of Govt. of Odisha was approved. Greenbelt will be developed in an area of about 403.15 ha out of the total area of 1347.35 hectares. There are no National parks/ Wildlife Sanctuaries within 10 km radius of the project site. Seven reserve forests exist within 10 km radius. The total cost of project including existing is about Rs. 22,240 Crores. Environmental clearance for the existing smelter and CPP were accorded by MoEF on 27.1.2006 and 22.11.2005 respectively.

Alumina (13,82,400 T), Calcined petroleum coke (3,21,603 T), HS pitch (71,041 T), Aluminium Fluoride (10,500 T) are the raw materials required for Smelter plant. Coal is the primary raw material for the proposed expansion of power plant i.e. 9.12 million ton will be sourced from captive Talabira-II&III coal block of Ib valley at a distance of 12 km. and till they become operational, shall be imported from Singapore, for which MoU has been signed with M/s Swiss Singapore Overseas PTE Ltd. The power requirement for smelter will be about 1,500 MW which will be met from the proposed 1,650 MW coal based captive power plant. Electrolytic reduction of alumina is carried out by State-of-the Art Point fed Prebaked Anode Technology employing Hall-Heroult process of electrolysis. The AP36S electrolysis process technology of Rio-Tinto ALCAN (AP) is considered superior to other pre-baked anode technologies. Carbon anodes are produced from a mixture of petroleum coke recycled spent anodes and liquid coal tar pitch. The green anodes produced from this mix are baked in baking furnace. The baked anodes are fitted with stem bracket assembly by pouring cast iron in the stub hole, which are now called as rodded anodes and shipped to pot rooms for assembly.

Fluoride gases emitted during electrolysis are efficiently collected in a Gas Treatment Center (GTC), where the main raw material alumina adsorbs all the fluorides and clean air is exhausted through smelter stacks. Fresh alumina thus fluorinated in GTC is fed continuously into pots through hyper dense phase system; thus recycling the fluorides. Complete hood coverage of cells, highly efficient extraction system and dry scrubbers will be provided to achieve lower emissions of fluoride. The total fluoride emission will be 0.74 kg/t of aluminium as against the industry standard of 0.8 kg/t of aluminium. PM emissions from GTCs and baking furnace will be controlled below 75 and 50 mg/Nm³ respectively by providing efficient bag filters. Multiflue Chimneys of 275 m height will be installed in CPP. The ESP would have an efficiency of 99.9 % to limit the dust load at the inlet to the chimney to a value of 50 mg/Nm³.

Geo hydrological studies were conducted by NGRI, Hyderabad. The process of smelting is a dry process and does not involve direct use of water. However, water is required for cooling and domestic usages. The total water requirement of proposed expansion of smelter and CPP sourced from Hirakud Reservoir within the existing water allocation of 52.73 cusec. No additional water is required. The total wastewater generation from Smelter & CPP including domestic wastewater will be about 750 m³/hr. This

will be partly treated in ETP and STP and treated water will be reused in the process, dust suppression systems and for plantations/ greenbelt development. About 300 m³/hr of water will be released from the Captive Power Plant and smelter will be zero discharge.

The main solid waste from the proposed smelter will be Spent Pot Lining (SPL), which will be initially disposed off to secured landfill and in due course will explore consumption in cement/steel industries. The collection of bottom ash and HCSD system for ash disposal will be in dry form. MoU for fly ash utilization was signed with M/s Ultratech cement. The dross and anode butts generated in the process will be recycled or will be sold to authorized reprocessors. The organic portion of solid waste generated in the STP will be composted and used as manure in greenbelt development. Acoustic enclosures will be provided wherever required to control the noise level below 85 dB(A). Wherever, it is not possible technically to meet required noise level, personal protective equipments will be provided to the workers. The project site falls in seismic zone III and the geotechnical studies were conducted by IIT Kharagpur.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Orissa Pollution Control Board (WBPCB) on 2nd March 2012. The issues raised in the public hearing were regarding provision of employment to local people, industrial training centre, pollution control measures, drinking water facility, green belt development etc. which were addressed in the EIA/EMP report.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to submission of rechecked energy balance which has been submitted and stipulation of following specific conditions along with other environmental conditions:

- i. All the streams passing through the project site shall not be disturbed w.r.t their quantity and quality of flow.
- ii. Ministry of Environment and Forests shall regularly be informed about the source and quantity of Alumina procured from captive/indigenous/imported sources.
- iii. Alumina shall be obtained only from those refineries, which have been accorded environmental clearance by the Ministry of Environment and Forests.
- iv. The gaseous emissions (PM, SO₂, NO_x, PAH, HC, VOCs and Fluoride) from various process units shall conform to the standards prescribed by the concerned authorities from time to time. The SPCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. The particulate emissions from the bake oven plant shall not exceed 50 mg/Nm³.
- v. Particulate fluoride emissions shall not be more than 0.65 mg/Nm³ and fugitive particulate fluoride emissions from pot room shall not be more than 1.85 mg/Nm³.
- vi. Space shall be provided for installation of FGD in future
- vii. The poly-aromatic hydrocarbons (PAH) from the carbon plant (anode bake oven) shall not exceed 2 mg/Nm³. The data on PAH shall be monitored quarterly and report submitted regularly to the Ministry/Regional Office at Bhubaneswar and SPCB.
- viii. In-plant control measures like fume extraction and dust extraction system for controlling fugitive emissions from all the material handling/transfer points shall be provided to control dust emissions. Fugitive Fluoride emissions from the pot room and in the forage around the smelter complex shall be monitored and data submitted regularly to the Ministry's Regional Office at Bhubaneswar and SPCB. Further dry scrubbing system to control the emissions from the pot lines shall be provided.

- ix. Electrostatic precipitator (ESP) will be provided to Captive Power Plant (CPP) to control emissions below 50 mg/Nm³. The company shall provide bag-filters, dry scrubbing system and dust suppression system to control all the emissions including fluoride emissions from all melting and casting units. Tar, dust and fluoride in the fumes shall be controlled in baking furnace by providing dry scrubber. The emissions shall conform to the standards prescribed by the Ministry/CPCB/SPCB whichever is more stringent.
- x. Fluoride as F consumption shall be less than 10 kg/ton of Aluminium produced as specified in the CREP guidelines.
- xi. Anode butts generated from the pots shall be cleaned and recycled to the Anode Plant. The spent pot lining generated from the smelter shall be properly treated in spent pot lining treatment plant to remove fluoride and cyanide and disposed off in secured landfill. The location and design of the landfill site shall be approved by the SPCB as per Hazardous Wastes (Management and Handling) Rules, 2003. Leachate collection facilities shall be provided to the secured landfill facility (SLF). The dross shall be recycled in the cast house. STP sludge shall be utilized as manure for green belt development. All the used oil and batteries shall be sold to the authorized recyclers/ reprocessors.
- xii. Integrated Ash Management Plan shall be prepared for the utilization of fly ash as per Fly Ash Notification, 1999 as amended in 2003 and implemented. A copy of the plan shall be submitted to the Ministry's Regional Office. Fly ash shall be collected pneumatically in silos and used by cement and brick manufacturers for further utilization. Bottom Ash shall be disposed off in ash pond using high concentrated slurry disposal method.
- xiii. As proposed, spent pot lining waste shall also be provided to cement and steel industries for further utilization.
- xiv. Regular ground water monitoring shall be carried out by installing Piezometers all around the secured landfill site in consultation with the SPCB, Central Ground Water Authority and State Ground Water Board and data submitted to the Ministry's Regional Office and SPCB.
- xv. Total water requirement for the expansion from Hirakud Reservoir shall not exceed 5,200 m³/hr and prior permission for the existing and proposed expansion shall be obtained from the concerned department before commissioning of the plant. All the effluent including from cooling tower and de-mineralization plant shall be treated in the effluent treatment plant and treated effluent shall be recycled / reutilized in the process in the smelter and CPP and also for fire protection, dust suppression, green belt development etc. Domestic effluent shall be treated in Sewage Treatment Plant (STP) and treated domestic wastewater will be used for green belt development.
- xvi. No effluent shall be discharged outside the premises of smelter during the non-monsoon period and shall be discharged during the monsoon period only after proper treatment and meeting the norms of the OSPCB/CPCB.
- xvii. Green belt of adequate width and density around the project site shall be developed in 33 % area in consultation with the DFO as per the CPCB guidelines having density of 2,000 trees/ha.
- xviii. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xix. The company shall develop rainwater structures to harvest the runoff water for recharge of ground water in consultation with the Central Ground Water Authority/Board.
- xx. Rehabilitation and Resettlement (R & R) Plan prepared and submitted to the State Govt. shall be implemented as per the R & R Policy of the State Government. All the recommendations mentioned in the R & R Plan shall be strictly followed including suitable employment and other facilities to all the oustees.

- xxi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium sector shall be strictly implemented.
- xxii. The company shall adopt well laid down corporate environment policy and identified and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with environmental clearance, environmental laws and regulations.
- xxiii. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 2nd March, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
- xxiv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.
- xxv. The company shall provide housing for 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.

37.2.4 Integrated Steel Plant (2.0 MTPA) along with Coal based Power Plant (2x250 MW) at Village Hijalgarh Mouja, P.S-Jamuria, District Burdwan, in West Bengal by M/s. Rashmi Cement Limited- regarding Environmental Clearance

The proponent informed that they will not be able to attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

37.2.5 Expansion of Steel Plant (0.1 MTPA to 0.4 MTPA) and Captive Power Plant (12 MW to 24 MW) at Jhamuria Industrial Estate, Village-Ikrah, Dist-Burdwan, West Bengal by M/s. Gagan Ferrotech Limited -regarding Environmental Clearance

The project authorities and their consultant, M/s Visiontek Consultants, Bhubaneswar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 13th Meeting of the Expert Appraisal Committee (Industry-1) held on 26th – 28th August, 2010 for preparation of EIA/EMP. All the steel plants are listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

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

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

Sl.	Particulars	Plant Facilities	Product	Production Capacity in
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No.				TPA
EXISTING				
1	Sponge Iron Plant	4 × 100TPD	Sponge Iron	1,20,000
2	Induction Furnace	2 × 20T	MS Ingots	1,08,000
3	Rolling Mill	342 TPH re-heating furnace	TMT Bars	1,02,600
4	Captive Power Plant	12MW (8MW WHRB+ 4 MW FBC)	Power	12MW
PROPOSED				
1	Induction Furnace	1 X 20T	Liquid Steel	60,000
2	Electric Arc Furnace	1 X 35T	Liquid Steel	2,42,000
3	Ladle Refining Furnace	1 X 35T	Refined Liquid Steel	2,42,000
4	AOD	1 × 30T	Refined Liquid Steel	2,41,000
5	CCM	2 × 3 Strand	Billet	2,40,000
6	Ferro Alloys Plant	2 × 9 MVA	Ferro Manganese/Silico Manganese	27,000
7	Power Plant	12MW (1 × 60TPH FBC Boiler)	Power	12MW

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

Make up water requirement at final stage will be 202.5 m³/hr (62.5-Existing and 140-Expansion). Application has been submitted to ADDA for supply of 5,000 KLD water for industrial use. Closed circuit recycling system will be adopted in the proposed plant. The wastewater generated from the power plant will be used for ash quenching, sprinkling in the coal yard and dust suppression. Treated wastewater

from SMS and CCM will be recycled for washings and dust suppression etc. Guard pond will be provided for aeration and dosing for pH correction. Neutralizing pit for the treatment of DM Plant water will be provided. The treated water will be recycled for plant use and horticulture application. Domestic effluent will be routed to a STP and the treated effluent will be used for green belt development. No effluent will be discharged and zero discharge will be adopted. Fe-Mn slag would be reused for Si-Mn production. Slag from Si-Mn production will be stored in waste storage yard and used for road construction and low land filling. The IF/EAF slag will be disposed in engineered landfill. The flue dust will be sold to pellet making plant. Fly ash will be partly sold to brick manufacturers and balance will be stored in ash mound of area 5.09 Acre. Bottom ash will be disposed in ash disposal area.

Public hearing is not required due to the location of project site in Notified Industrial Estate. Environmental Clearance was accorded to the Industrial Estate at Jamuria on 6.11.2008.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to submission of compliance to the conditions stipulated in the existing environmental clearance/ NOC from SPCB and stipulation of following specific conditions along with other environmental conditions:

1. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks should be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ by installing energy efficient technology.
2. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.
3. Gaseous emission levels including secondary fugitive emissions from all the sources should 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 should be followed.
4. No charcoal shall be used as fuel. Pet coke shall be used as fuel instead of charcoal from unknown sources.
5. Dust suppression system and bag filters shall be installed to control the fugitive dust emissions at conveyor and transfer points, product handling, loading and unloading points.
6. Total water requirement after expansion shall not exceed 202.5 m³/hr. The water consumption shall not exceed as per the standard prescribed for the steel plants.
7. Efforts shall further be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources. 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.
8. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage should be treated in septic tank followed by soak pit.
9. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.

10. Slag produced in Ferro Manganese (Fe-Mn) production shall be used in manufacture of Silico Manganese (Si-Mn). All the other ferro alloy slag shall be used in the preparation of building materials.
 11. No Ferro Chrome shall be manufactured without prior approval from the Ministry of Environment & Forests.
 12. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2010. All the fly ash should be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding should be submitted to the Ministry's Regional Office at Bhubaneswar.
 13. Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
 14. As proposed, green belt shall be developed in 33 % of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
 15. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants should be implemented.
 16. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.
- 37.2.6 Proposed Iron ore Beneficiation (4,95,000 TPA), Cold Briquetted Iron (CBI- 2,97,000 TPA), Silicon Carbide Crucible (3,000 TPA) and Coal Gasifier (11,08,80,000 Nm³/annum) at Villages Hiradahalu and Pulkurthi, Mandal D. Hirrehal, District Ananthapur in Andhra Pradesh by M/s Daataa Shree Metals & Minerals Pvt. Limited - regarding Environmental Clearance**

The project authorities and their consultant, M/s Pioneer Enviro Laboratories & Consultants Pvt. Ltd., Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (ToRs) awarded during the 21st Meeting of the Expert Appraisal Committee (Industry-1) held during 25th & 26th March 2011 for preparation of EIA/EMP. The primary metallurgical industry is listed at S.No. 3(a) under Category 'A' of the Schedule of EIA notification, 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Daataa Shree Metals & Minerals Pvt. Ltd. have proposed for Iron ore Beneficiation (4,95,000 TPA), Cold Briquetted Iron (CBI- 2,97,000 TPA), Silicon Carbide Crucible (3,000 TPA) and Coal Gasifier (11,08,80,000 Nm³/annum) at Villages Hiradahalu and Pulkurthi, Mandal D. Hirrehal, District Ananthapur in Andhra Pradesh. Total land envisaged for the project is 136.2 acres and same is in possession of management. Green belt will be developed in 33% area. No R & R is involved. No National Park / Wildlife Sanctuary/ Biosphere reserves are located within 10 km radius of the proposed project site. Mincheri R.F., Bellery R.F & Hirehalu R.F are situated at a distance of 1.0 Km, 3.8 Kms & 5.3 Kms. respectively from the project site. Manchinilla Vanka & Tungabhadra Canal are at a distance of 1.2 Kms. & 6.7 Kms. respectively from the proposed project site. Total cost of the project is Rs. 335 Crores. Capital Cost for environment protection for proposed plant is Rs. 12.0 Crores and recurring cost for environmental protection is Rs. 0.5 Crores/Annum

Details of the products along with their production capacity are given below:

S.No	PRODUCT /UNIT	PLANT CONFIGURATION	PRODUCTION CAPACITY
1	Iron Concentrate	3 x 1,65,000 TPA	4,95,000 TPA
2.	Cold Briquetted iron	3 x 99,000 TPA	2,97,000 TPA

	(through Tunnel Kiln Technology)		
3	Silicon Carbide Crucible	3 x 1,000 TPA	3,000 TPA
4	Coal Gasifier	3 x 4 nos of Φ 3.2m	11,08,80,000 Nm ³ /annum
<ul style="list-style-type: none"> • Above production capacity is based on 330 days of operation. • The above proposed capacities will be implemented in 3 phases with capacity in each phase is 1/3rd of the above specified capacity. 			

Raw material required for the proposed project will be low grade iron ore (6,65,000 TPA), Coal (2,33,700 TPA), limestone (29,700 TPA), silicon carbide powder (3,000 TPA) and Sodium silicate binders (60 TPA). Power required for the proposed project will be sourced from the Grid. The manufacturing process would involve crushing the low grade Iron Ore to minus 150 /200 mesh size and separation by Magnetic Separators, Gravitation and floatation process. The Iron concentrate is compressed in cakes and charged with coal powder in the Silicon Carbide Crucibles and processed in Tunnel kiln to reduce it. In this process, reduction is better as it is in closed container and composition of Cold Briquetted Iron is good. After reduction and cooling, the cakes can be used directly or can be crushed and briquetted again.

Ambient air quality monitoring was carried out at 8 locations during December 2010 to February 2011 and the data indicated the value of PM_{2.5} (13.2 to 17.8 ug/m³), PM₁₀ (22.1 to 30.1 ug/m³), SO₂ (6.1 to 7.7ug/m³) and NOx (6.9 to 8.9ug/m³). The predicted incremental GLCs due to the proposed project is PM₁₀ (0.6 μ g/m³), SO₂ (9.4 μ g/m³) & NOx (4.6 μ g/m³) and the resultant concentrations are within the permissible limit. Multicyclones followed by bag filters will be installed to control PM emissions to below 50mg/Nm³. The water required for the proposed project will be 311m³/day and the same will be sourced from ground water. There will not be any process wastewater generation from the unit as closed circuit cooling system will be adopted.

Solid waste generated from the proposed project will be tailings (2,19,500 TPA), ash (64,152 TPA), char (70,110 TPA), silicon carbide crucibles (3000 TPA). Tailings will be provided to cement manufacturing units and ash will be given to Cement plants & brick making units. The char (70,110 TPA) generated from the CBI plant will be mixed with coal in the ratio of 1:2 and then briquetted to be used in coal gasifier for generation of coal gas. After usable life of the crucibles, they will be crushed and recycled in making fresh Silicon carbide crucibles. Ear plugs will be provided to workers working in noise prone areas. Acoustic enclosures will be provided to noise generating equipment.

The Committee deliberated upon the issues raised during the Public Hearing/Public Consultation meeting conducted by the A.P. Pollution Control Board on 19th April, 2012. The main issues raised in the public hearing meeting were provision of pollution control measures, employment to locals, green belt development, social welfare activities etc. which were addressed in the EIA/EMP report.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to stipulation of following specific conditions along with other environmental conditions:

- i. Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), gas cleaning plant, venturi scrubber, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ by installing energy efficient technology.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 should be followed.

- iv. Total water requirement shall not exceed 311 KLD. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage should be treated in septic tank followed by soak pit.
- v. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- vi. Regular monitoring of influent and effluent surface, sub-surface and ground water (including chromite) should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB.
- vii. Vehicular pollution due to transportation of raw material and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- viii. All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit.
- ix. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular reports regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste should be submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB.
- x. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xi. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xii. As proposed, green belt shall be developed in 33 % of plant area as per the CPCB guidelines in consultation with the DFO.
- xiii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants should be implemented.
- xiv. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 19th April, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- xv. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.
- xvi. The company shall provide housing for 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.

37.2.7 Coke Oven Plant (2,37,600 TPA), Coal Washery (66,000 TPA), Slurry Washery (5,28,000 TPA) and Captive Power Plant (WHRB, 6 MW) at Plot No. 116-178, 179(Part)189, 205-211, 294-331,

332(Part), 333 (Part), 334-360, 466-500, Village Hirodih, P.S. Jainagar, District Kodarma in Jharkhand by **M/s Jupiter Ispat Private Limited - regarding Environmental Clearance**

The project authorities and their consultant, M/s Visiontek Consultants, Bhubaneswar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of References (TORs) awarded during the 9th meeting of the Expert Appraisal Committee (Industry - 1) held on 7th – 8th April, 2010 for preparation of EIA/EMP. The proposed project is a Category B project as per the Schedule of EIA Notification 2006 and appraised by the SEIAA/SEAC. However, due to absence of SEIAA for Jharkhand, the proposal is appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Jupiter Ispat Limited have proposed for setting up of Coke Oven Plant (2,37,600 TPA), Coal washery (6,6000 TPA), slurry washery (5,28,000 TPA) and Captive Power Plant (6 MW) at Village Hirodih, P.S. Jainagar, District Kodarma, Jharkhand. Proposed plant will be set up in 40 acres and the land is acquired on lease from M/s Jupiter Spun Pipe Company Private Limited. Green belt will be developed in 14.00 acres out of total 40 acres. No national park/wild life sanctuary/reserve forest is located within 10 Km. Akto Nadi and Barakar River flow at a distance of 1.5 km and 4 km respectively from the project site. Kodarma town is at 10.5 km. Total cost of the project is Rs. 88.65 Crores. Rs. 3.6 Crores and Rs. 0.29 Crores are earmarked towards capital cost and recurring cost per annum for pollution control measures.

Following will be manufactured:

SL	Manufacturing Items	Plant Capacity		Manufacturing Technology
		TPD	TPA	
1	Low Ash Coke	720	2,37,600	Non Recovery Coke Ovens
2	Coal Washery	200	66,000	Wet media barrel separation
3	Slurry Washery	1600	5,28,000	Through hydro & froth flotation
4	Captive Power Plant	6 MW		Through WHRB from coke oven

Coal (66,000 TPA) and slack coal (5,28,000 TPA) will be used as raw materials. MoU with Bharat Coking Coal Ltd. for supply of coal is submitted. Power (6.0 MW) will be sourced initially from JSEB and from captive power plant at later stage. D.G. sets (500 KVA and 200 KVA) will be installed for emergency use. Coal will be burnt for manufacturing low ash coke. After processing, coke will be taken out and air quenched. Traveling grate type circular sinter machine will be used for sintering of fines. Captive power plant (WHRB) will be installed to make use of flue gases generated from the coke oven.

Ambient air quality monitoring was carried within the study area for PM₁₀, SO₂ and NO_x. The maximum values of these parameters are 42.0 µg/m³, 18.19 µg/m³ and 22.89 µg/m³ respectively. The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.046 µg/m³ with respect to the PM₁₀, 0.07 µg/m³ with respect to the SO₂ and 0.035 µg/m³ with respect to the NO_x. The GLC predicted at all receptor locations after the proposed expansion are within the NAAQS. Particulate matter will increase due to grinding and burning process. Down draft system with tunnel and complete combustion of flue gases will be installed in coke ovens to control particulate matters. Non-recovery type of coke oven will be provided with external combustion and recuperator system to recover sensible heat from outgoing flue gases before escaping from the chimney and used in power generation through WHRB. Poly-aromatic hydrocarbon (PAH) will be burnt in the coke oven itself. Dedusting system and water sprinkler will be provided to control fugitive emissions.

Total ground water requirement from bore wells and RWH will be 623 m³/day. Permission for ground water drawl has been obtained from CGWA, New Delhi vide letter No. 21-4(85)/MER/CGWA/2011-3439, dated 19.04.2012. No liquid effluent will be generated and discharged due to adoption of closed loop system. Only make up water will be fed into the plant. The treated effluent will be used for ash conditioning, dust suppression and green belt development. Service water

will be passed through oil separator to remove oil content in the effluent. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and Zero discharge will be adopted. The rejects from coal washery and slurry washery will be sold to Briquette plant/ red bricks manufacturing units and the dust from APCD will be partly reused in process and the balance is sold to FBC units. Waste/used/spent oil and used batteries will be sold to authorized recyclers / re-processors.

Public hearing/Public consultation meeting was conducted by the Jharkhand State Pollution Control Board (JSPCB) on 23rd October 2011. The issues raised in the public hearing meeting were w.r.t. provision of pollution control measures, employment to locals, drinking water, education, health facilities, tree plantation etc. and have been addressed in the EIA/EMP.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to submission of revised diagram of coke oven plant and stipulation of following specific conditions along with other environmental conditions:

1. Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided.
2. Stack monitoring facilities for all the major stacks and adequate air pollution control systems viz. dust catchers or cyclones, Multi stage scrubber, bag filters etc. to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored alongwith other parameters and standards notified under E (P) Act shall be followed. The reports shall be submitted to the Ministry's Regional Office at the Bhubaneswar, CPCB and SPCB.
3. Multi stage scrubber shall be installed to control gaseous and dust emission from the coke oven stack. Measures shall be taken to prevent leakages from the coke oven plant.
4. The prescribed emission standards for coke oven plants, as notified vide notification no. GSR 46 (E) dated 3rd February, 2006 and subsequently amended shall be complied with.
5. 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 and coke sorting plant of coke oven plant. 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.
6. Secondary fugitive emissions shall be controlled within the prescribed limits, regularly monitored and records maintained. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.
7. 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. Efforts shall also be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. Vehicular emissions shall be regularly monitored and records kept.
8. Total requirement of the water shall not exceed 623 m³/day. All the treated wastewater shall be recycled for dust suppression and green belt development. Domestic wastewater shall be treated in septic tank followed by soak pit and used for green belt development. Zero effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.

9. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
 10. Waste from the hard coke unit, shall be provided to the briquette manufacturing units. Coal and coke fines shall be recycled and reused in the process. The bag filter dust shall be used for land filling. The waste oil shall be properly disposed off as per the Hazardous Waste (Management, Handling, Handling and Transboundary Movement) Rules, 2008.
 11. As proposed, green belt shall be developed in 33% of plant area within and around the project site to mitigate the impact of fugitive emissions as per the CPCB guidelines in consultation with local DFO.
 12. The recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Coke Oven Plants shall be implemented.
 13. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
 14. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 23rd October, 2011 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
 15. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.
 16. The company shall provide housing for 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.
- 37.2.8 Integrated Cement Project (Clinker - 2.4 MTPA, Cement - 4.0 MTPA, Captive Power Plant - 44 MW & Captive Limestone Mine - 3.8 MTPA, 551.36 ha) at Villages Kodla & Benkanhalli, Taluka Sedam, District Gulbarga, Karnataka by M/s. Shree Cement Ltd. - regarding Environmental Clearance**

The project authorities and their consultant, MM/s. J.M. EnviroNet Pvt. Ltd., Gurgaon gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (ToRs) awarded during the 85th Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 23rd– 25th September, 2008 for preparation of EIA/EMP. All the cement plants (≥ 1.0 MTPA) are listed at S.No. 3(b) under Category A of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s. Shree Cement Limited has proposed an integrated cement project at Villages Kodla & Benkanhalli, Taluka Sedam, District Gulbarga, Karnataka. Total plant area is 173.32 ha and mining lease area is 551.36 ha. No eco-sensitive area like National Park, Wildlife Sanctuary, Biosphere Reserve exist within 10 km radius study area of project site. Only one Reserve Forest (Yadagir Reserve Forest) exist at 9.1 km in SW direction from project boundary. Total cost of the project is Rs. 1,050 Crores. Capital cost for Environmental Protection Measures is Rs. 60 Crores and Recurring Cost is Rs. 1.2 Crores/annum.

The proposed production capacities are as follows:

Project activity	Production Capacity
Clinker Production	2.4 MTPA
Cement Production	4.0 MTPA
Captive Power Plant	44 MW(2 x 22 MW)
Limestone Production from Captive Mine (ML area - 551.36ha)	3.8 MTPA

The mining method is mechanized open cast mining method with drilling and blasting. Limestone is transported to cement plant by covered conveyor belt. Ultimate working depth will be 30 m bgl (460 m RL) and mine working will not intersect the ground water table. The cement plant is based on the dry process technology for cement manufacturing with pre-heater and pre-calciner technology. Major raw material required for the proposed cement project is limestone, which is transported from the captive limestone mine via covered conveyor belt. Other raw materials are Iron ore, Gypsum, Coal & Fly ash, which are transported by road/rail. Coal linkage documents for imported coal and MoUs for pet coke were submitted. The total power requirement for the integrated unit is around 35 MW. During implementation phase, power will be procured from KSEB and during operation phase, the power requirement will be met from the CPP of 44 MW.

Environmental baseline study was conducted for the project during Summer Season, 2009. As per the Ambient Air Quality Monitoring carried out, in Core Zone, SPM & RSPM ranges between 101.5 to 156.5 $\mu\text{g}/\text{m}^3$ and 28.3 $\mu\text{g}/\text{m}^3$ to 52.1 $\mu\text{g}/\text{m}^3$ respectively. Whereas, in Buffer Zone, SPM & RSPM ranges between 91.5 to 178.5 and 29.6 to 55.3 $\mu\text{g}/\text{m}^3$ respectively. Maximum incremental concentration of SPM due to the project will be 9.20 $\mu\text{g}/\text{m}^3$ at a distance of approx. 1 km in West direction. In Core Zone, SO_2 & NO_x concentrations were found in the range of 6.1 to 8.8 $\mu\text{g}/\text{m}^3$ and 9.2 to 12.5 $\mu\text{g}/\text{m}^3$, respectively and in Buffer Zone, SO_2 & NO_x concentrations were found in the range of 6.4 to 10.3 $\mu\text{g}/\text{m}^3$ and 8.9 to 14.1 $\mu\text{g}/\text{m}^3$, respectively. Wet Drilling & controlled blasting technique will be used to avoid dust generation. Pollution control equipments like ESP, Bag houses and Bag filters will be installed to control dust emission. All material transfer points will be provided with bag filters to entrap the emissions at the source itself. Clinker & fly ash will be stored in silo and gypsum in covered yard.

Total water requirement will be 2,000 KLD and will be sourced from groundwater. CGWA permission has been obtained for the same vide letter No 21-4(87)/SWR/CGWA/2008-1988 dated 29.01.09. Wastewater of mine area, generated from workshop will be passed through up-flow filter for separation of oil and grease contents and clear water will be used for dust suppression in mine area and crusher. No industrial waste water will be generated in the Cement Plant. Domestic wastewater generated from Cement Plant will be treated in the STP. The treated water will be utilized for green belt development/horticulture activities. No solid waste will be generated in cement manufacturing process. Dust collected from various pollution control equipments will be recycled back to the process. STP sludge will be utilized as manure for green belt development within the plant premises.

Public hearing for the proposed project was conducted by Karnataka State Pollution control Board on 2nd March, 2012. The issues raised in the public hearing meeting were w.r.t. provision of compensation for land, pollution control measures, employment, education, health, infrastructure facilities, blasting & vibration etc. which have been covered in the final EIA/EMP Report.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to submission of documents & letter regarding compensation to land and stipulation of following specific conditions along with other environmental conditions:

- i). Rehabilitation and Resettlement Plan for the project affected population including tribals, if applicable, shall be implemented as per the policy of the State Govt. in consultation with the State Govt. of Karnataka. Compensation paid in any case shall not be less than the norms prescribed under the National Resettlement and Rehabilitation Policy, 2007.
- ii). The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the KSPCB. At no time, particulate emissions from the cement plant including kiln, coal mill, cement mill, cooler and CPP shall not exceed 50 mg/Nm^3 .

- iii). Continuous on-line monitors for particulate emissions shall be installed. Interlocking facility shall be provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit (s) is shut down automatically.
- iv). Data on ambient air quality (PM₁₀, SO₂, NO_x) shall be regularly submitted to the Ministry including its Regional office at Bangalore and the State Pollution Control Board / Central Pollution Control Board once in six months. Further, quality of discharged water shall also be monitored [(TDS, DO, pH) and total Suspended solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain.
- v). The Company shall install low NO_x burner with Kiln/calcliner for control of NO_x emissions.
- vi). Secondary fugitive emissions shall be controlled within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.
- vii). 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.
- viii). Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. Vehicular emissions should be regularly monitored.
- ix). Fly ash shall be utilized as per the provisions of Fly Ash Notification, 1999, subsequently amended in 2009. Fly ash shall be stored in ash silo and 100% used in the cement manufacturing.
- x). The company shall make the efforts to utilize the high calorific hazardous waste in the cement kiln and necessary provisions shall be made accordingly. The company shall keep the record of the waste utilized and shall submit the details to Ministry's Regional Office at Bangalore, CPCB and SPCB.
- xi). Rainwater harvesting measures shall be adopted for the augmentation of ground water at cement plant, colony including check dams at mine site. The company must also collect rain water in the mined out pits of captive lime stone mine and use the same water for the various activities of the project to conserve fresh water and reduce the water requirement from the ground water. An action plan shall be submitted to Ministry's Regional Office at Bangalore within 3 months from date of issue of this letter. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- xii). Total requirement shall not exceed 2,000m³/day. The water stored in the artificial reservoir made in the mine pit shall be used maximum to reduce ground water consumption. No effluent should be discharged from the mine to any water body or nearby river.
- xiii). Top soil, if any, shall be stacked with proper slope at earmarked site(s) only with adequate measures and shall be used for reclamation and rehabilitation of mined out areas.
- xiv). The project proponent shall ensure that no natural water course shall be obstructed due to any mining and plant operations. The company shall make the plan for protection of the natural water course passing through the plant and mine area premises and submit to the Ministry's Regional Office at Bangalore.
- xv). The inter burden and other waste generated shall be stacked at earmarked dump site(s) only and shall not be kept active for long period. The total height of the dumps shall not exceed 30 m in three terraces of 10 m each and the overall slope of the dump shall be maintained to

28⁰. The inter burden dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office, Bangalore on six monthly basis.

- xvi). The void left unfilled shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plantation to be done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.
- xvii). Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, inter burden and mineral dumps to arrest flow of silt and sediment. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted, particularly after monsoon and maintained properly.
- xviii). Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and inter burden dumps and sump capacity shall be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.
- xix). Dimension of the retaining wall at the toe of inter burden dumps and inter burden benches within the mine to check run-off and siltation shall be based on the rain fall data.
- xx). Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers at suitable locations by the project proponent in and around project area in consultation with Regional Director, Central Ground Water Board. The frequency of monitoring shall be four times a year- pre-monsoon (April / May), monsoon (August), post-monsoon (November), and winter (January). Data thus collected shall be sent at regular intervals to Ministry of Environment and Forests and its Regional Office at Bangalore, Central Ground Water Authority and Central Ground Water Board.
- xxi). Wet drilling sequential and controlled blasting method and provision for the control air emissions during blasting using dust collectors etc. shall be used. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders shall be implemented.
- xxii). Bench height, width and slope for individual bench shall be properly assessed and implemented. Adequate measures should be adopted to stabilize the slope before abandonment. The fencing around the reservoir should be provided to prevent accidents.
- xxiii). Action plan for the mining, management of over burden (removal, storage, disposal etc.), reclamation of the mined out area and mine closure should be submitted to the Ministry and its Regional Office at Bangalore.
- xxiv). As proposed, green belt shall be developed in 33% of the plant and mine area as per the CPCB guidelines in consultation with DFO.
- xxv). All the recommendations of the Corporate Responsibility or Environmental Protection (CREP) for the cement plants shall be strictly followed.
- xxvi). The company shall adopt well laid down corporate environment policy and identified and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with environmental clearance, environmental laws and regulations.

- xxvii). Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral.
- xxviii). Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Bangalore, KSPCB and CPCB within 3 months of issue of environment clearance letter.
- xxix). Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure, for approval.
- xxx). The company shall comply with the commitments made during public hearing held on 2nd March, 2012 and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- xxxi). At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.
- xxxii). 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

37.2.9 Enhancement of Cement plant (Clinker from 4200 TPD to 4500 TPD) at Chilamkur Village, Yerraguntla Mandal, Y.S.R. District in Andhra Pradesh by M/s India Cement Limited- regarding Environmental Clearance

The project authorities and their consultant, M/s Pioneer Enviro Laboratories & Consultants Pvt. Ltd., Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (ToRs) awarded during the 22nd Meeting of the Expert Appraisal Committee (Industry-1) held during 18th -19th April 2011 for preparation of EIA/EMP. All the cement plants (≥ 1.0 MTPA) are listed at S.No. 3(b) under Category A of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s. India Cement Ltd. is an existing plant having clinkerisation and cement plant at Chilamkur Village, Yerraguntla Mandal, Y.S.R. District in Andhra Pradesh. It is proposed to enhance the clinker production capacity from 1.386 MPTA to 1.485 MTPA by optimization of process/operations. Total existing project area is 579.88 Acres and the enhancement of Clinker capacity will be done within the existing plant premises only. About 223 acres of area has already been developed under green belt. There will not be any additional investment for the proposed Clinker capacity enhancement. Kosinapalle RF is present at distance of 3.5 Kms. from the project site. Nearest village Chilamakur is at a distance of 1.9 Kms. from the project site. No national parks / biosphere reserves / ecologically sensitive areas are located within 10 km radius of the project area. Penneru Riverflows at a distance of 9.0 Kms. from the project site. Public hearing for the existing plant was held on 29th March, 2007 under the EIA Notification, 2006.

Following is the existing and proposed plant configuration:

Product	Existing	Enhancement	After Enhancement
Clinker	1.386 MTPA	0.099 MTPA	1.485 MTPA
Cement	1.650 MTPA	NIL	1.650 MTPA

Raw material required for the proposed enhancement capacity will be Limestone (156 TPD), Iron ore (161 TPD), Laterite/Bauxite (121 TPD), Coal (23 TPD). Limestone will be sourced from captive

mines. Iron ore will be sourced from the Kurnool / Bethamcherla. Coal will be sourced from Indonesia / Russia / Australia. Ambient air quality monitoring was carried out at 8 locations during September 2011 to November 2011 and the data indicates the value of $PM_{2.5}$ (13.5 to $24.6\mu\text{g}/\text{m}^3$), PM_{10} (20.3 to $45.2\mu\text{g}/\text{m}^3$), SPM (95.6 to $155.5\mu\text{g}/\text{m}^3$), SO_2 (7.0 to $18.5\mu\text{g}/\text{m}^3$) and NO_x (9.0 to $20.2\mu\text{g}/\text{m}^3$). Improvement in ESP performance will be brought by reduction in dust returning from pre heater due to lower tower pressure and conversion of ESP to Bag house will reduce emission levels to meet the stipulated standard.

No additional water will be required for the capacity enhancement. Water required for the existing plant is being sourced from Penneru River. There will not be any additional water required for the clinker capacity enhancement. Water drawl permission is existing from the Irrigation Dept., Govt. of AP. There will not be any process effluent generation as closed circuit water system is being implemented and it will be followed after proposed enhancement. Zero effluent discharge system is being adopted in the existing plant. Similar practice will be followed after the proposed capacity enhancement also. The dust collected in the APCS will be recycled in to the process. Hence, there will not be any solid waste generation from the process due to the proposed enhancement. There will not be any hazardous waste generation from the process due to the proposed enhancement.

Public hearing was exempted under 7 (II) of the EIA Notification, 2006.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to stipulation of following specific conditions along with other environmental conditions:

- i. Continuous stack monitoring facilities to monitor gaseous emissions from all the stacks shall be provided. After expansion, limit of SPM shall be controlled within $50\text{ mg}/\text{Nm}^3$ by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO_x burners should be provided to control NO_x emissions.
- ii. 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.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard should be followed.
- v. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions should be regularly monitored.
- vi. Total water requirement for the capacity enhancement shall not exceed $133\text{ m}^3/\text{day}$. Efforts shall be made to further reduce water consumption by using air cooled condensers for bag house. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- vii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.

- viii. Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB.
- ix. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / reprocessors only.
- x. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
- xi. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision should be made accordingly.
- xii. As proposed, green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.
- xiii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.
- xiv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on earlier 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 at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.

Proposals for TORs

37.2.10 Establishment of 75 TPD of Sponge Iron production Unit with pre-heating technology at Sy. No. 135 & 136, Village Haraginadoni, District Bellary in Karnataka by **M/s Sri Subramanya Sponge Iron Pvt. Limited - regarding TORs**

The proponent informed that they will not be able to attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

37.2.11 Proposed Cement Plant of 3.6 MTPA Clinker, 5.5 MTPA Cement along with 100 MW Captive Power Plant at Village & Taluka Sedam, District Gulbarga in Karnataka by **M/s Reliance Cement Company Pvt. Limited - regarding TORs**

The project authorities and their consultant, M/s Vimta Labs, Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP. Cement Plants with production capacity ≥ 1.0 MTPA are covered under Category A as per para 3(b) of the Schedule of EIA notification, 2006 and appraised by the Expert Appraisal Committee (Industry-1) in the MoEF.

M/s Reliance Cement Company Pvt. Limited have proposed for Cement Plant of 3.6 MTPA Clinker, 5.5 MTPA Cement along with 100 MW Captive Power Plant at Village & Taluka Sedam, District Gulbarga in Karnataka. The land requirement is 235.0 Ha for Cement Plant and Colony out of which 33% will be developed as green belt/plantation. Additional 70 Ha has been considered for Rail Corridor, OLCB and Approach Road. The project site involves 100% Private Land. There are no habitats within the cement project site. The cost of the project is Rs. 2,600 Crores.

The main raw material, Lime Stone of 5.4 MTPA will be sourced from Captive Limestone mines (Tilkur & Hebal Mines - 5.0 MTPA) and Sanghavi Mines -0.4 MTPA). The TOR for the both the mines has been approved by EAC-Mining Committee. To evaluate cumulative impact, single EIA report

covering two mines and cement plant will be prepared. High efficiency air pollution control equipments like Bag Filters, Bag Houses and ESP will be installed in Cement plant and CPP. Fly ash and cement will be stored in silos, clinker in silo / closed stock pile and other raw material will be stored in covered shed. Automated Water sprinkling system will be provided at limestone and coal unloading hopper and handling area. The stack emission will be maintained below $< 50 \text{ mg/Nm}^3$ in the cement plant & $< 100 \text{ mg/Nm}^3$ in CPP.

Total fresh water requirement for the proposed project will be $5,300 \text{ m}^3/\text{day}$ and it will be sourced from Surface water and/or ground water. There will not be any effluent generation from the cement plant. The liquid effluent from CPP will be treated in Treatment Plant for separation of solids, oil and grease. The treated effluent would be reused for various non production areas. The plant will be designed on the basis of zero discharge concept. Air cooled condensers will be provided for CPP for water conservation. Domestic wastewater generated from Cement Plant/colony will be treated in STP and used for green belt development / Horticulture & for dust suppression. In the Cement plant, dust particles collected from various pollution control equipments will be recycled back to the process. Fly ash generated will be utilized for cement manufacturing. Solid waste generated from colony will be disposed to the local municipality after segregating the waste into biodegradable and non-biodegradable. STP Sludge will be utilized as manure for green belt development within the plant premises.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. Firm coal linkage for the Captive Power Plant.
4. A line diagram/flow sheet for the process and EMP
5. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
7. Present land use should 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 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.
9. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
10. Revised plant layout so that no natural stream passes through the project site.
11. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
12. Details and classification of total land (identified and acquired) should be included.
13. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
14. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
15. Permission and approval for the use of forest land and recommendations of the State Forest Department regarding impact of proposed expansion on the surrounding reserve forests, if applicable, should be included.
16. A list of industries containing name and type in 10 km radius shall be incorporated.
17. Residential colony should be located in upwind direction.
18. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".

19. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per ISO-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.).
20. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO_2 , Al_2O_3 , MgO , MnO , K_2O , CaO , FeO , Fe_2O_3 , P_2O_5 , H_2O , CO_2 .
21. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
22. Studies for fly ash, muck disposal, slurry, sludge material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
23. Manufacturing process details for all the cement plant, captive power plant and mine should be included.
24. Possibility of installation of WHRB will be explored and details included
25. Mass balance for the raw material and products should be included.
26. Energy balance data for all the components including proposed power plant should be incorporated.
27. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
28. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
29. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
30. Vehicular pollution control and its management plan should be submitted.
31. A write up on use of high calorific hazardous wastes from all the sources in kiln and commitment regarding use of hazardous waste should be included.
32. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
33. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
34. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
35. Air quality modeling for all the plants proposed including mine for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included. Cumulative impacts of cement plant, Captive Power Plant and mines located at a distance of 2.0 km on the ambient air quality shall be assessed.
36. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
37. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
 - i) Emissions (g/second) with and without the air pollution control measures
 - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height using SODAR) on hourly basis
 - iii) Model input options for terrain, plume rise, deposition etc.
 - iv) Print-out of model input and output on hourly and daily average basis
 - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
 - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant

- vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
 - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
 - ix) Graphs of monthly average daily concentration with down-wind distance
 - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
 - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
38. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
 39. One season data for gaseous emissions other than monsoon season is necessary.
 40. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 41. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
 42. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 43. Ground water modeling showing the pathways of the pollutants should be included
 44. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
 45. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
 46. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
 47. A note on the impact of drawl of water on the nearby River during lean season.
 48. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 49. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
 50. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
 51. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
 52. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
 53. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans.
 54. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
 55. Action plan for solid/hazardous waste generation, storage, utilization and disposal. A note on the treatment, storage and disposal of all type of solid waste should be included. End use of solid waste viz. fly ash etc. and its composition should be covered.

56. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
57. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
58. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
59. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
60. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the traveling roads should also be incorporated. All rooftops/terraces should have some green cover.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
63. Occupational health:
 - a) 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,
 - b) 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.
 - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
 - e) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
64. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
65. 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 should be detailed in the EIA report.
66. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
67. A note on identification and implementation of Carbon Credit project should be included.
68. Total capital cost and recurring cost/annum for environmental pollution control measures.
69. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.

70. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned 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 should be provided. The draft EIA/EMP report shall be submitted to the Karnataka State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP report including public hearing proceedings.

37.2.12 Manufacturing of both white and grey cement from existing grey Cement Plant at Village Andheri Deori, District Ajmer in Rajasthan by M/s Shree Cement Limited - regarding TORs

The committee noted that the existing unit did not require environmental clearance at that time and hence, environmental clearance was not obtained. As requested by the proponent, the committee recommended that MoEF may inform the proponent to approach SPCB since no EC was accorded by MoEF for the existing unit.

37.2.13 Expansion from 400 TPD DRI Plant to 0.24 MTPA Integrated Steel Plant and 21 MW Captive Power Plant at Village Budhakhap, Karma, Tehsil Mandu, District Ramgarh in Jharkhand by M/s Alope Steels Industries Private Limited - regarding TORs

The project authorities and their consultant, M/s Visiontek Consultants, Bhubaneswar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP. All the steel plants are listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Alope Steels Industries Pvt. Ltd. have proposed for the expansion of existing DRI unit of 4 x 100 tons (Sponge Iron – 1,20,400 TPA) to 0.24 MTPA integrated steel plant and 21 MW CPP by addition of units at Village Budhakhap, Karma, Tehsil Mandu, District Ramgarh in Jharkhand. The project site is located at a distance of 6 km (Approx.) from the severely polluted area, Ramgarh. Total 75 acres (existing 50 acres and additional 25 acres) land is required out of which 53.41 acres of land has been acquired and rest is under acquisition. Existing green belt is of 10.5 acres and green belt will be developed in a total area of 26 acres. No rehabilitation and resettlement is involved. No national parks/wild life sanctuary/reserve forests are located within 10 km radius. Total cost of the project after expansion will be Rs. 370.19 crores. Rs. 20.36 crores and Rs. 4.0 crores are earmarked towards capital cost and recurring cost per annum against pollution control measures.

Following configuration is proposed:

Sl. No.	Unit	Existing Capacity	Expansion	Total Capacity
1.	DRI Kiln	1,20,400 TPA (4x100 TPD)	----	1,20,400 TPA
2.	Sinter Machine	-----	85,100 (2x6 Sq.M)	85,100 TPA
3.	Mini Blast Furnace	-----	1,00,000 (2x65 Cu.M)	1,00,000 TPA

4.	Electric Arc Furnace (EAF)	-----	2,40,000 (2x30T with 2 billet caster)	2,40,000 TPA
5.	WHRB & CFBC	-----	21 MW (8MW WHRB and 13MW FBC)	21 MW
6.	Rolling Mill	-----	1,27,500TPA (7 Stands)	1,27,500 TPA

The committee recommended replacing 2X65 m³ BF with a higher capacity BF and was agreed by the proponent. Raw material requirement for expansion will be – Sponge Iron (1,20,400 TPA) manufactured in-house and 90,300 TPA from outside, Iron ore lumps (85,100 TPA), Iron ore fines (78,700 TPA), Scrap (15,520 TPA), Limestone (25,200 TPA), coal (74,000 TPA), coke & coke fines (71,900 TPA), and other fluxing and alloying agents will be used as raw materials. No charcoal will be used as reducing agent or in any other process. All the dolochar (31,200 TPA) generated will be used in-house in FBC furnace of captive power plant. Power (27 MW in final phase) will be sourced from CPP (21 MW) and JSEB (6 MW).

Electrostatic precipitator (ESP), bag filters and dust collectors will be provided for air pollution control. Pulse jet bag filters will be provided to steel melting shop (SMS) and ESP will be provided to captive power plant. Bag filters will be provided in coal crushing and coal handling area of FBC based power plant as well as blast furnace raw material handling area. Dust extraction system such as dust cyclones, bag filters etc. will be provided at all transfer points, conveyor points, crushing and screening units, storage building etc. Dust suppression comprising of spray nozzles, piping network & pump would be provided.

Make up water requirement of 320m³/hr will be met from River Damodar for which necessary permission has been obtained. Closed circuit recycle system will be adopted in the proposed plant. The wastewater generated from the power plant will be used for ash quenching, sprinkling in the coal yard and dust suppression. Treated wastewater from SMS and CCM will be recycled for washings and dust suppression etc. Guard pond will be provided for aeration and dosing of pH corrective. Neutralizing pit for the treatment of DM Plant regeneration will be provided. The treated water will be recycled for plant use and horticulture application. Domestic effluent will be routed to a STP and the treated effluent will be used for green belt development. No effluent will be discharged and zero discharge will be adopted.

Dust from Sinter Plant will be reused. The slag, dust from APC devices and scrap of EAF will be safely disposed on land, used for road construction and reused in furnace respectively. The slag from MBF will be grinded, granulated & supplied to cement plant and the dust & sludge from gas cleaning will be reused in sinter plant. Fly ash from CPP will be used for manufacture of fly ash bricks & cement industries and bottom ash will be used for filling low lying areas. Waste/used/spent oil and used batteries will be sold to authorized recyclers / re-processors.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project
2. The proposed 2X65 m³ BF shall be replaced with a higher capacity BF
3. Photographs of the existing and proposed plant area.
4. Compliance to the conditions stipulated for existing capacity in the environmental clearance and NOC obtained from the SPCB.
5. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
6. 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, compliance to the notice(s)
7. A line diagram/flow sheet for the process and EMP
8. Coal linkage documents
9. A copy of the mutual agreement for land acquisition signed with land oustees.

10. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
11. Present land use should 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 should be used for land used/land-cover mapping of the area.
12. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
13. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
14. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
15. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
16. Details and classification of total land (identified and acquired) should be included.
17. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
18. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
19. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
20. A list of industries containing name and type in 25 km radius should be incorporated.
21. Residential colony should be located in upwind direction.
22. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
23. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included..
24. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
25. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
26. Action plan for excavation and muck disposal during construction phase.
27. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
28. Manufacturing process details for all the plants should be included.
29. Mass balance for the raw material and products should be included.
30. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
31. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
32. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
33. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected.

The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

34. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
35. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
36. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
37. Air quality modeling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm³.
38. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
39. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
 - i) Emissions (g/second) with and without the air pollution control measures
 - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
 - iii) Model input options for terrain, plume rise, deposition etc.
 - iv) Print-out of model input and output on hourly and daily average basis
 - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
 - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
 - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
 - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
 - ix) Graphs of monthly average daily concentration with down-wind distance
 - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
 - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
40. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
41. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
42. One season data for gaseous emissions other than monsoon season is necessary.
43. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
44. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
45. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
46. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
47. Ground water modeling showing the pathways of the pollutants should be included
48. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.

49. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
50. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
51. A note on the impact of drawl of water on the nearby River during lean season.
52. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
53. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
54. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
55. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
56. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
57. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
58. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans.
59. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
60. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
61. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. needs to be addressed.
62. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.
63. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
64. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
65. 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. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
66. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
67. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
68. Occupational health:
 - a) 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,

- b) 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.
 - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
69. 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.
 70. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
 71. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
 72. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
 73. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
 74. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
 75. A note on identification and implementation of Carbon Credit project should be included.
 76. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned 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 should be provided. The draft EIA/EMP report shall be submitted to the Jharkhand State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

37.2.14 Expansion of 3x100 TPD DRI Plant with additional 1x12MVA (20,000 TPA) Ferro Alloy Plant and 18 MW Captive Power Plant (WHRB- 6 MW & FBC- 12 MW) at Village Hehal, Barkakana, Tehsil Mandu, District Ramgarh in Jharkhand by M/s Maa Chhinnmastika Cement and Ispat Private Limited - regarding TORs

The project authorities and their consultant, M/s Visiontek Consultants, Bhubaneswar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP. All the ferro alloy plants are listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Maa Chhinnmastika Cement and Ispat Pvt. Limited have proposed for the expansion of existing DRI unit of 3 x 100 TPD (Sponge Iron – 90,300 TPA) by addition of 1x12MVA Ferro alloys unit to produce 20,000TPA of HC Ferro-Manganese and 18 MW CPPat Village Hehal, Barkakana, Tehsil

Mandu, District Ramgarh in Jharkhand. The project is located at a distance of 10 km from the severely polluted area, Ramgarh. Total project area is 35 acres (existing 32.6 acres and additional 2.4 acres) and Green belt will be developed in 34% area i.e 12 acres. No rehabilitation and resettlement is involved. No national parks/wild life sanctuary/reserve forests are located within 10 km radius. Total cost of the project after expansion will be Rs. 139.36 crores. Rs. 5.6 crores and Rs. 1.1 crores are earmarked towards capital cost and recurring cost against pollution control measures.

Following is the existing and proposed project configuration:

Facilities / Products	Quantity (TPA)
Existing	
Sponge Iron (through DRI Kiln)	90,300
Proposed	
Ferro Alloys (Fe-Mn, through 1x12MVA SAF)	20,000
Power (through WHRB & AFBC)	18 MW (6MW WHRB & 12MW FBC)

Raw material requirement for expansion will be – Mn ore (52,000 TPA), Coke (10,000 TPA), Dolomite (3,500 TPA), Quartz (3,500 TPA), Coal (48,000 TPA) and Dolochar (24,200 TPA). Waste heat of DRI flue gases will be used in WHRB. Power requirement of 18 MW will be sourced from CPP. Electrostatic precipitator (ESP), bag filters and dust collectors will be provided for air pollution control. Pulse jet bag filters will be provided to Ferro alloys (SAF) plant. ESP will be provided to captive power plant. Bag filters will be provided in coal crushing and coal handling area of FBC based power plant. Dry fog as well as water sprinkling will be provided at feeding point, transfer point and proportioning system to control fugitive emissions from raw material handling section.

Make up water requirement of 160 m³/hr (existing 26 m³/hr and additional 134 m³/hr) will be met from River Damodar for which necessary permission will be obtained. Closed circuit recycle system will be adopted in the proposed plant. The wastewater generated from the power plant will be used for ash quenching, sprinkling in the coal yard and dust suppression. Treated wastewater will be recycled for washings and dust suppression etc. Guard pond will be provided for aeration and dosing of pH corrective. Neutralizing pit for the treatment of DM Plant regeneration will be provided. The treated water will be recycled for plant use and horticulture application. Domestic effluent will be routed to a STP and the treated effluent will be used for green belt development. No effluent will be discharged and zero discharge will be adopted.

The Fe-Mn slag will be sold to Si-Mn manufacturing plants and the APC dust will be reused in the process. Fly ash from CPP will be used for manufacture of fly ash bricks & cement industries and bottom ash will be used for filling low lying areas. Waste/used/spent oil and used batteries will be sold to authorized recyclers / re-processors.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project.
2. Photographs of the existing and proposed plant area.
3. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
4. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. 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, compliance to the notice(s)
6. A line diagram/flow sheet for the process and EMP
7. Coal linkage documents

8. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
9. A site location map on Indian map of 1:10,00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should 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 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
12. A list of industries within 10 km radius of the plant area.
13. Details and classification of total land (identified and acquired) should be included.
14. Project site layout plan to scale using AutoCAD showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
15. List of raw material required, Chemical analysis of all the raw materials including Trace Elements and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
16. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included.
17. Mass balance for the raw material and products should be included.
18. Energy balance data for all the components of ferro alloy plant should be incorporated.
19. Design details of Ferro Alloy Plant and manufacturing process details should be included.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out including cumulative Impact of the surrounding industries.
22. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
23. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
24. Air quality modeling for ferro alloy plant for specific pollutants needs to be done. APCS for the control of emissions should also be included to control emissions within 50 mg/Nm³.
25. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
26. Air Quality Impact Prediction Modeling based on ISCST-3 or the latest models.
27. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
28. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
29. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
30. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
31. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
32. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.
33. A note on the impact of drawl of water on the nearby River during lean season.
34. Action plan for rainwater harvesting measures.

35. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
36. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
37. Pretreatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.
38. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
39. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included. Land filling is not allowed.
40. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
41. Provision of Toxic Chemical Leachability Potential (TCLP) test for the slag and its end use should be included.
42. Commitment that no Ferro chrome will be manufactured without prior approval of the Ministry.
43. Action plan for the green belt development plan in 33 % area should be included.
44. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
45. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
46. Occupational health:
 - a) 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,
 - b) 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.
 - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
47. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
48. Total capital cost and recurring cost/annum for environmental pollution control measures should also be included.
49. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
50. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned 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 should be provided. The draft EIA/EMP report shall be submitted to Jharkhand State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

37.2.15 Expansion of existing 100 (2 X 50) TPD cement grinding unit by installation of 400 (4x100) TPD cement grinding unit at Village Chalbalpur, Chittaranjan Road, P.O. Sitarampur, P.S. Kulti, District Burdwan in West Bengal by M/s Sanjay Intra Limited - regarding TORs

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the proposed Terms of References for preparation of EIA/EMP report. The stand alone cement grinding units are covered under Category 'B' as per para 3(b) of the Schedule of the EIA notification 2006, but due to location of critically polluted area within 10 km radius of the project site, the proposal was considered as a Category "A" Project and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Sanjay Intra Limited has proposed for expansion of existing 100 (2 X 50) TPD cement grinding unit by installation of 400 (4x100) TPD cement grinding unit at Village Chalbalpur, Chittaranjan Road, P.O. Sitarampur, P.S. Kulti, District Burdwan in West Bengal. The project area is 3.43 acres of which green belt will be developed on 1.14 acres. No national park/wild life sanctuary is located within 10 km radius. River Damodar flows at a distance of 4.9 km from the project site. Total cost of the project is Rs. 4.0 Crores.

The existing production capacity of Portland Cement is 22,500 TPA and that proposed is 1,32,000 TPA. Clinker, Slag and Gypsum are the raw materials that will be used. Total power requirement is 900 KVA (Existing 200 KVA and Expansion 700 KVA), which shall be sourced from WBSEB. Reverse pulse jet bag filters and cyclone separators shall be provided to control the PM emissions. Total water requirement for the project (only domestic and green belt development) will be 3.5 m³/day (Existing 0.39 m³/day & Additional 3.11 m³/day), which shall be met from Kulti Municipality. There is no generation of process wastewater. Roof top rain water harvesting would be developed.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project.
2. Photographs of the existing and proposed plant area.
3. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
4. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. 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, compliance to the notice(s)
6. A line diagram/flow sheet for the process and EMP
7. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
8. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
9. Present land use should 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 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
10. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
11. A list of industries within 10 km radius of the plant area.
12. Details and classification of total land (identified and acquired) should be included.
13. Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.

14. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
15. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included.
16. Mass balance for the raw material and products should be included.
17. Energy balance data for all the components of plant should be incorporated.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
20. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
21. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
22. Air quality modeling for specific pollutants needs to be done. APCS for the control of emissions should also be included to control emissions within 50 mg/Nm³.
23. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
24. Air Quality Impact Prediction Modeling based on ISCST-3 or the latest models.
25. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
26. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
27. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
28. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
29. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
30. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.
31. A note on the impact of drawl of water on the nearby River during lean season.
32. Action plan for rainwater harvesting measures.
33. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
34. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
35. Pretreatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.
36. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
37. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included.
38. Action plan for the green belt development plan in 33 % area should be included.
39. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
40. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
41. Occupational health:
 - a) 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,
- b) 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.
 - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
42. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
 43. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
 44. Total capital cost and recurring cost/annum for environmental pollution control measures should also be included.
 45. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned 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 should be provided. The draft EIA/EMP report shall be submitted to the West Bengal Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

Any Other Item

37.2.16 Proposed Integrated Steel Plant (BF & DRI)- 8,30,000 T.P.A., Steel Melting Shop (Ingot, Billets Blooms & Slab)- 7,50,000 TPA Sinter Plant- 6,27,000 T.P.A., Rolled Products / Rolling Mill - 6,90,000 T.P.A., High grade Iron ore Beneficiation and Pelletisation (with Iron Ore beneficiation) – 7,50,000 T.P.A., Oxygen Plant – 1,000 m³/ hr, Coke Oven Battery (Non recovery type) - 3,70,000 T.P.A., Ferro Alloys – 17,500 T.P.A., Fly Ash Based Products – 3,61,000 T.P.A., Coal Washery -12,00,000 T.P.A.& Power Plant- (80 MW-AFBC, 40 MW-WHRB) 120 MW at Villages Kopedih and Anjora, District Rajnandgaon in Chhattisgarh by **M/s Vandana Ispat Limited- regarding amendment in environmental clearance**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/1172/2007-IA II (I), dated 8.10.2010. The PP has requested for amendment in the above EC for clubbing the iron ore pelletization&sintering facilities without increasing the overall production capacity and split the iron ore beneficiation capacity from the pelletization capacity as granted in the EC. The PP has also made a presentation before the committee.

The above environmental clearance was accorded for 6.27 lakhs TPA sinter plant and 7.5 lakhs TPA pellet plant& beneficiation plant. It was submitted that the minimum economic module of pelletization plant has been found to be 1.2 MTPA. The pellets being in the shape of balls, are not suitable for charging 100% in Blast Furnace (BF), looking into the possibilities of slippage, therefore, it is recommended to charge in a smaller portion along with sinter. Hence, some sintering is also required. In sponge iron manufacturing, 100% pellets will be used and in the BF, mix of pellets & sinter will be used. In the original application for environmental clearance, it was assumed that, only pellets will be used in

the DRI kiln and only sinter will be used in the BF. Therefore, those capacities were proposed. The pelletization of iron ore requires lesser energy than sintering and relevant documents in this regard were also enclosed. There would be no increase in the raw material requirement and no additional impacts on the environment. There would be no increase in the iron ore beneficiation plant capacity as the balance iron ore fines of suitable grade is available and will be sourced from NMDC/Barbil area mines/captive mines.

Following will be plant configuration after proposed amendment

Iron ore Pelletization/Sinter Plant: 13.77 lakhs TPA

Iron ore beneficiation Plant: 7.5 lakhs TPA

The committee noted that there is no increase in the production capacity & pollution load, there would be decrease in energy requirement and hence, recommended for the above amendment in the environmental clearance dated 8.10.2010 subject to the environmental safeguards.

37.2.17 Integrated Iron & Steel Plant (4.0 MTPA) with Captive Power Plant (4x100 MW) at Kujang, Near Paradip, Jagatsinghpur, Orissa by M/s POSCO India – Orissa Pvt. Ltd. – regarding Revalidation of Environmental clearance

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/285/2007-IA II (I), dated 19.7.2007. The PP has requested MoEF for extension of validity of EC for 5 years. The PP has also made a presentation before the committee.

It was submitted that, due to delay in land acquisition and law & order situation, the construction activities could not be started. However, now the situation has considerably improved as a result of continuous communication of POSCO-India and Odisha Govt. with the locals and other stakeholders. The Odisha Govt. is in the process of transferring encroachment free Govt. land to POSCO-India.

The EAC recommended revalidation of the environmental clearance granted to M/s POSCO India Pvt. Ltd. with due regard to the observations recorded as to meeting held on 13th and 14th December 2010 whereat the comprehensive EIA prepared by the POSCO India Pvt. Ltd. consequent to the original environmental clearance accorded on 19.7.2007 was considered.

37.2.18 Expansion of Steel Plant (2.2 MTPA to 2.8 MTPA) at P.O. Lapanga, Village Thekoloji, Tehsil Rengali, District Sambalpur in Orissa by M/s Bhushan Power & Steel Limited - regarding amendment in environmental clearance

The above proposal was considered and discussed in the 36th Meeting of the Expert Appraisal Committee (Industry-1) held during 24th & 25th May, 2012. The discussion and deliberations on the subject matter could not be completed and it was decided that the matter shall be taken up in the next meeting. The committee has also sought a detailed comparative pollution load of various parameters due to the proposed reconfiguration.

The PP and their consultant, M/s MECON, Ranchi have made a detailed presentation before the committee. Following are the details of reconfigured facilities proposed to be installed:

Sl. No.	Plant Units	Environmental Clearance Granted	Proposed Reconfiguration	Final Plant Configuration
1	Coal Washery	(1x1.0)+(1x3.5) MTPA	No Change	(1x1.0)+(1x3.5) MTPA
2	Ore Beneficiation Plant	(1x1200) TPH	No Change	(1x1200)TPH
3	Pallet Plant	(1x3.50) MTPA	No Change	(1x3.50) MTPA
4	DRI Kilns	(14x500) TPD	No Change	(14x500) TPD
5	Sinter Plant	(1x105)+(1x60)m ²	1x105 m ² in operation. The capacity of new	(1x105)+(1x204) m ²

			Sinter Plant will be of 204 m ² instead of 60 m ²	
6	Coke Oven	(2x0.45)MTPA (Non Recovery Type)	No Change	(2x0.45) MTPA (Non Recovery Type)
		(1x0.70)MTPA (Recovery Type)	New recovery type coke oven shall be of capacity 1.0 MTPA with 94 ovens of 5.5 m tall instead of 0.70 MTPA	(1X1.0) MTPA (Recovery Type)
7	Blast Furnace	(1x1008)+(1x550)m ³	(1x1008) m ³ Blast Furnace in operation. The new Blast Furnace shall be of 2015 m ³ instead of 550 m ³	(1x1008)+(1x2015) m ³
8	SMS			
a)	EAF (Electric Arc Furnace)	(4x90)+(2x100)T	The 4x90 T furnaces will be modified to 4x100 T & 2x 100 T shall remain same.	(6x100)T
b)	LF (Ladle Furnace)	(4x90)+(2x100)T	The 4x90 T furnaces will be modified to 4x100 T & 2x100 T shall remain same.	(6x100)T
c)	VD (Vacuum Degasser)	---	New 2x100T VD is proposed	(2x100)T
d)	IF (Induction Furnace)	4x15T	No Change	(4x15) T
e)	AS (Alloy Smelter)	4x16 MVA	No Change	(4x16) MVA
f)	Billet Caster	(1x2)+(1x4)+(1x5) Strand	Additional new (1x4) strand is proposed	(1x2)+(2x4)+(1x5) Strand
g)	Bloom Caster	---	(1x2) Strand new bloom caster is proposed.	(1x2) strand
h)	Thin Slab Caster	(2x1) Strand	No Change	(2x1) Strand
9	CSP (Hot Rolling Mill)	1.8 MTPA	No Change	1.8 MTPA
10	Wire & Rod Mill	0.45 MTPA	No Change	0.45 MTPA
11	Heavy Bar & Rod Mill	0.55 MTPA	No Change	0.55 MTPA
12	Pipe & Tube Mill	0.20 MTPA	No Change	0.20 MTPA
13	Cold Roll Mill	1.00 MTPA	No Change	1.00 MTPA
14	Galvanising / Galvolume Unit	0.50 MTPA	No Change	0.50 MTPA
15	Colour Coating Unit	0.45 MTPA	No Change	0.45 MTPA
16	Oxygen Plant	(1x400)+(1x660) TPD	No Change	(1x400)+(1x660) TPD
17	Lime Plant	(3x300)TPD	Additional 1x600 TPD Lime Plant is proposed.	(3x300)+(1x600) TPD
18	Dolo Plant	(1x300)+(1x100) TPD	No Change	(1x300)+(1x100) TPD
19	Captive Power Plant	560 MW	No Change	560 MW
20	Cement Plant	1.0 MTPA	No Change	1.0 MTPA

The various technological advantages of the proposed new units such as Emission Optimized Sintering (EOS) – Closed Hood sintering bed, emission control system mounted on coal charging and coke pushing car with stand alone bag filter, Hot Blast Temperature leading to reduction of emission etc. were highlighted. The comparative pollution load of various parameters due to the proposed reconfiguration was presented. There would be decrease in emission load w.r.t PM, SO₂ and NO_x and the GLCs after proposed reconfiguration are within the limits. The water requirement and wastewater generation would increase marginally, but zero discharge would be maintained. There would be decrease in the solid waste from DRI plant and increase from BF, sinter plant, coke oven plant etc. but, shall be recycled/reused.

The committee noted that there is no increase in land requirement, no additional raw water to be drawn from the source, the additional power requirement will be met from the existing CPP, there is decrease in air pollution load, zero discharge of wastewater & recycle/reuse of the solid waste and hence, recommended for the above amendment in the environmental clearance dated 2nd April, 2010 subject to the environmental safeguards.

The proponent informed the committee, that the total project area was inadvertently mentioned as 1300 acres in the environmental clearance dated 2nd April, 2010, whereas in all the documents submitted by the proponent, it was clearly mentioned that the company will acquire 735 acres land for the expansion and have submitted the copy of letter issued by the State Govt. in this regard along with the layout of the Plant. Hence, it was requested to amend the total project area as 2035 acres (1300 + 735). After perusal of the project file, the committee also recommended for the above amendment.

37.2.19 Proposed Mini Steel Plant (Sponge Iron- 90,000 TPA; MS Billets/ ingots -1,50,000 TPA; Iron Ore Beneficiation and Pellet plant - 3,00,000 TPA) along with Captive Power Plant (12 MW : WHRB-6 MW and FBC - 6 MW)) at Villages Hiradahallu & D.Hirehal, Mandal D.Hirehal, District Ananthapur, Andhra Pradesh by M/s. Ghanasai Ispat Private Limited- regarding Change in Configuration

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/142/2010-IA II (I) dated 31st October, 2011. The PP has requested MoEF for amendment in the above EC for replacement of 1 x 100 TPD Rotary Kiln with 1 x 100 TPD through Tunnel Kiln technology for manufacturing Cold Briquetted Iron (CBI) of 30,000 TPA. The remaining 2 x 100 TPD kilns will be Rotary Kilns for manufacturing Sponge Iron of 60,000 TPA. The PP and their environmental consultant, M/s Pioneer Enviro Laboratories & Consultants Pvt. Ltd., Hyderabad have also made a presentation before the committee.

The following is the project configuration for which the EC was accorded.

S.No.	DETAILS	CONFIGURATION	PROPOSED CAPACITY
1	Beneficiated Iron Ore & Pellet plant	1 x 3,00,000 TPA	3,00,000 TPA
2.	Sponge Iron	3 x 100 TPD	90,000 TPA
3.	M.S. Billets/Ingots (IF and CCM)	3 x 15 MT	1,50,000 TPA
4	Power	WHRB	6 MW
		FBC	6 MW
			12 MW

The total production capacity of sponge iron and cold briquetted iron will be 90,000 TPA. The stack height requirement of the 100 TPD Tunnel Kiln is 41.5 m and a stack height of 50 m would be provided. The comparative environmental load of both scenarios is as follows:

S.No.	Parameter	As per EC accorded (3 x 100 TPD Rotary kilns)	Present proposal 1x 100 TPD Tunnel Kiln & 2 x 100 TPD Rotary Kilns	Reduction with present proposal

1	Air Environment PM emission	1.3 g/s	1.17 g/s	10 %
2	Water requirement	150 KLD	100 KLD	50 KLD (33% Reduction)
3	Wastewater	Nil	Nil	Nil
4	Solid waste	Char – 27,000 TPA	Char – 24,900 TPA	2,100 TPA (7.7 % Reduction)

Following will be plant configuration after proposed amendment

S.No.	DETAILS	CONFIGURATION	PROPOSED CAPACITY
1.	Beneficiated Iron Ore & Pellet plant	1 x 3,00,00 TPA	3,00,000 TPA
2.	Sponge Iron Cold Briquetted Iron	2 x 100 TPD 1 x 100 TPD	60,000 TPA 30,000 TPA
3.	M.S. Billets/Ingots	3 x15 MT	1,50,000 TPA
4.	Power	WHRB FBC	6 MW 6 MW
			12 MW

The committee noted that there is no increase in the production capacity, there is decrease in pollution load, water requirement etc. and hence, recommended for the above amendment in the environmental clearance dated 31st October, 2011 subject to the environmental safeguards.

37.2.20 Proposed 0.7 MTPA Alumina refinery Complex along with 30 MW Co-generation power plant at Villages Talaanchalbadi, Baraja, Raikona, Lekhpai, Mandaput, Deulaguma, Seriguma, Balapai, Kaskadango, Dumapai, Lamberi in Rayagada District in Orissa **M/s RSB Metal Tech Pvt. Limited - regarding extension of validity in TORs**

The above proposal was accorded ToRs by MoEF vide letter no. J-11011/559/2009-IA II (I) dated 29.4.2010. The PP vide letter dated 12.4.2012 has requested MoEF for extension of validity of ToRs for submitting the EIA report. The PP and their environmental consultant, M/s Vimta Labs, Hyderabad has also made a presentation before the committee.

It was informed that the EIA report was submitted to SPCB on 17.9.2010. The public hearing was scheduled for 24.8.2011 and 27.10.2011, but could not be conducted due to law & order problems. The main issue of protesting villagers is regarding the land acquisition, which has been taken up with the District Administration for amicable solution.

After detailed deliberations, the committee recommended the extension of validity of ToRs for a period of 1 year with prescription of latest additional ToRs.

37.2.21 Enhancement in the capacity of Cement from 1.58 MTPA to 4.33 MTPA, clinker from 0.76 MTPA to 2.00 MTPA and Captive Power Plant from 25 MW to 50 MW at Jamul Cement Works, Village Jamul, Taluk Jamul, District Durg in Chhattisgarh by **M/s ACC Limited - regarding amendment in Environmental Clearance**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/251/2008-IA II (I) dated 13th May, 2009. Vide letter dated 28th May, 2012, the PP has requested MoEF for amendment in the above EC for change in project configuration i.e. increase in the clinker production and decrease in the cement production & CPP capacity. The PP and their environmental consultant, M/s B.S. Envi-Tech Pvt. Ltd., Hyderabad have also made a presentation before the committee.

It was submitted that, as per the technology & equipment supplier, the 2.0 MTPA capacity kiln has the potential to produce 3.0 MTPA with the following changes in clinkerisation.

1. Increasing the RPM of the Kiln
2. Increase in the surface area by increasing the number of chambers in the cooler
3. Six stage pre-heater will be converted to Low pressure cyclones
4. Improvement in the efficiency and capability of upstream and downstream auxiliaries.
5. Low NOx burner for Kiln for reduction of NOx emissions.

The following amendment is requested:

	As per EC letter		Amendment in EC requested
	Existing	EC granted	
Clinker production , MTPA	0.76	2.00	3.00
Cement production (PSC, PPC), MTPA	1.58	4.33	1.50
Captive Power Plant, MW	25	50	25

The key changes in environmental parameters due to the above modification would be as follows:

S.No	Parameter		For EC Granted	After Amendment	Change in %
1	Energy Consumption,	kwh/t of cement	70	65	↓ 7.1
		kwh/t of Clinker	82	75	↓ 8.5
2	Specific Heat Consumption	kcal/kg of clinker	730	717	↓ 2.3
3	Water Consumption, m ³ /day		5100	3600	↓ 29.4
4	Wastewater generation, m ³ /day		1058	686	↓ 35.1
5	Solid Waste generation, t/day		462	231	↓ 50.0
6	Air Emissions, Kg/hr	Particulate Matter	106.8	94.53	↓ 11.4
		Sulphur Dioxide	522.65	402.84	↓ 23.0
		Oxides of Nitrogen	1082.88	752.04	↓ 30.0
7	Incremental Ground Level Concentrations (ug/m ³)	Particulate Matter	4.6	3.03	↓ 34.0
		Sulphur Dioxide	15.69	9.18	↓ 41.0
		Oxides of Nitrogen	21.07	12.09	↓ 42.6

Note: ↓ decrease ↑ increase

There is no change in the project area and the project cost would increase from Rs 1,120 crores to Rs 1,800 crores. The reduction in GLCs due to reduction of pollution load is as follows:

24-Hourly Concentrations	EC Granted			Amendment in EC requested		
	Suspended Particulate Matter (SPM)	Sulphur Dioxide (SO ₂)	Oxides Of Nitrogen (NOx)	Suspended Particulate Matter (SPM)	Sulphur Dioxide (SO ₂)	Oxides Of Nitrogen (NOx)
Baseline Scenario (98 th percentile) max	176	17.5	19.1	176	17.5	19.1
Predicted Groundlevel Concentration (Max)	4.60	15.69	21.07	3.03	9.18	12.09
Overall Scenario	180.6	33.19	40.17	179.03	26.68	31.19

(worst case)						
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The committee noted that there is decrease in pollution load, water requirement, energy consumption etc. and hence, recommended for the above amendment in the environmental clearance dated 13th May, 2009 subject to the environmental safeguards.

37.2.22 Expansion of Steel (Hot Metal 4,00,000 MTPA to 7,00,000 MTPA, Rolled product, 185,000 MTPA to 3,00,000 MTPA) at Hospet Road, Ginigers, Koppal, Karnataka by M/s Kalyani Steels Limited - regarding amendment in Environmental Clearance

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/172/2007-IA II (I) dated 27th September, 2007. Vide letter dated 21st May, 2012, the PP has requested MoEF for amendment in the above EC for setting up of Sinter Plants in the existing unit. The PP has also made a presentation before the committee.

It was submitted that, due to the scarcity of calibrated iron ore in the market arising out of the ban on mining in the Districts of Bellary, Chitradurga and Tumkur in Karnataka, they are unable to source calibrated iron ore. To utilize the iron ore fines, it is proposed to set up sinter plants of 1 MTPA (in 2 phases of 0.5 MTPA) in the existing steel plant. The hot metal capacity and rolling capacity shall remain with the approved limits only as sintering is an intermediate step for use of iron ore fines. The recycled water from power plant blow down will be used for the sinter mix and no additional water drawl is required. No additional land is required. The transport of iron ore fines would be through covered conveyor belts with dedusting systems at transfer points, two ESPs will be installed to control the emissions and the dust from APCD will be reused in the sinter plant. The benefits due to the sintering like usage of coke and iron ore fines, reduction in consumption of coke were also elaborated.

The committee has sought a detailed comparative pollution load of various parameters due to the proposed inclusion of sinter plant and the technical/environmental friendly features of sinter plant vis-à-vis the latest benchmarks of the same for sinter plant.

37.2.23 Expansion of Ferro Alloy Plant (Fe-Si: 7200 TPA; Si-Mn: 17,640 TPA; Fe-Mn: 22320 TPA), Pig Iron (25440 TPA), Ferro Chrome (16200 TPA) at Sy. No. 515/A, 516/A, 521 & 523, Bhimaraopally Road, Village Reddipally, Mandal Chegunta, District Medak in Andhra Pradesh by M/s GSN Ferro Alloys Pvt. Limited- regarding amendment in environmental clearance

The proponent informed that they will not be able to attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

37.2.24 Proposed Cement Plant at Village Jamunanagar, Tehsil Umrangshu, North Cachar Hills in Assam by M/s Calcom Cement India Limited – regarding extension of validity

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/307/2006-IA II (I) dated 26th July, 2007. Vide letter dated 24th May, 2012, the PP has requested MoEF for extension of validity of EC for 5 years. The PP has also made a presentation before the committee.

It was submitted that, due to major insurgency activities in the area, non availability of the sanctioned power from the State Electricity Board, financial constraints as well as transfer of New Umrangshu Mining Lease (417.5 ha), Tehsil Umarangshu, District Dima Hasao (North Cachar Hills) from Assam Industrial Development Corporation Ltd. (AIDC) to M/s. Calcom Cement India Limited, the project has been delayed. It was also submitted that, M/s Dalmia Cements Ltd. has entered into an agreement with the PP to purchase 50% stake in equity. A letter from M/s Dalmia Cements Ltd. in this regard and requesting for extension in validity of EC was submitted.

After detailed deliberations, the committee recommended the extension of validity of environmental clearance by a period of five years subject to the environmental safeguards.

37.2.25 Expansion of Ferro Alloy Plant (Submerged Arc Furnace 4x16.5 MVA (existing): 1x33 MVA (Proposed) along with Captive Power Plant (67.5 MW) at Kalinganagr Industrial Complex (Growth Centre), Village : Kanchrigaon & Chandia, Mouza Duburi, Tehsil Sukinda, District Jajpur, Orissa by **M/s Rohit Ferro-Tech Limited**. - **regarding change in product mix i.e. production of ferro chrome apart from producing ferro alloys (Ferro manganese, Silico-manganese and ferro silicon) within the approved production capacity**

The Ministry had earlier accorded environmental clearance to M/s. Rohit Ferro Tech on 30th September, 2010 for production of ferro alloys i.e. 35947 TPA of ferro manganese, 25.426 TPA of Silico manganese and 23.833 TPA of ferro silicon.

The proponent requested the Ministry that they are planning to use the raw material i.e. chromite ore by producing ferro chrome apart from producing ferro alloys whenever it is required within the approved capacity by using 33 MVA furnace. The chrome will be recovered from the slag before sending to common hazardous waste disposal facility after carrying TCLP test. In the existing 4x16.5 MVA sub-merged arc furnace, SPCB has given NOC for disposal of slag in the disposal site subject to condition that the ground water near the disposal site of slag shall be analyzed with respect to soluble chromium.

The Expert Appraisal Committee, therefore, recommended for change in the product mix due manufacturing of ferro chrome within the approved capacity subject to following conditions:

- i. The company shall recover ferro chrome from the ferro chrome slag. The remaining slag shall be disposed of in the waste disposal site after carrying TCLP test.
- ii. The ground water quality monitoring around the disposal site shall be regularly monitored and the results of the monitored data shall be submitted to the SPCB and to the RO of the Ministry.
- iii. The trucks carrying the slag shall be covered with tarpaulin.

15th June, 2012

Proposals for Environmental Clearance

37.3.1 Expansion from 3.0 MTPA to 5.0 MTPA Integrated Steel Plant along with installation of Pellet Plant - 4.0 MTPA and 300 MW Captive Power Plant at Geethapuram, Village Dolvi, Tehsil Pen, District Raigarh in Maharashtra by **M/s JSW Ispat Steel Limited (formerly M/s Ispat Industries Limited)** - **regarding Environmental Clearance**

The project authorities and their consultant, M/s MECON Limited, Ranchi gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 22nd Meeting of the Expert Appraisal Committee (Industry-1) held during 18th & 19th April, 2011 and the additional ToRs prescribed by MoEF on 17.1.2012 for preparation of EIA/EMP. All the Integrated Steel Plants are listed at S. No. 3 (a) as Primary Metallurgy Industries under Category A of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MOEF.

M/s JSW Ispat Steel Limited have proposed to expand its existing integrated steel plant capacity from 3.0 MTPA to 5.0 MTPA along with installation of Pellet Plant - 4.0 MTPA and 300 MW gas based CPP at Geetapuram, Dolvi, Tehsil Pen, Dist. Raigad, Maharashtra. The expansion will be carried out within the existing plant premises of 1,200 acres and green belt will be developed in additional 64 ha. No ecologically sensitive area such as National Park/Wild Life Sanctuary / Biosphere Reserve/Habitat for migratory birds, archeological site, defense installation etc. is located within 10 km radius of the project site. Four Reserve Forests exist in the study area. Total cost of the proposed expansion project is Rs. 9,000 Crores and Rs. 450 Crores & Rs. 67.5 Crores/Annum will be earmarked towards total capital cost and recurring cost for environmental pollution control measures.

Following are the details of existing facilities and proposed facilities to be installed:

Sl. No.	Facility	Existing Capacity	Proposed Expansion	Plant Capacity After Expansion
1.	DRI (Gas based Mega Module)	1.2 MTPA	0.8 MTPA by augmenting	2.0 MTPA
2.	Pellet Plant	-	4.0 MTPA	4.0 MTPA
3.	Coke Ovens including By-product Plant	1.0 MTPA (under Implementation)	1.0 MTPA (New)	2.0 MTPA
4.	Sinter Plant	2.8 MTPA	3.2 MTPA	6.0 MTPA
5.	Blast Furnace including Pig casting	2.0 MTPA	1.6 MTPA	3.6 MTPA
6.	SMS (CONARC)	3.0 MTPA	2.2 MTPA (By Augmenting the existing facilities)	5.2 MTPA
7.	Ladle Furnace(LF)	2x200 t Twin shell	1x205 t	2x200 t + 205 t
8	VD/VOD	1x200 t	1x205 t	1x200 t + 1x205 t
9.	CSP(HRC Coil) Thin Caster-cum-Hot Strip Finishing Train	3.0 MTPA	0.5 MTPA (By Augmenting)	3.5 MTPA
10.	Conventional Slab Caster	-	2x1 strands	2x1 strands
11.	Plate Mill	-	1.5 MTPA	1.5 MTPA
12.	CRM (Hot Rolled Skin Pass + Cold Rolled Full Hard Coil + Hot Rolled Pickled & Oiled Coil)	-	1.0 MTPA	1.0 MTPA
13.	Galvanizing (Cold Rolled Steel Strips, Hot Dip Zinc Coated Full Hard)	-	0.6 MTPA	0.6 MTPA
14.	Electrical Steel CRGO	-	0.4 MTPA	0.4 MTPA
15.	Tin Plate Mill	-	0.4 MTPA	0.4 MTPA
16.	Colour Coating Plant	-	0.5 MTPA	0.5 MTPA
17.	Lime /Dolo Plant	600 TPD	1200 TPD	1800 TPD
18.	Oxygen Plant	1600 TPD	2500 TPD	4100 TPD
19.	Captive Power Plant (CPP)	-	300 MW (Based on surplus of BF & CO gases + RLNG)	300 MW (Based on surplus BF & CO gases + RLNG)

Compliance to the conditions stipulated in the EC dated 31.12.1996 was submitted and found to be satisfactory. Iron Ore, Sinter, Pellets, coke, coke breeze, quartz, lime/dolomite and iron scrap will be used as raw materials. MoUs with DUFERCO SA Switzerland and Avani Resources PTE Ltd., Singapore for sourcing of coke were submitted. Total power requirement of 428 MW will be met by CPP and from grid. Ambient air quality monitoring was carried out at 8 locations during the period March 2011- May 2011 and the average data submitted indicate PM_{10} (31-78 $\mu\text{g}/\text{m}^3$), $PM_{2.5}$ (14-31 $\mu\text{g}/\text{m}^3$), SO_2 (4-11 $\mu\text{g}/\text{m}^3$) and NO_x (13-18 $\mu\text{g}/\text{m}^3$) are within the permissible limits. Prediction of Ground Level Concentrations (GLCs) due to proposed expansion has been made by Industrial Source Complex, Short Term (ISCST3) as per CPCB guidelines and the average data submitted indicated an incremental PM_{10} of 12.96 $\mu\text{g}/\text{m}^3$. Fugitive emissions from raw material handling section will be suppressed by dry fogging system/water sprinkling.

Total water requirement for the proposed expansion will be 2,590 m^3/hr and the existing consumption is 833.3 m^3/hr , which shall be sourced from the State Water Resources Dept. from Nagothane dam at K.T. Bhandara. Maximum recycling of wastewater will be done after treatment to achieve zero discharge. Treated wastewater will be used for dust suppression and green belt development. Effluent streams such as cooling tower blow down, floor washings etc. will be used for fugitive dust suppression, water sprinkling etc. Sewage will be treated in septic tanks. Bag filter dust will be recycled in the process. BF slag will be granulated and used for cement manufacturing. Slag from SMS production will be used in land / road / area development or for manufacturing of insulated bricks etc. All pumps and motors will be selected from less noise generating types. Ear plugs will be provided to employees working in high noise prone areas. DG set will be provided with silencer.

Public hearing/Public consultation meeting was conducted by the MSPCB on 28.02.2012. The main issues raised in the public hearing meeting were w.r.t. proper pollution control measures, traffic problem due to the transportation vehicles, supply of drinking water, local employment, plantation etc. which have been addressed and included in the EIA/EMP.

After detailed deliberations, the Committee has recommended the proposal for environmental clearance subject to stipulation of following specific conditions along with other environmental conditions:

- i. Measures shall be undertaken to mitigate PM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring with proper O&M and continuous stack monitoring facilities for all the process stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), gas cleaning plant, venturi scrubber, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm^3 by installing energy efficient technology.
- ii. As proposed, Electrostatic precipitator (ESP) shall be provided to sinter plant, WHRB, CFBC, DRI plants; and dust catcher followed by venturi scrubbers to blast furnace to control SPM levels within 50 mg/Nm^3 . Fume extraction system shall be provided to induction furnaces to control the emissions within the prescribed standards.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 should be followed.
- v. Total water requirement for expansion shall not exceed 2,590 m^3/hr . Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage should be treated in septic tank followed by soak pit.

- vi. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- vii. Regular monitoring of influent and effluent surface, sub-surface and ground water (including chromite) should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E (P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.
- viii. The water consumption shall not exceed as per the standard prescribed for the steel plants.
- ix. Vehicular pollution due to transportation of raw material and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- x. All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads.
- xi. 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 should be submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.
- xii. Proper embankment shall be provided for the sludge disposal area
- xiii. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xiv. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xv. As proposed, green belt shall be developed in 33 % of plant area as per the CPCB guidelines in consultation with the DFO.
- xvi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants should be implemented.
- xvii. The company shall adopt well laid down corporate environment policy and identified and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with environmental clearance, environmental laws and regulations.
- xviii. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 28th February, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xix. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.
- xx. The company shall provide housing for 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.

37.3.2 Ferro Alloy manufacturing unit of 5x9 MVA Submerged Electric Arc Furnace to manufacture Si-Mn - 8,500 TPA, Fe-Si – 5,500 TPA and Silicon Metal – 22,000 TPA at Village Unuguntapallam, Mandal Kota, District Sri Pottisriramulu Nellore in Andhra Pradesh by M/s Wook Silicon Alloys Pvt. Ltd. - regarding Environmental Clearance

The project authorities and their consultant, M/s Sri Sai Manasa Nature Tech Pvt. Ltd., Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (ToRs) awarded during the 18th Meeting of the Expert Appraisal Committee(Industry-1) held on 24th - 25th January, 2011 for preparation of EIA/EMP. All the Ferro alloy plants are listed at S. No. 3(a) under Primary Metallurgy Industry of the Schedule of EIA Notification 2006 under Category 'A' and appraised by the Expert Appraisal Committee (Industry-1) of MOEF.

M/s. Wook Silicon Alloys Pvt. Ltd. have proposed for a Ferro Alloys Manufacturing Unit (5X 9 MVA SEAF) for manufacture of 8,500 TPA Silico-Manganese, 5,500 TPA of Ferro-Silicon and 22,000 TPA Silicon Metal at Survey No: 294/P,295& 296/1, Unuguntapallam Village, Kota Mandal of SPSR Nellore District in Andhra Pradesh. Total land acquired is 20.75 acres of which green belt will be developed in 6.85 acres. No forest land is involved in the project area. No National Park/Wildlife Sanctuarie/Tiger Reserve/Archaeologically important site is located within 10km distance of the project area. Swarnamukhi River - 4.0 Km (S), Vallipedu RF – 5.4 Km (NW), Udatavaripalem PF - 6.6 Km (N), Rudrayapalem RF-7.0 Km (W), Kesavaram RF 5.2 Km(NW), Kadivedu RF-6.3 Km(NW), Pidatalapudi RF-8.1 Km (NW) are within the 10 km radius. Total cost of the proposed project will be Rs. 85 Crores. Rs. 11 Crores and Rs. 80.0 lakhs will be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures.

Following will be the proposed facilities and products:

S. No.	Facility	Products	Production Quantities
			(TPA)
1	5 x 9 MVA	Silico Manganese	8,500
2	Submerged Electric Arc Furnace	Ferro Silicon	5,500
3		Silicon Metal	22,000
		Total	36,000

Manganese Ore, Fe-Mn Slag, Quartz, Limestone/Dolomite, Coke, Coal, Electrode Carbon Paste etc. will be used as raw materials. Total power requirement of 33 KVA will be met from the substation. The manufacturing process involves smelting of charge materials in submerged arc furnace. Dust extraction system with Pulse Jet bag filters and Gas cleaning unit will be provided to submerged arc furnace. Water sprinkling system will be provided to control fugitive dust emissions from material handling. Ambient air quality monitoring was carried within the study area for PM, SO₂ and NO_x. The maximum values of these parameters are 55.9 µg/m³, 7.8 µg/m³ and 23.6 µg/m³ respectively. The predicted maximum incremental ground level concentrations (GLCs) due to the proposed project are 0.306 µg/m³, 0.748 µg/m³ and 1.205 µg/m³ respectively. The resultant concentrations of these parameters are within the prescribed standards.

The total water requirement is 66 KLD, which will be met by ground water through bore wells located within the plant premises. No process wastewater will be generated. The cooling tower blow down will be recirculated. Domestic wastewater will be sent to septic tank followed by dispersion trench. Zero effluent discharge will be maintained. The Silico Manganese, Ferro Silicon and Silicon Metal slag will be used in constructional works. Bag filter dust will be briquetted and reused in the smelting process. Noise absorbing materials will be used in the construction of buildings etc. and less noise generating machinery will be installed.

Public hearing/Public consultation meeting was conducted by the APPCB on 28.09.2011. The main issues raised in the public hearing meeting were various lacunae in the EIA report, shifting of the project site to elsewhere, etc. which have been addressed in the final EIA/EMP.

After detailed deliberations, the Committee has recommended the proposal for environmental clearance subject to stipulation of following specific conditions along with other environmental conditions:

1. No charcoal shall be used as fuel. Pet coke shall be used as fuel instead of charcoal from unknown sources.
 2. Continuous monitoring facilities for all the stacks and sufficient air pollution control equipments viz. fume extraction system with bag filters, ID fan and stack of adequate height to submerged arc furnace shall be provided to control emissions below 50 mg/Nm³.
 3. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
 4. Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
 5. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB.
 6. The total water requirement shall not exceed 66 m³/day. 'Zero' effluent discharge shall be strictly followed and no wastewater should be discharged outside the premises.
 7. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
 8. All the ferro alloy slag shall be used in the preparation of building materials.
 9. No Ferro Chrome shall be manufactured without prior approval from the Ministry of Environment & Forests.
 10. Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB within 3 months of issue of environment clearance letter.
 11. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 28th September, 2011 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bangalore.
 12. As proposed, green belt should be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
 13. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- 37.3.3** Expansion of existing manufacturing of manmade fiber other than Rayon- Synthetics Filament Yarn (SFY) using polyester/ Nylon/polypropylene chips from 2,50,000 to 8,30,000 TPA at Sy No. 273/1, 274 & 45/2, Industrial Area, Demni Road, Village Dadra, Silvassa, U.T. of Dadra and Nagar Haveli by **M/s Filatex India Limited – regarding Environmental Clearance**

The project authorities and their consultant, M/s Unistar Environment and Research Labs Pvt. Ltd., Vapi, Gujarat, gave a detailed presentation on the salient features of the project and the proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded in the 26th Expert Appraisal Committee (Industry-1) meeting held on 22nd -23rd July, 2011 for preparation of EIA/EMP report. All manmade fibres manufacturing other than rayon are listed at S.No. 5(d) under category B of the Schedule of EIA Notification, 2006 and appraised by the SEIAA/SEAC. However, due to location of the project within 10 km of the interstate boundary and applicability of general condition, proposal has been appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Filatex India Limited have proposed for expansion of existing manufacturing of manmade fiber other than Rayon- Synthetics Filament Yarn (SFY) using polyester/ Nylon/polypropylene chips at Sr No. 273/1, 274 & 45/2, Industrial Area, Demni Road, Village Dadra, U.T. of Dadra and Nagar Haveli. The Project site is located within 10 km from Inter-state boundary of Gujarat. Silvassa town is located at 6.5 Km. Total project area is 7.82 acres and green belt area will be 1.95 acres. No additional land is required for proposed expansion project. D&NH Wildlife Centaury is located at a distance of 7 km. in southern direction from the project site. Total project cost for the proposed expansion will be Rs. 39.16 Crores. Rs. 1.0 Crore and Rs. 39.66 Lakhs are earmarked toward capital cost and recurring cost per annum for pollution control measures. The consent to operate for the existing unit was renewed till 31.8.2014.

Polyester/Nylon/PP chips & granules, Finish Oil, Antistatic Oil are used as raw materials to manufacture existing products and the same raw materials will be used for manufacturing proposed products also. M/s. Filatex India Limited. is an existing unit (established in 1995) which is manufacturing Synthetic Filaments Yarn (Partially oriented Yarn(POY)/ Fully Drawn Yarn (FDY), Nylon Filament Yarn, Polypropylene poy/cripped Yarn, Texturised Yarn, Narrow woven fabric, Nylon Crimped) – 25,000 MT/Annum. The company has now proposed for enhancement of existing production capacity by 58,000 MTPA to manufacture the same products. After the proposed enhancement, Production capacity will be 83,000 MT/Year.

The existing products are manufactured by melting of polyester/nylon/PP chips in the extruder and passed through spin pack to convert the molten mass into yarn form, spin finish oil is applied on the yarn surface to avoid the internal adhesion of yarns, and required cooling is provided by cool air to get the yarn solidify. The formed yarns are taken up at required speed on a winder. Thus formed yarn is further used for manufacturing of Texturized yarn and Knitting & Fabric weaving. The whole process is carried out in closed conditions. The proposed product POY, FDY, NFY, POY/CY, PTY, NWF and Nylon crimped will be manufactured by enhancement of existing production capacity process. The company has installed 4 nos. of Thermic Fluid Heater having capacity of 4 lac Kcal/Hr. using furnace oil as fuel. After the proposed expansion also, the same thermic fluid heaters will be used with increase in fuel consumption for proposed enhancement of production capacity.

The power is sourced from Electricity Dept, Silvassa and the present power requirement is 7,500 KVA. For proposed expansion project, additional power of 5,000 KVA will be also sourced from Electricity Dept, Silvassa. The company has installed D.G. sets, 5 nos of 1,000 KVA capacity and 1 nos of 1,250 KVA capacity as stand by purpose using HSD as fuel. It is proposed to install stand by Natural gas fired Power Engines (D.G. Sets) 2 nos of 3.349 MW each using Natural gas as fuel. Natural Gas will be used as fuel @ 35,640 Nm³/Day for Natural Gas Fired Power Engines. After the proposed expansion, the existing HSD fired D.G. sets will be removed. Stack of 30 m height will be provided to stand by Natural Gas fired power engine (DG set) to control PM within 150 mg/Nm³, SO₂ within 100 ppm and NO_x within 50 ppm. Ambient air quality monitoring was carried within the study area for PM₁₀, PM_{2.5}, SO₂, NO_x, CO and VOC. The maximum values of these parameters are 90µg/m³, 36 µg/m³, 37 µg/m³, 27 µg/m³, BDL and BDL respectively. The predicted maximum incremental ground level concentrations (GLCs) due to the proposed project for PM₁₀, SO₂ and NO_x are 0.1 µg/m³, 0.26 µg/m³ and 13.021 µg/m³ respectively. The resultant concentrations of these parameters are within the prescribed standards.

Total water requirement including existing will be 470 KLD and will be drawn from bore well/canal. Wastewater generated from industrial activities @ 20 KLD from washing will be treated in ETP and the treated wastewater will be reused or used for plantation. Cooling tower blow down of 50 KLD will also be

reutilized for gardening. Domestic effluent will be treated through septic tank and soak pit. ETP waste (5 MTPA) will be packed in bags and stored in designated area, which will be sent to landfill site of M/s GEPIL, Silvassa for final disposal. Yarn waste (250 MTPA) will be packed in bags and stored in designated area, which will be recycled back/sold to actual users. Used oil (12 KLPA) will be stored in drums and sold to registered refiners/sent to TSDF site. Empty drums/bags (5 lacs per annum) will be stored at a separate storage area and reused for packing/sold to authorized scrap vendor.

Public hearing was exempted by categorizing the project as category B2 as the polyester chips will be purchased and there is no acquisition of additional land for the expansion and there will be zero discharge of effluent.

After detailed deliberations, the Committee has recommended the proposal for environmental clearance subject to stipulation of following specific conditions along with other environmental conditions:

- i. It is noted that the project does not fall within 100 m distance from the boundary of Dadra and Nagar Haveli Wildlife Sanctuary. The company shall obtain necessary clearance under the Wildlife (Protection) Act, 1972 from the National Board for Wild life as may be applicable in this case.
- ii. The company shall install wet scrubber and bag filters etc. to control the particulate emissions below 50 mg/Nm³.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should 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 should be followed.
- v. The total water requirement shall not exceed 470 KLD and Permission shall be obtained to draw the water from the ground water from the State Ground Water Board /Central Ground Water Authority as may be applicable to this case.
- vi. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- vii. Risk & Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.
- viii. As proposed, green belt shall be developed in 33 % of the plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

37.3.4 Proposed Coke Oven Plant (1,20,000 TPA), Sinter Plant (1,20,000 TPA), and Captive Power Plant (1.5 MW) at Village Hirodih, P.S. Jainagar, District Koderma, Jharkhand by M/s Jupitar Coke & Energy Private Limited - regarding Environmental Clearance

The project authorities and their consultant, M/s Visiontek Consultants, Bhubaneswar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of References (TORs) awarded during the 12th meeting of the

Expert Appraisal Committee (Industry - 1) held on 26th-28th July, 2010 for preparation of EIA/EMP. The primary metallurgical industry is listed at S.No. 3(a) under Category 'A' of the Schedule of EIA notification, 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Jupitar Coke & Energy Private Limited have proposed for setting up of Coke Oven Plant (1,20,000 TPA), Sinter Plant (1,20,000 TPA), and Captive Power Plant (1.5 MW) at Village Hirodih, P.S. Jainagar, District Koderma, Jharkhand. The project area is of 40 acres and is taken on lease from M/s Jupitar Spun Pipe Company Private Limited. Green belt will be developed in 14 acres out of total 40 acres. No nation park/wild life sanctuary/reserve forest is located within 10 Km. Forest is located at 3.5 km (NE). Koderma town is at 10.5 km. Teliya Dam is located at Koderma (11.5 km, SW). Total cost of the project is Rs. 41.0 Crores. Rs. 1.1 Crores and Rs. 37.0 Lakhs are earmarked towards capital cost and recurring cost against pollution control measures. A budget of Rs. 2.04 crores has been envisaged for CSR.

Following will be manufactured:

S.No.	Facilities / Products	Quantity (TPD / TPA)
1.	LAM Coke	400 / (1,20,000)
2.	Sinter	400 / (1,20,000)
3.	Power	1.5 MW

Iron ore fines (85,500 TPA), Coke Breeze (7,500 TPA), Limestone (15,000 TPA), Dolomite (13,500 TPA), sinter fines return (12,000 TPA) and Coal (1,56,000 TPA) will be used as raw materials. Power (2.5 MW) will be sourced from captive power plant and JSEB. D.G. sets (1x200 KVA) will be installed for emergency use. Coal will be burnt for manufacturing low ash coke. After processing, coke will be taken out and air quenched. Traveling grate type circular sinter machine will be used for sintering of fines. Captive power plant will be installed to make use of flue gases generated from the coke oven. Low ash metallurgical coke & sinter manufactured will be used in iron industry and also in group's cupola and mini blast furnace.

Ambient air quality monitoring was carried within the study area for PM₁₀, SO₂ and NO_x. The maximum values of these parameters are 42.0µg/m³, 18.19 µg/m³ and 22.89 µg/m³ respectively. The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.11844 µg/m³ with respect to the PM₁₀, 0.1223 µg/m³ with respect to the SO₂ and 0.0706 µg/m³ with respect to the NO_x. The GLC predicted at all receptor locations after the proposed expansion are within the NAAQS. Down draft system with tunnel and complete combustion of flue gases will be installed in coke ovens to control particulate matters below 150 mg/Nm³ and bag filters in crushing and handling areas of sinter section to control particulate matters below 50 mg/Nm³. Non-recovery type of coke oven will be provided with external combustion and recuperator system to recover sensible heat from outgoing flue gases before escaping from the chimney and used in power generation through WHRB. Poly-aromatic hydrocarbon (PAH) will be burnt in the coke oven itself. Dedusting system and water sprinkler will be provided to control fugitive emissions.

Total water requirement will be 243 m³/day and will be met from bore wells and rain water harvesting. Permission for ground water drawl is under process. No liquid effluent will be generated and discharged due to adoption of closed loop system. Only make up water will be fed into the plant. The treated effluent will be used for ash conditioning, dust suppression and green belt development. Service water will be passed through oil separator to remove oil content in the effluent. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and Zero discharge will be adopted. Breeze Coke (25 TPD), Sinter Dust (40 TPD) and Dust (6.7 TPD) from APCD will be reused in sinter plant. Waste/used/spent oil and used batteries will be sold to authorized recyclers / re-processors.

Public hearing/Public consultation meeting was conducted by the Jharkhand State Pollution Control Board (JSPCB) on 22nd October 2011. The issues raised in the public hearing meeting were w.r.t. provision of pollution control measures, employment to locals, drinking water, education, health facilities, tree plantation etc. and have been addressed in the EIA/EMP.

After detailed deliberations, the Committee recommended the proposal for environmental clearance subject to stipulation of following specific conditions along with other environmental conditions:

1. Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided.
2. Stack monitoring facilities for all the major stacks and adequate air pollution control systems viz. dust catchers or cyclones, Multi stage scrubber, bag filters etc. to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored alongwith other parameters and standards notified under E (P) Act shall be followed. The reports shall be submitted to the Ministry's Regional Office at the Bhubaneswar, CPCB and SPCB.
3. Multi stage scrubber shall be installed to control gaseous and dust emission from the coke oven stack. Measures shall be taken to prevent leakages from the coke oven plant.
4. The prescribed emission standards for coke oven plants, as notified vide notification no. GSR 46 (E) dated 3rd February, 2006 and subsequently amended shall be complied with.
5. 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 and coke sorting plant of coke oven plant. 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.
6. Secondary fugitive emissions shall be controlled within the prescribed limits, regularly monitored and records maintained. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.
7. 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. Efforts shall also be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. Vehicular emissions shall be regularly monitored and records kept.
8. Total requirement of the water shall not exceed 243 m³/day. All the treated wastewater shall be recycled for dust suppression and green belt development. Domestic wastewater shall be treated in septic tank followed by soak pit and used for green belt development. Zero effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
9. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
10. Waste from the hard coke unit, shall be provided to the briquette manufacturing units. Coal and coke fines shall be recycled and reused in the process. The bag filter dust shall be used for land filling. The waste oil shall be properly disposed off as per the Hazardous Waste (Management, Handling, Handling and Transboundary Movement) Rules, 2008.
11. As proposed, green belt shall be developed in 33% of plant area within and around the project site to mitigate the impact of fugitive emissions as per the CPCB guidelines in consultation with local DFO.

12. The recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Coke Oven Plants shall be implemented.
 13. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
 14. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 22nd October 2011 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
 15. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.
 16. The company shall provide housing for 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.
- 37.3.5 Proposed Cement Grinding Unit (200 TPD) at Dag No. 435 & 282 and Patta No. 173, Village Katlabarkuchi, Mouza- Batahgila, District Nalbari in Assam by M/s GLF Developers (I) Pvt. Limited - regarding Environmental Clearance**

The project authorities and their consultant M/s. En-vision Enviro Engineers Pvt. Ltd., Surat gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of References (TORs) awarded during the 26th Meeting of the Expert Appraisal Committee (Industry-1) held during 21st & 22nd July, 2011 for preparation of EIA/EMP. All the stand alone cement grinding units are covered under Category (B) as per para 3(b) of the Schedule of the EIA notification 2006, but due to absence of SEIAA/SEAC for Assam, the proposal has been appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s. GLF Developers (I) Pvt. Ltd. have proposed for setting up of Cement Grinding Unit (200 TPD) at Dag No. 435 & 282 and Patta No. 173, Village Katlabarkuchi, Mouza- Batahgila, District Nalbari in Assam. The total land requirement for the proposed unit is 0.6691 ha which is already in the possession of the project proponent. About 0.2208 ha of plant area will be developed under green belt. A seasonal River Pagladia is flowing at a distance of 350 m in East direction from the project site. No forest land is involved. The project site is in Seismic Zone-V. The total cost of the project will be Rs. 577.46 Lakhs. Rs. 35 Lakhs and Rs. 6.5 Lakhs will be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures.

The manufacturing process of cement comprises, mixing and grinding of clinker, gypsum & fly ash. The raw materials required for the proposed plant will be Clinker (196 TPD), Gypsum (10 TPD) and fly ash (50 TPD). The total power requirement for the proposed plant will be 400 KW which will be sourced from Assam State Electricity Board. A D.G. set of 625 KVA will be installed to meet the emergency power requirement. Ambient air quality monitoring was carried out within the study area for PM₁₀, PM_{2.5}, SO₂, and NO_x. Values of these parameters range from 54-80.3 µg/m³, 26-50 µg/m³, 4.3-10.5 µg/m³ and 11.2-21.8 µg/m³ respectively. The predicted maximum incremental ground level concentration (GLC) due to the proposed project for SPM is 6.4 µg/m³, the resultant concentration of which is within the prescribed standards.

Source of air pollution from the proposed plant will be cement mill and packing plant. For control of particulate emissions, twin cyclone separator followed by reverse pulse jet type bag filter will be provided. The total water requirement for the proposed plant will be 4 KLD which will be met from the ground water source. There is no wastewater generation due to the process. Domestic wastewater (1.2

KLD) will be generated which will be discharge through septic tank and soak pit. The waste collected in pollution control equipments will be recycled in the process and the spent lube oil will be given to registered recyclers

The proposal was exempted from public hearing by categorizing in B-2 category due to use of energy efficient technology, no clinker manufacturing at the proposed site, no sensitive area within 10 km. radius, 'zero' effluent discharge, utilization of all the solid waste in the process itself including utilization of fly ash etc.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to the following specific conditions along with other environmental conditions:

- i. Particulate emissions shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Shillong, Assam State Pollution Control Board (ASPCB) and CPCB regularly.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.
- iii. Seismic hazard and Earth Quake Management Plan along with past history of earth quake in the area shall be submitted to the Ministry's Regional Office at Shillong.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed.
- v. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. All the raw material stock piles should be covered. A closed clinker stockpile system shall be provided. All conveyers should be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling.
- vi. Asphaltting/concreting of roads and water spray all around the stockyard and loading/unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- vii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and should not be overloaded. Vehicular emissions should be regularly monitored.
- viii. Total ground water requirement for the cement plant shall not exceed 4.0 m³/day and necessary permission for the drawl shall be obtained. All the treated wastewater should be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- ix. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.

- x. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process used for cement manufacturing. Spent oil and batteries should be sold to authorized recyclers / reprocessors only.
- xi. Green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.
- xii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Shillong. Implementation of such program should be ensured accordingly in a time bound manner.

37.3.6 Expansion of existing Mini Steel Plant into Integrated Steel Plant along with 20 MW Captive Power Plant at Village Haldiaguna, District Keonjhar in Odisha by M/s MSP Sponge Iron Limited -regarding Environmental Clearance

The project authorities and their consultant, M/s Visiontek Consultants, Bhubaneswar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of References (TORs) awarded during the 22nd meeting of the Expert Appraisal Committee (Industry - 1) held on 18th – 19th April, 2011 for preparation of EIA/EMP. All the steel plants are listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s MSP Sponge Iron Limited (MSPSIL) has proposed for expansion of its existing mini steel plant to Integrated steel plant along with 20MW Captive Power Plant (CPP) at Village –Haldiaguna, Keonjhar District, Odisha. Total project area including existing plant is 160.93 Acres and green belt will be developed in 53.0 acres. Keonjhar town is at 16.0 km. Forest is located at 3.0 km (NE). No nation park/wild life sanctuary/reserve forest is located within 10 Km. Total cost of the project is Rs. 623.41 Crores. Rs. 34.28 Crores and Rs.6.856 Crores are earmarked towards capital cost and recurring cost per annum against pollution control measures. A budget of Rs. Rs.31.5 Crores has been envisaged for CSR. The existing unit was accorded Consent to Operate on 16.6.2011. Compliance to the conditions stipulated in the said consent was submitted and found to be satisfactory.

The configuration of the existing and proposed expansion is as follows:

SL	Unit	Existing Capacity (TPA)	Proposed Expansion		Total Capacity in (TPA)
			PH- I in TPA	PH-II In TPA	
1.	Coal Beneficiation Plant	-----	-----	6,00,000 (throughput) (2 x 75 TPH)	6,00,000 (throughput)
2.	Coal Gasification Plant	1x864 M ³ /hr.	4x2,850 M ³ /hr. each	4x2,850 M ³ /hr. each	23,664 M ³ /hr
3.	Iron ore Beneficiation Plant	-----	10,00,000 (throughput) (concentrate – 8,50,000)	-----	10,00,000 (throughput) (concentrate – 8,50,000)
4.	Iron Ore Pellet Plant	-----	6,00,000	6,00,000	12,00,000
5.	DRI Plant	54,000	-----	1,05,000 (1x350 TPD)	1,59,000

6.	Sinter Plant	-----	-----	4,16,000 (1x36M ²)	4,16,000
7.	Mini Blast Furnace	-----	-----	2,00,000 (1x250M ³ with 30 TPH pig casting machine)	2,00,000
8.	SMS & Continuous Casting	50,400 (3 x 5T/heat I/F)	-----	2,13,600 (4 x 15 T/heat with two number of billet caster.)	2,64,000
9.	Rolling Mill	42,000	---	---	42,000
10.	Captive Power Plant	-----	-----	12 MW (CFBC) & 8 MW (WHRB)	20 MW

Iron Ore, Dolomite, Coal, Coke, Bentonite, Limestone and Quartzite are the major raw materials used in the plant process. The unit's saleable product will be Steel Billets, Iron ore Pellets, Pig iron, TMT bars, etc. Letters from Ministry of coal confirming the supply of different grades of coal were submitted. Remaining quantity will be sourced through e auction. The estimated power requirement for the plant is 34 MW out of which 20 MW will be generated from Captive power plant and balance 14 MW will be drawn from NESCO at final stage. D.G. sets (1x200 KVA) will be installed for emergency use.

Ambient air quality monitoring was carried within the study area for PM₁₀, SO₂ and NO_x. The maximum values of these parameters are 73.4 µg/m³, 7.4 µg/m³ and 13.3 µg/m³ respectively. The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 8.95553µg/m³ with respect to the PM₁₀, 22.63504 µg/m³ with respect to the SO₂ and 2.52265µg/m³ with respect to the NO_x. The GLC predicted at all receptor locations after the proposed expansion are within the NAAQS. Gaseous emissions will be controlled by installing air pollution control equipments. Dust suppression will be done by water sprinkling to control fugitive emissions due to transportation activities. Fume extraction system with bag filters will be provided to DRI plant. MBF will be equipped with bag filter and venturi scrubbers. Spark arrester and bag filter will be provided to SMS plant. Air pollution from CPP will be controlled by ESP and ash conditioning & moistening system. Water sprinkling will be done along the haul roads to control the dust arising from vehicular movement.

Total water requirement will be 7,920 m³/day, which shall be met from bore wells and rain water harvesting. Permission for ground water drawl has been obtained from CGWA, New Delhi vide letter No. 21-4(96)/SER/CGWA/2009-27, dated 25.06.2009. No liquid effluent will be generated and discharged due to adoption of closed loop system. Only make up water will be fed into the plant. The treated effluent will be used for ash conditioning, dust suppression and green belt development. Service water will be passed through oil separator to remove oil content in the effluent. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and Zero discharge will be adopted.

Solid waste i.e. char generated from DRI plant will be reused in Power Plant and dust form APCD will be partly used for fly ash brick making and balance will be taken to designated dump area. Kiln accretion waste will be partly processed through iron ore beneficiation plant & remaining part will be disposed in solid waste dump area. Granulated Slag from MBF will be given to cement manufacturing unit. Dust form APCD will be used in sinter plant. SMS slag will be used for road construction & low land filling and Dust form APCD will be disposed in solid waste dump yard. Dust form APCD of sinter plant and pellet plant will be re-used in sinter plant. Fly ash from power plant will be used for cement making, fly ash brick making, road construction, concrete batching plant and balance will be taken to ash mound for which 8 acres land is earmarked. Bottom ash will be disposed in ash disposal area. Middlings from Coal Beneficiation Plant will be used in FBC boiler of CPP and remaining amount is sold. Rejects from Coal Beneficiation Plant will be given to brick manufacturing units, coal briquetting unit and used in power plant. Tailings from iron ore beneficiation will be kept in tailing pond of area 14 acres. Waste / used / spent oil and used batteries will be sold to authorized recyclers / re-processors.

Public hearing/Public consultation meeting was conducted by the Odisha State Pollution Control Board (SPCB) on 23rd March, 2012. The issues raised in the public hearing meeting were w.r.t. provision of pollution control measures, employment to locals, electricity, health facilities etc. and have been addressed in the EIA/EMP.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to the following specific conditions along with other environmental conditions:

- i. Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), gas cleaning plant, venturi scrubber, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³ by installing energy efficient technology.
- ii. As proposed, Electrostatic precipitator (ESP) shall be provided to sinter plant, WHRB, CFBC, DRI plants and dust catcher followed by venturi scrubbers to blast furnace to control SPM levels within 50 mg/Nm³. Fume extraction system shall be provided to induction furnaces to control the emissions within the prescribed standards.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 should be followed.
- v. Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB). The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack.
- vi. Total water requirement shall not exceed 7,920 KLD. Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage should be treated in septic tank followed by soak pit.
- vii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- viii. Regular monitoring of influent and effluent surface, sub-surface and ground water (including chromite) should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.
- ix. The water consumption shall not exceed as per the standard prescribed for the steel plants.
- x. All the coal fines, char from DRI plant and washery rejects shall be utilized in CFBC boiler of power plant and no char shall be used for briquette making or disposed off anywhere else. CFBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning. All the blast furnace (BF) slag shall be provided to the cement manufacturers. Scrap shall be used in steel melting shop (SMS) and SMS slag and kiln accretions shall be properly utilized. All

the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.

- xi. Tailings from beneficiation plant and sponge iron kiln accretion can be mixed and made into bricks etc.
- xii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003.
- xiii. Vehicular pollution due to transportation of raw material and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- xiv. Transportation of raw coal during the initial phase shall be by 40-T mechanically covered or tarpaulin covered trucks from the coalmines to the washery. The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site(s) within sheds/stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored minerals do not catch fire.
- xv. Hoppers of the coal crushing unit at the crushing shed and washery unit shall be fitted with high efficiency bag filters/Dust extractors and mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of belt conveyor systems which shall be closed and from transportation roads.
- xvi. All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3-tier avenue plantation using native species shall be developed along the roads. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit.
- xvii. The washery unit shall be a zero-discharge facility and no wastewater shall be discharged from the washery into the drains/natural watercourses. Recycled water shall be used for development and maintenance of green belt and in dust suppression from Plant operations.
- xviii. 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 should be submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.
- xix. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xx. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xxi. As proposed, green belt shall be developed in 33 % of plant area as per the CPCB guidelines in consultation with the DFO.
- xxii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants should be implemented.
- xxiii. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 23rd March, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
- xxiv. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on Public Hearing issues and item-wise details along with time bound

action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.

- xxv. Rehabilitation and Resettlement Plan for the project affected population including tribals, if any shall be implemented as per the policy of the State Govt. in consultation with the State Govt. of Odisha. Compensation paid in any case should not be less than the norms prescribed under the National Resettlement and Rehabilitation Policy, 2007.
- xxvi. The company shall provide housing for 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.

37.3.7 Expansion of existing DRI plant (66,000 TPA) by installation of 0.85 MTPA Iron Ore Beneficiation Plant, 0.6 MTPA Pellet Plant & 10 MW Captive Power Plant at Tumkela, Sub Division: Bonai, Tehsil: Lahunipara, Dist: Sundergarh, Odisha by M/s Vikram Pvt. Limited- regarding Environmental Clearance

The project authorities and their consultant, M/s Sun Consultancy and Services, Bhubaneswar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of References (TORs) awarded during the 17th Meeting of the Expert Appraisal Committee-1 (Industry) held during 13th& 14th December, 2010 for preparation of EIA/EMP. The pellet plants are listed at S. No. 3(a) under Primary Metallurgy Industries under Category A of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Vikram Private Limited has proposed for expansion of existing 66,000 TPA Sponge Iron Plant by installation of 0.85 MTPA Iron Ore Beneficiation Plant, 0.6 MTPA Pellet Plant and Captive Power Plant (10MW) at Tumkela, Sub Division: Bonai, Tehsil: Lahunipara, Dist: Sundergarh, Odisha. There is no national Park/wild life sanctuary within 10 km radius of the project site. The total land requirement of the project is 82 acres. The cost of the project is about Rs. 276.19 Crores, Rs. 13.81 Crores and Rs. 0.27 Crores per annum are earmarked towards the capital cost and recurring cost for environmental pollution control measures. Rs. 13.81 Crores is earmarked for CSR activities. The existing unit was accorded Consent to Operate on 23.2.2007. Compliance to the conditions stipulated in the said consent was submitted and found to be satisfactory.

Following are the existing and proposed major plant facilities:

Unit	Product	Existing	Proposed	Total
DRI Plant	Sponge Iron	66,000 TPA	-	2 × 100 TPD (66,000 TPA)
Iron Ore Beneficiation Plant	Concentrate	-	6,60,000 TPA	6,60,000 TPA
Iron Ore Pelletisation Plant	Pellet	-	6,00,000 TPA	6,00,000 TPA
Power Plant	Power	-	10 MW	10 MW

Precautionary measures will be adopted for storage of raw materials on concrete floors with bund under cover shed so as to avoid any leaching during rainy season. Transportation of raw materials and products will be done in covered manner so as to avoid any fugitive emission. There will be emissions during handling of raw materials and products, which will be controlled by dust suppression system. The emissions from the production process will be passed through Scrubber and Bag filters/ESP to retain flue dust particles and then released through high stack. The PM level will be maintained below 50 mg/Nm³.

Total water requirement will be 130.5m³/hr which will be sourced from surface water. The rain water will be harvested and stored in a reservoir of sufficient capacity to cater to the exigencies during lean season. There will be no effluent generation from the plant. The wastewater generated from the plant shall be recycled & utilized in the plant, dust suppression & gardening. As such the plant will work on zero discharge basis. The solid waste will be mostly in the form of dust from various APC devices, sludge from iron ore beneficiation plant and fly ash and bottom ash generated from Captive Power Plant. Solid waste generated from the plant in the form of fly ash will be given to cement manufacturers/brick manufacturing. The dust generated in the plant will be used in pellet plant. Bottom ash generated from the Captive Power Plant will be used as base material for the roads.

Public hearing/Public consultation meeting was conducted by the Odisha State Pollution Control Board (SPCB) on 22nd November 2011. The issues raised in the public hearing meeting were w.r.t. provision of pollution control measures, employment to locals, social welfare etc. and have been addressed in the EIA/EMP.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to submission of chemical and trace element analysis of iron ore from both the mines, trace element management plan and the following specific conditions along with other environmental conditions:

1. Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Govt. should be ensured and regular reports submitted to the Ministry and its Regional Office at Bhubaneswar.
2. Efforts should be made to reduce RSPM levels in the ambient air and a time bound action plan should be submitted. Continuous stack monitoring facilities for all the stacks should be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. should be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology. No charcoal should be used as raw material.
3. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.
4. Gaseous emission levels including secondary fugitive emissions from all the sources should be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 should be followed.
5. Vehicular pollution due to transportation of raw material and finished product should be controlled. Proper arrangements should also be made to control dust emissions during loading and unloading of the raw material and finished product.
6. Prior permission for the drawl of 130.5 m³/hr water shall be obtained. 'Zero' effluent discharge should be strictly followed and no wastewater should be discharged outside the premises.
7. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
8. Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.
9. Proper handling, storage, utilization and disposal of all the solid waste should be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of

solid/hazardous waste should be submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.

10. Dolochar shall be used without dumping. Bricks shall be manufactured from tailings and fly ash and may be distributed to locals free of cost as a part of Enterprise Social Commitment
 11. A time bound action plan should be submitted to reduce solid waste, its proper utilization and disposal.
 12. A Disaster Management Plan should be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB within 3 months of issue of environment clearance letter.
 13. As proposed, green belt should be developed in 33 % areas per the CPCB guidelines in consultation with the DFO.
 14. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 22nd November 2011 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
 15. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.
- 37.3.8 Proposed Integrated Steel Plant (Sponge Iron Plant, Induction Furnace, Rolling Mill and Captive Power Plant) at Industrial Area Hargarh, Tehsil Sihora in District Jabalpur Madhya Pradesh by M/s Eurobond Industries Pvt. Limited - regarding Environmental Clearance**

The proponent informed that they will not be able to attend the meeting. The Committee decided to consider the project as and when requested by the proponent.

- 37.3.9 Expansion of Induction Furnace capacity from 62,500 TPA to 2,87,000 TPA at Plot No. A-1, Industrial Area, South of G.T. Road, Ghaziabad, Uttar Pradesh by M/s Rathi Super Steel Limited - regarding reconsideration of Environmental Clearance**

The above proposal was considered in the 36th Meeting of the Expert Appraisal Committee (Industry-1) held during 24th & 25th May, 2012. The committee noted that the presentation was not as per the ToRs accorded. The proposal was deferred for reconsideration in the next meeting at the request of the project proponent. The project authorities along with their environmental consultant, M/s. Grass Roots Research & Creation India (P) Ltd., Noida, gave a detailed presentation on the salient features of the proposal & proposed environmental protection measures to be undertaken as per Terms of References (TORs) issued during the 28th Meeting of the Expert Appraisal Committee (Industry-I) held during 26th– 27th September, 2011 for preparation of EIA/EMP. The project category is listed at S.No. 3(a) under category B of the Schedule of EIA Notification, 2006 and appraised by the SEIAA/SEAC. However, due to location of the project within 10 km of the Critically Polluted Area and applicability of general condition, the proposal has been appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Rathi Super Steel have proposed for expansion of Expansion of Induction Furnace capacity from 62,500 TPA to 2,87,000 TPA at Plot No. A-1, Industrial Area, South of G.T. Road, Ghaziabad, Uttar Pradesh .Total existing project area is 8.49 Ha, which was allocated by UPSIDC and no additional land will be required for the proposed expansion. Green belt will be developed in an area of 2.80 Ha. The project site falls under Seismic Zone IV. River Hindon flows at a distance of 5.2 km. No National Park/Wildlife Sanctuary/Elephant corridors/Tiger Reserves are located within 10 km radius. The cost of proposed expansion project is Rs. 48.30 Crore.

The existing production facilities in SMS includes 8T capacity induction furnace, a ladle refining furnace, a continuous casting machine, ingot casting facility for production of steel capacity of 25,500 TPA. Besides constructional steels, the shop can produce value added products viz. forging quality alloy & special steels, extra low carbon steel and stainless steel. The company has obtained environmental clearance from the State Environment Impact Assessment Authority (SEIAA), Uttar Pradesh on 12.10.2009 for installation of a 15 T induction furnace to raise the capacity by 37,000 TPA. The project is under implementation. The proposed project relates to expansion of steel making capacity to 2,87,000 TPA by upgrading the existing 8 T capacity induction furnace into a dual mode, upgrading the proposed 15 T to 20 T dual mode induction furnace and expansion of production of stainless steel / special steel through OTB, VD/VOD converter. Also additional crucible, making the total to 3 (2 operating and 1 standby) will be provided. The additional production capacity will be 2,24,500 TPA. The major raw materials viz. Steel Scrap will be imported from Middle East/Europe and Industrial units and/or indigenous traders and transported by sea, rail & road. Pig Iron, Ferro Alloys and Nickel will be sourced from manufacturers and/or traders in & around Delhi and transported by road.

The baseline data was monitored and analyzed during the period from December 2011 to February 2012 within 10 Km radius of the study area. The ambient air quality at 8 AAQM stations indicated that the concentration values of PM₁₀, SO₂ and NO₂ ranged between 68.2- 128.9 µg/m³, 7.2 - 19.6 µg/m³ and concentration ranged between 15.6-44.9 µg/m³ respectively. Prediction of Ground Level Concentrations (GLCs) has been carried out by ISCST3 model which indicated that after proposed expansion, maximum incremental GLCs for PM₁₀ will be 5.2 µg/m³ at a distance of 1 km east direction. Predicted GLCs of pollutants after implementation of the proposed expansion project will be within NAAQS.

The primary emissions from the IF would be collected by swiveling hood over the furnace roof and taken in to bag-filters. The secondary emissions will be collected through a roof mounted canopy hood connected to the same bag filter system. The emissions will be dispersed into the atmosphere after bringing down the PM level below 50 mg/Nm³. The dust laden hot fumes coming out from the O.T.B. Converter would be collected with primary and secondary fume extraction devices and cooled in a similar manner and let into the same bag-filter after passing through a mixing chamber.

Total water requirement for proposed expansion project will be 198KLD. The wastewater from the billet caster unit and hot rolling mill would be treated in a scale pit where the coarse sized iron scales and the oil would get separated followed by clarifier separation of fine particulates. The treated water would be recycled after cooling. Efforts will be made to harvest rainwater in the plant. Run-off water from the office areas, shop roofs will be collected and sent to recharge pits. All storm water drains from the raw materials and solid waste handling areas will be routed through garland drains into catch pits of sufficient volume to settle out suspended solids present in the storm water run-offs. The clear water will be discharged into natural drainage channels. The sewage from the Plant will be sent to a septic pit and soak pit.

The entire solid waste will be recycled. The slag will be crushed in primary crusher and passed through a magnetic separator. The metallic pieces will be recycled to induction furnace. The non-metallic pieces will be converted into blocks through a pug mill which will be used for road making. The dust from the pollution control systems will also be sent to the pug mills. Some portion of non metallic solid waste will be sold to the cement plant.

Public hearing is not required as per Para 7 (i) III (b) of EIA Notification, 2006 as the project is located in notified industrial area.

The Committee noted that the State Level Environment Impact Assessment Authority, Uttar Pradesh has granted environmental clearance for expansion from 25500 to 62500 TPA steel capacity by installation of 15 MT induction furnace on 12.10.2009. However the project is under implementation stage. After detailed deliberation, the Committee recommended the project for environmental clearance subject to stipulation of following specific conditions along with other environmental conditions:

- i. The company shall install bag filters etc. to control the particulate emissions below 50 mg/Nm³.

- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.
- iii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB should be followed.
- iv. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- v. The total water requirement shall not exceed 198 KLD. No effluent shall be discharged and 'zero' discharge shall be adopted.
- vi. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB within 3 months of issue of environment clearance letter.
- vii. Earth quake and Seismic hazard management plan shall be submitted to the Ministry's Regional Office at Lucknow within three months.
- viii. As proposed, green belt shall be developed in 33 % of the plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program should be ensured accordingly in a time bound manner.

37.3.10 New Cement Grinding Unit with Fly Ash Dryer at Plot No. Spl-1, Spl-2 RIICO Paryavaran Industrial Area, Sakatpura, Kota, Rajasthan by Birla Corporation Limited - regarding reconsideration of Environmental Clearance

The above proposal was considered in the 34th Meeting of the Expert Appraisal Committee (Industry-1) held during 29th & 30th March, 2012. The Committee after detailed deliberations sought the following information for reconsideration:

- A copy of application submitted to National Board for Wildlife
- An authenticated map regarding location of project site from Gharial Sanctuary and Comments from Chief Wildlife Warden
- Revised layout plan after increasing the capacity of rain water harvesting pond
- A copy of Gazette notification of RIICO industrial area
- Data on trace element analysis of RSPM
- Chemical and trace element analysis of raw materials including fly ash
- Noise level management plan
- Digital Elevation Model and Flood Hazard history of the area
- Commitment for providing covered belt conveyor for fly ash transportation

- Occupational health:
 - a) 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,
 - b) 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.
 - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.

The above information was submitted by the proponent. The proponent and their consultant, M/s Cholamandalam MS Risk Services Limited, Chennai, also made a presentation before the EAC. After detailed deliberations, the committee recommended the project for environmental clearance subject to stipulation of following specific conditions along with other environmental conditions:

- i. Particulate emissions shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB regularly.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.
- iii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed.
- iv. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. All the raw material stock piles should be covered. A closed clinker stockpile system shall be provided. All conveyers should be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling.
- v. Asphaltting/concreting of roads and water spray all around the stockyard and loading/unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- vi. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and should not be overloaded. Vehicular emissions should be regularly monitored.
- vii. Total water requirement shall not exceed 72 m³/day and necessary permission for the drawl shall be obtained. All the treated wastewater should be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.

- viii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- ix. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process used for cement manufacturing. Spent oil and batteries should be sold to authorized recyclers / reprocessors only.
- x. Green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.
- xi. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program should be ensured accordingly in a time bound manner.

Proposals for TORs

37.3.11 Expansion of Cast Iron unit (50,000 TPA) by installation of 5 no.of Induction Furnace to manufacture Cast Iron (1,00,800 TPA) at Jalan Industrial Complex Gate No. 1, JL:27, Village Biprannapara, P.S – Domjur, District Howrah, West Bengal by **M/s Kiswok Industries Pvt. Limited - regarding TORs**

The Project authorities and their consultant, M/s Techno Analytical, Kolkata gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for the preparation of EIA/EMP. The project category is listed at S.No. 3(a) under category B of the Schedule of EIA Notification, 2006 and appraised by the SEIAA/SEAC. However, due to location of the project within 10 km of the Critically Polluted Area and applicability of general condition, the proposal has been appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Kiswok Industries Pvt. Limited has proposed for expansion of Cast Iron unit (50,000 TPA) by installation of 5 no.of Induction Furnace to manufacture Cast Iron (1,00,800 TPA) at Jalan Industrial Complex Gate No. 1, JL:27, Village Biprannapara, P.S – Domjur, District Howrah, West Bengal. Total project area will be 3 Bigha (4,013 Sq.m) and green belt will be developed in 1,103.5 Sq.m of plant area. No rehabilitation and resettlement is involved. No national parks/wild life sanctuary/reserve forests are located within 10 km radius. Total cost of the project is Rs. 50.5 Crores. Total capital cost and recurring cost/annum for environmental pollution control measures are Rs 21 Lakhs and Rs. 3 Lakhs respectively.

Pig Iron- 57,932.06 TPA, MS Scrap-38,621.37 TPA, Ferro Silico Mg-1,372.57 TPA, Ferro Silico Inoculant-231.92 TPA, Ferro Silico Lump-520.63 TPA, Ferro Chrome-348.35 TPA, Silico Manganese-310.48 TPA and Moulding Sand-662.62 TPA will be used as raw materials for the proposed project. No charcoal will be used as reductant. Power (8,900 KVA) will be sourced from W.B.S.E.D.C.L and 2 X 500 KVA D.G Sets are present for meeting emergency requirements of plant utilities during power failure. Bag filter system with spark arrestor, ducting, valves, ID fans will be provided to control emissions. The clean gas will be released to the atmosphere by the ID fans through chimney. Makeup water requirement will be 320 m³/d for the proposed plant and will be sourced from bore well/ rainwater harvesting pond. The treated effluent will be used for dust suppression and green belt development. Domestic effluent will be treated in septic tank. No effluent will be discharged outside the premises and zero discharge will be adopted. Fines collected from Bag filter from Induction furnace will be recycled. Slag (10,000 TPA) will be used in road / area / land development.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Certified distance of the project site from the nearest critically polluted area. If the project area lies within 10 km of critically polluted area, only then the proposal shall be appraised at the Centre, else shall be transferred to SEIAA, West Bengal.
2. Executive summary of the project.
3. Photographs of the existing and proposed plant area.
4. Compliance to the conditions stipulated for existing capacity in the environmental clearance or NOC obtained from the SPCB.
5. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
6. 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, compliance to the notice(s). A line diagram/flow sheet for the process and EMP
7. Coal linkage documents
8. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should 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 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing landuse/landcover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
12. A list of industries within 10 km radius of the plant area.
13. Details and classification of total land (identified and acquired) should be included.
14. Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
15. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
16. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included.
17. Mass balance for the raw material and products should be included.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
20. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
21. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
22. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
23. Air Quality Impact Prediction Modelling based on ISCST-3 or the latest models.
24. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
25. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
26. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
27. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V

diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.

28. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
29. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.
30. A note on the impact of drawl of water on the nearby River during lean season.
31. Action plan for rainwater harvesting measures.
32. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
33. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
34. Pretreatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.
35. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
36. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included.
37. Identification and details of land to be used for all type of slag disposal in the secured land fill as per CPCB guidelines should be included.
38. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
39. Provision of Toxic Chemical Leachability Potential (TCLP) test for the slag and its end use should be included.
40. Action plan for the green belt development plan in 33 % area should be included.
41. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
42. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
43. Occupational health:
 - a) 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,
 - b) 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.
 - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
44. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing proceedings and item-wise details alongwith time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
45. Total capital cost and recurring cost/annum for environmental pollution control measures should also be included.
46. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
47. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned 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 should be provided. The draft EIA/EMP report shall be submitted to Punjab Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP report including public hearing proceedings.

37.3.12 Proposed Iron ore Beneficiation Plant (1.5 MTPA), Pellet Plant (1.2 MTPA), Producer gas plant (480 TPD or 75,000Nm³/hr) and Coke Oven Plant (0.225 MTPA) along with 15 MW WHRB based Captive Power Plant at Village Gokulpur, Tehsil Kharagpur, District Paschim Medinipur in West Bengal by M/s Orissa Metaliks Pvt. Limited - regarding TORs

The project authorities and their consultant, M/s Envirotech East Pvt. Ltd., Kolkata gave a detailed presentation on the salient features of the project and proposed environmental protection measures, to be undertaken along with the draft Terms of Reference for the preparation of EIA/EMP Report. All the steel plants are listed at S.No. 3(a) in primary metallurgical industries (ferrous & non ferrous) under category 'A' of Schedule of EIA Notification, 2006 and appraised by Expert Appraisal Committee (Industry-1) of MoEF.

M/s Orissa Metaliks Pvt. Limited has proposed for Iron ore Beneficiation Plant (1.5 MTPA), Pellet Plant (1.2 MTPA), Producer gas plant (480 TPD or 75,000Nm³/hr) and Coke Oven Plant (0.225 MTPA) along with 15 MW WHRB based Captive Power Plant at Village Gokulpur, Tehsil Kharagpur, District Paschim Medinipur in West Bengal. The proposed Plant will be established on 78 acres of barren land, out of which 33% area will be developed under green belt. The proposed project is not located within 10 km of Critically Polluted Area. No National Park / Wildlife Sanctuary / Reserve Forest are located within 10 km from the project site. Kharagpur town is around 3.5 km from the project site. Midnapur town, District Head Quarter, is around 7.0 km from the project site. Kangsavati River is flowing at 4.5 km from the project site. Total cost of the project is Rs. 420 Crores. No litigation or court case is pending against the project and/or land.

The proposed units along with their capacities are as follows:

Unit	Capacity	Product
Iron Ore Beneficiation Plant	15,00,000 TPA	Iron Ore Concentrate
Pellet Plant	12,00,000 TPA	Pellet
Producer Gas Plant	480 TPD	Producer Gas
Coke Oven Plant	2,25,000 TPA	Metallurgical Coke
Captive Power Plant	15 MW (WHRB Based)	Power

Iron Ore Fines, Coal, Coking Coal, Lime Stone and Bentonite will be used as the major raw materials in the plant process. The total power requirement will be around 10 MW. Initially Power will be sourced from West Bengal State Electricity Distribution Company Ltd. (WBSEDCL). After commissioning of the CPP, required Power for the Project will be sourced from the CPP. Plant will be operated on house load and excess power will be sold to WBSDCL.

There will be emissions during handling of raw materials and products, which will be controlled by dust suppression system. Particulate emissions from the plant will be controlled within 50 mg/Nm³ with the use of high efficiency ESPs, Bag Filters etc. The cleaned gases will be discharged to the atmosphere through stacks of adequate height. Water sprinkling will be done along the haul roads to control dust arising from vehicular movement. Total make up water requirement for the proposed project will be 792 m³/day, which will be sourced from Kansabati River. Water system will be designed for “Zero Discharge” wherein all discharges will be treated and reused in the plant. Domestic wastewater will be treated in Septic tank – Soak pit system. Tailings from Beneficiation unit will be disposed off in a designated location within the project premises. Dust as collected in the dedusting system from Pellet Plant will be used in the pelletizing mix. Coke breeze from Coke Oven Plant will be used in the pellet plant.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Coal linkage documents
5. A copy of the mutual agreement for land acquisition signed with land oustees.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
7. Present land use should 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 should be used for land used/land-cover mapping of the area.
8. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
9. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing landuse/landcover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
10. Project site layout plan showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
12. Details and classification of total land (identified and acquired) should be included.
13. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
14. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
15. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
16. A list of industries containing name and type in 25 km radius should be incorporated.
17. Residential colony should be located in upwind direction.
18. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be “Environmentally Compliant”.
19. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included..

20. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
21. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
22. Action plan for excavation and muck disposal during construction phase.
23. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
24. Manufacturing process details for all the plants should be included.
25. Mass balance for the raw material and products should be included.
26. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
27. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
28. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
29. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
30. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
31. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
32. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
33. Air quality modeling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm³.
34. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
35. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
 - i) Emissions (g/second) with and without the air pollution control measures
 - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
 - iii) Model input options for terrain, plume rise, deposition etc.
 - iv) Print-out of model input and output on hourly and daily average basis
 - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
 - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
 - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
 - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
 - ix) Graphs of monthly average daily concentration with down-wind distance
 - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
 - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.

36. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
37. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
38. One season data for gaseous emissions other than monsoon season is necessary.
39. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
40. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
41. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
42. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
43. Ground water modeling showing the pathways of the pollutants should be included
44. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
45. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
46. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
47. A note on the impact of drawl of water on the nearby River during lean season.
48. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
49. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
50. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
51. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
52. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
53. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
54. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans.
55. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
56. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
57. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. needs to be addressed.
58. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.

59. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
60. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
61. 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. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
62. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
63. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
64. Occupational health:
 - a) 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,
 - b) 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.
 - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
 - e) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
65. 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.
66. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
67. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
68. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
69. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
70. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
71. A note on identification and implementation of Carbon Credit project should be included.
72. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned 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 should be provided. The draft EIA/EMP report shall be submitted to the West Bengal Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

37.3.13 Proposed Steel Melting Shop (Induction Furnace (2x15 T - 99,000 TPA) at J.L. No. 24, Plot No. 2124 (P), 2125 (P), Village kadasole, Mouza Ghutgoria, District Bankura in West Bengal by M/s Gupta Ispat Pvt. Limited - regarding TORs

The above proposal is a category B project, but was submitted at the Centre with the presumption that it is within 10 km of Durgapur and the General Condition (GC) of EIA Notification, 2006 shall apply. The committee noted that, Durgapur is a severely polluted area and not a critically polluted area. Hence, the GC will not apply and the proposal shall be transferred to SEIAA, West Bengal for appraisal.

37.3.14 Proposed Pellet Plant along with Iron Ore Beneficiation Plant at Village Jitusole, Mouja Bagmuri, P.S. Jhargram, District Paschim Medinipur in West Bengal by M/s Rashmi Iron & Industries Pvt. Limited - regarding TORs

The project authorities and their consultant, M/s Envirotech East Pvt. Ltd., Kolkata gave a detailed presentation on the salient features of the project and proposed environmental protection measures, to be undertaken along with the draft Terms of Reference for the preparation of EIA/EMP Report. The pellet plants are listed at S. No. 3(a) under Primary Metallurgy Industries under Category A of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s Rashmi Iron & Industries Pvt. Limited has proposed for the Installation of Pellet Plant along with Iron Ore Beneficiation Plant at Village Jitusole, Mouja Bagmuri, P.S. Jhargram, District Paschim Medinipur in West Bengal. The proposed Plant will be established on 51 acres of barren land, out of which 33% area will be developed under green belt. No National Park / Wildlife Sanctuary / Reserve Forest is located within 10 km. from the project site. Jhargram town is around 9.0 km from the project site. Kangsavati River is flowing at 12 km in North-east direction while Subarnarekha River is passing at 16 km in south direction w.r.t. the project site. Total cost of the project is Rs. 330 Crores.

The proposed units along with their capacities are as follows:

Unit	Capacity	Product
Iron Ore Beneficiation Plant	15,00,000 TPA	Iron Ore Concentrate
Pellet Plant	12,00,000 TPA	Pellet
Producer Gas Plant	480 TPD	Producer Gas

Iron Ore, Coal fines, Lime Stone and Bentonite will be used as the major raw materials in the plant process. The total power requirement will be around 8 MW, which will be met from West Bengal State Electricity Distribution Company Ltd. (WBSEDCL). The emissions from handling of raw materials and products will be controlled by dust suppression system. Particulate emissions from the plant will be controlled within 50 mg/Nm³ with the use of high efficiency ESP, Bag Filters etc. The cleaned gases will be discharged to the atmosphere through stack of adequate height. Water sprinkling will be done along the haul roads to control dust arising from vehicular movement. Total water requirement for the proposed project will be 600 m³/day, which will be sourced from Subarnarekha River. Water system will be designed for “Zero Discharge” wherein all discharges will be treated and reused in the plant. Domestic wastewater will be treated in Septic tank – Soak pit system. Tailings from Beneficiation unit will be disposed off in a designated location within the project premises. Dust collected in the dedusting system from Pellet Plant will be used in the pelletizing mix.

After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Coal linkage documents
5. A copy of the mutual agreement for land acquisition signed with land oustees.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
7. Present land use should 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 should be used for land used/land-cover mapping of the area.
8. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
9. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
12. Details and classification of total land (identified and acquired) should be included.
13. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
14. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
15. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
16. A list of industries containing name and type in 25 km radius should be incorporated.
17. Residential colony should be located in upwind direction.
18. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
19. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included..
20. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
21. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
22. Action plan for excavation and muck disposal during construction phase.
23. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
24. Manufacturing process details for all the plants should be included.

25. Mass balance for the raw material and products should be included.
26. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
27. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
28. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
29. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
30. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
31. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
32. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
33. Air quality modeling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm³.
34. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
35. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
 - i) Emissions (g/second) with and without the air pollution control measures
 - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
 - iii) Model input options for terrain, plume rise, deposition etc.
 - iv) Print-out of model input and output on hourly and daily average basis
 - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
 - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
 - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
 - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
 - ix) Graphs of monthly average daily concentration with down-wind distance
 - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
 - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
36. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
37. One season data for gaseous emissions other than monsoon season is necessary.
38. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
39. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
40. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from

river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.

41. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
42. Ground water modeling showing the pathways of the pollutants should be included
43. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
44. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
45. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
46. A note on the impact of drawl of water on the nearby River during lean season.
47. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
48. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
49. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
50. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
51. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
52. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
53. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans.
54. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
55. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
56. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. needs to be addressed.
57. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.
58. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
59. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
60. 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. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.

62. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
63. Occupational health:
 - a) 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,
 - b) 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.
 - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
 - e) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
64. 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.
65. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
66. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
67. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
68. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
69. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
70. A note on identification and implementation of Carbon Credit project should be included.
71. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned 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 should be provided. The draft EIA/EMP report shall be submitted to the West Bengal Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP reports along with Public Hearing Proceedings.

37.3.15 Expansion of Cement Plant by installation of new Line II (Clinker 4.0 MTPA, Cement 4.0 MTPA) along with 50 MW Captive Power Plant, WHRB- 15 MW and DG Set 2x6 MW at Hirmi Cement Works at Village Hirmi, Tehsil Simga, District Raipur in Chhattisgarh by M/s UltraTech Cement Limited- regarding corrigendum for subject matter of Project Proposal

The above proposal was accorded ToRs for preparation of EIA report by MoEF vide letter no. J-11011/586/2011-IA II (I) dated 14.2.2012. The PP vide letter dated 11.5.2012 has requested MoEF for

issuance of Corrigendum for change of subject matter of Project Proposal. The PP and their environmental consultant, M/s. J.M. EnviroNet Pvt. Ltd., Gurgaon have also made a presentation before the committee.

It is proposed to revise the subject matter as **“Expansion of Integrated Cement Project - Cement (2.75 to 6.75 MTPA), Clinker [2.2 MTPA to 6.75 MTPA (Line I - 2.2 MTPA to 2.75 MTPA, Proposed Line II - 4.0 MTPA)], CPP (50 MW to 100 MW), DG Set (18 MW to 30 MW) and WHRB - 15 MW”** keeping capacities same as per the ToR letter but to include the present plant capacity as it is a Brownfield project. The revised Form-1 and Pre-feasibility report were submitted.

The existing and proposed project configuration is as follows:

Units	Existing Capacity (Line-I)	Proposed Expansion Capacity	Total Capacity After Expansion
Clinker (MTPA)	2.2	Line- I (2.2- 2.75 MTPA) Line-II- 4.0 MTPA	6.75
Cement (MTPA)	2.75	Line II - 4.0	6.75
CPP (MW)	50 (2x25)	Line II - 50 (2 x 25)	100 (4x25)
WHRB (MW)	-	Line II – 15	15
D.G. Set (MW)	18 (3x6)	Line II - 12 (2 x 6)	30

After detailed deliberations, the committee recommended the issuance of corrigendum for subject matter of project proposal as **“Expansion of Cement Project by installation of new Line II-Clinker (2.75 MTPA to 6.75 MTPA), Cement (2.75 MTPA to 6.75 MTPA), CPP (50 MW to 100 MW), DG Set (18 MW to 30 MW) and WHRB - 15 MW”**.

37.3.16 Expansion of White Cement Production Capacity from 0.56 Million TPA to 1.4 Million TPA and Captive Power Plant capacity from 7.5 MW to 33.5 MW at Rajashree Nagar, Village: Kharia Khangar, Tehsil: Bhopalgarh, District: Jodhpur, Rajasthan by **M/s. UltraTech Cement Limited (Unit: Birla White) - reg. ToRs**

The project authorities and their consultant M/s. J. M. EnviroNet Pvt. Ltd., Gurgaon gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the proposed Terms of References for preparation of EIA/EMP report. The Cement Plants with production capacity more than 1.0 MTPA are listed at S. No. 3 (b) under Category “A” of the Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry-1) of MoEF.

M/s. Ultra Tech Cement Limited has proposed for expansion of White Cement Production Capacity from 0.560 Million TPA to 1.40 Million TPA and Captive Power Plant capacity from 7.5 MW to 33.5 MW at Birla White Unit at Rajashree Nagar, Village: Kharia Khangar, Tehsil: Bhopalgarh, District: Jodhpur, Rajasthan. The total area of the existing plant is 204 acres and an additional area of 80 acres is required for the proposed expansion. 43% of the total plant area has already been developed under greenbelt / plantation area. The same will be maintained & further enhanced for proposed expansion project. No ecologically sensitive area such as national park, wildlife sanctuary, Biosphere reserves, Wildlife corridor, Tiger/ Elephant reserve, Reserved/ Protected Forest are falling within the study area of 10 km radius of the project site. Total cost of the project is Rs. 1,061 Crores. Capital cost for Environmental Protection Measures is Rs. 76 Crores and Recurring Cost is Rs. 18 Crores/annum.

Details of the project proposal are as given below:

Particulars	Existing Production	Proposed Modernizations	Installation of additional new	After proposed Modernizations in
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		in existing Line	Line	existing Line and installation of new Line
Cement Production	0.56 MTPA	0.68 MTPA	0.72 MTPA	1.40 MTPA
Captive Power Plant	7.5 MW	8.5 MW	25 MW	33.5 MW

The cement plant will be based on the dry process technology for cement manufacturing with pre-heating and pre-calcliner technology. Limestone and other raw materials like clay, gypsum, feldspar, fluorspar shall be sourced through own captive mines as well as external suppliers of area. Existing Power requirement is 33.50 MW. Power required for the proposed expansion project will be 19.65 MW which will be sourced from the captive power plant. DG sets capacity will be augmented from 9925 KVA to 14525 KVA by adding 7500 KVA DG set (1 No) and discarding two DG sets of 1450 KVA. To control particulate emissions, all major sources of air pollution will be provided with Bag Houses/Bag filters, ESPs to maintain the PM emission level below 50 mg/Nm³. All material transfer points have been provided with bag filters to entrap the emissions at the source itself. Clinker & fly ash will be stored in silo and gypsum in covered yard.

Total water requirement will be around 2,650 KLD (existing 1,250 KLD and additional 1,400 KLD), which will be met from Bore well. No industrial wastewater will be generated in the Cement Plant and "Zero discharge" will be maintained. Domestic wastewater generated from Cement Plant/Colony will be treated in the STP. The treated water will be utilized for Greenbelt Development/Horticulture activities. Rain water harvesting will be done. No solid waste will be generated in cement manufacturing process. Dust collected from various pollution control equipments will be recycled back to the process. STP Sludge will be utilized as manure for green belt development within the plant premises.

The proponent requested to utilize the environmental data being collected in the existing unit in the EIA Report, for which the committee has agreed. After detailed deliberations, the Committee prescribed following TORs for undertaking detailed EIA/EMP study:

1. Executive summary of the project
2. Photographs of the existing and proposed plant area.
3. Compliance to the conditions stipulated for existing capacity in the environmental clearance or NOC obtained from the SPCB.
4. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. 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, compliance to the notice(s)
6. A line diagram/flow sheet for the process and EMP
7. Coal linkage documents
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should 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 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
12. Project site layout plan showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
13. Details and classification of total land (identified and acquired) should be included.

14. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
15. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
16. Permission and approval for the use of forest land and recommendations of the State Forest Department regarding impact of proposed expansion on the surrounding reserve forests, if applicable, should be included.
17. A list of industries containing name and type in 10 km radius shall be incorporated.
18. Residential colony should be located in upwind direction.
19. List of raw material required and source alongwith mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
20. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per ISO-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.).
21. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO_2 , Al_2O_3 , MgO , MnO , K_2O , CaO , FeO , Fe_2O_3 , P_2O_5 , H_2O , CO_2 .
22. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
23. Studies for fly ash, muck disposal, slurry, sludge material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
24. Manufacturing process details for all the cement plant, captive power plant and mine should be included.
25. Possibility of installation of WHRB will be explored and details included
26. Mass balance for the raw material and products should be included.
27. Energy balance data for all the components including proposed power plant should be incorporated.
28. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
29. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
30. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
31. Vehicular pollution control and its management plan should be submitted.
32. A write up on use of high calorific hazardous wastes from all the sources in kiln and commitment regarding use of hazardous waste should be included.
33. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
34. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
35. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
36. Air quality modeling for all the plants proposed including mine for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm^3 should be included. Cumulative impacts of cement plant, Captive Power Plant and mines located at a distance of 2.0 km on the ambient air quality shall be assessed.
37. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.

38. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
 - i) Emissions (g/second) with and without the air pollution control measures
 - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height using SODAR) on hourly basis
 - iii) Model input options for terrain, plume rise, deposition etc.
 - iv) Print-out of model input and output on hourly and daily average basis
 - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
 - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
 - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
 - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
 - ix) Graphs of monthly average daily concentration with down-wind distance
 - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
 - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
39. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
40. One season data for gaseous emissions other than monsoon season is necessary.
41. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
42. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
43. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
44. Ground water modeling showing the pathways of the pollutants should be included
45. Column leachate study for all types of stockpiles or waste disposal sites, at 20°C-50°C should be conducted and included.
46. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
47. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
48. A note on the impact of drawl of water on the nearby River during lean season.
49. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
50. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
51. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
52. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.

53. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
54. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans.
55. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
56. Action plan for solid/hazardous waste generation, storage, utilization and disposal. A note on the treatment, storage and disposal of all type of solid waste should be included. End use of solid waste viz. fly ash etc. and its composition should be covered.
57. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
58. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
59. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
60. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
61. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the traveling roads should also be incorporated. All rooftops/terraces should have some green cover.
62. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
63. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
64. Occupational health:
 - a) 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,
 - b) 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.
 - c) Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
 - e) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
65. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
66. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
67. A note on identification and implementation of Carbon Credit project should be included.
68. Total capital cost and recurring cost/annum for environmental pollution control measures.
69. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.

70. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned 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 should be provided. The draft EIA/EMP report shall be submitted to the Rajasthan State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP report including public hearing proceedings.

Any Other Item

37.3.17 Expansion of ferro Alloy Plant from 65,000 TPA to 1,30,000 TPA at Randia, District Bhadrak in Orissa by M/s Ferro Alloys Corporation Limited - regarding Amendment in Environmental Clearance

The above proposal was accorded environmental Clearance vide MoEF letter No. J-11011/594/2008-IA.II (I) dated 4th May, 2009. The PP vide letter dated 16.5.2012 has requested MoEF for reduction of permitted capacity from 1,30,000 TPA to 1,15,000 TPA by installation of 27 MVA SEAF instead of already permitted 45 MVA SEAF. The PP and their environmental consultant, M/s Sun Consultancy and Services, Bhubaneswar have also made a presentation before the committee.

It was informed that, the recession in the market scenario, financial crisis, low operating cost, reduction in raw material requirement, availability of indigenous equipment & spares are the main reasons for going for a reduced capacity with installation of 27 MVA furnace instead of 45 MVA furnace. There will be no change in production technology, characteristics of raw material, utility and product mix. There will be less pollution load on the environment as the emission rate and generation of solid waste will reduce appreciably in the present proposal.

After detailed deliberations, the committee recommended the above amendment in environmental clearance dated 4th May, 2009 subject to the environmental safeguards.

37.3.18 Ferro Alloy Plant with installation of 2 x 6.5 MVA Submerged Arc Furnace and manufacture 28,000 TPA of Fe-Mn and 19,000 TPA of Si-Mn and 9300 TPA of Fe-Si or 19,000 TPA of Ferro-Chrome at Sy. No: 15/E, Fouzpur Village, Taroda (B) Grampanchayat, Jainath Mandal, Adilabad District of Andhra Pradesh by M/s Balaji Electro Smelters Limited – regarding amendment in Environmental Clearance

The committee noted that the request made by the proponent for amendment in environmental clearance cannot be acceded to as it is a case of expansion.

37.3.19 Expansion of Cement Grinding Unit (1.8 MTPA to 4.0 MTPA) and installation of Captive Power Plant (25 MW) and DG Set (6 MW) near Hotgi Station, District Solapur in Maharashtra by M/s Birla Super Cement (A Division of Grasim Industries Limited) - regarding Amalgamation

The above proposal was accorded environmental Clearance for vide MoEF letter No. J-11011/1031/2007-IA.II (I) dated 4th July, 2008 in the name of M/s. Birla Super Cement (A Division of Grasim Industries Limited). The PP has requested MoEF for change in the name of company from M/s. Birla Super Cement to M/s. Ultratech Cement Limited. The PP and their environmental consultant, M/s. J.M. EnviroNet Pvt. Ltd., Gurgaon have also briefed the committee.

It was informed that, Grasim Industries Limited amalgamated with Samruddhi Cement Ltd. as per the sanction of Scheme of Arrangement ("Demerger Scheme") between Grasim and Samruddhi by the

Hon'ble High Court of Madhya Pradesh at Indore and the Hon'ble High Court of Gujarat. Further, Samruddhi Cement Ltd. amalgamated with UltraTech Cement Ltd. as per the sanction of Scheme of Amalgamation ("Amalgamation Scheme") of Samruddhi with UltraTech Cement Ltd. by the Hon'ble High Court of Bombay and the Hon'ble High Court of Gujarat. The above was intimated to MoEF vide letters dated 14.5.2010, 29.5.2010 and 26.7.2010. The certified true copies of the resolution passed at the Meeting of the Board of Directors of the company dated 3.5.2010 and 25.7.2010 were submitted.

After detailed deliberations, the committee recommended the change of name in the environmental clearance dated 4th July, 2008 from Birla Super Cement to UltraTech Cement Ltd. subject to the environmental safeguards.

37.3.20 Expansion of Cement Plant (from 200 TPD to 2,500 TPD) at Sy. No. 47, Village Hadad, Taluk Danta, District Banaskantha in Gujarat by M/s Shriram Cement Limited - regarding Amendment in TORs

The above proposal was accorded ToRs for preparation of EIA report by MoEF vide letter no. J-11011/197/2011-IA II (I) dated 10.6.2011. The PP vide letter dated 10.5.2012 has requested MoEF for amendment in ToRs for inclusion of manufacture of Portland Slag Cement (PSC) along with OPC and PPC without increasing the total production capacity. The PP and their environmental consultant, M/s. J.M. EnviroNet Pvt. Ltd., Gurgaon has also made a presentation before the committee.

It was informed that, in order to make the project proposal more environmental friendly, it is proposed to manufacture PSC by addition of slag along with PPC & OPC without increasing the total production capacity. The revised Form-1 and Pre-feasibility report were submitted.

After detailed deliberations, the committee recommended the amendment in ToRs dated 10.6.2011 for inclusion of manufacture of PSC along with OPC and PPC without increasing the total production capacity along with prescription of latest additional ToRs.

37.3.21 Proposed Cement plant (Cement 5.5 MTPA; Clinker 4.5 MTPA) along with Captive Power Plant (3x25 MW), DG Set (3 x 6 MW) and Waste Heat Recovery (15 MW) at District Karur, and Dindigul Tamil Nadu by M/s Samruddhi Cement Ltd. (Formerly M/s Grasim Industries Ltd.) - amendment in TORs

The above proposal was accorded ToRs for preparation of EIA report by MoEF vide letter no. J-11011/102/2010-IA II (I) dated 19.7.2010 in the name of M/s Samruddhi Cement Ltd. The PP vide letter dated 26.3.2012 has requested MoEF for amendment in the ToR letter w.r.t change in the name of company from M/s Samruddhi Cement Ltd. to M/s. Ultratech Cement Limited. During the meeting, it was also requested for extension of validity of ToRs for submitting the EIA report

It was informed that, Grasim Industries Limited amalgamated with Samruddhi Cement Ltd. on 13.5.2010, which further amalgamated with UltraTech Cement Ltd. on 25.7.2010. The same was intimated to MoEF vide letter dated 8.9.2010. Due to the land acquisition issues, the project was delayed for about 20 months.

After detailed deliberations, the committee recommended the extension of validity of ToRs dated 19.7.2010 for a period of 1 year with prescription of latest additional ToRs and change of name from Samruddhi Cement Ltd. to UltraTech Cement Ltd.

"The Committee thanked the Ministry for the opportunity afforded to appraise industrial projects and submit its recommendations. The Chairman and members placed on record their genuine appreciation of the splendid support received from Dr Ahujarai and her team comprising of Shri Ramesh, Shri Sakre and each member of the office staff. The Chairman expressed his gratitude to all the members of the Committee for their most purposeful and objective contribution."

The meeting ended with a vote of thanks to the Chair.

LIST OF PARTICIPANTS IN 37th EAC (INDUSTRY-1) MEETING (14th -15th June, 2012)

Expert Appraisal Committee (Industry-1) :			
1.	Dr. T. S. Vijayaraghavan	Chairman	P
2.	Shri. Shiban Raina	Vice-Chairman	P
3.	Prof. Manju Mohan	Member	P
4.	Prof. Jayanta Bhattacharya	Member	P
5.	Prof. R.C. Gupta	Member	P
6.	Dr. R.M. Mathur	Member	P
7.	Dr. S. K. Dave	Member	P
8.	Prof. C. S. Dubey	Member	P
9.	Prof. Pradeep Kumar Garg	Member	P
10.	Dr. K. Sankar	Member	P
MOEF Officials :			
11.	Dr. P.L. Ahujarai	Scientist 'F' & Member Secretary	
12.	Shri Ramesh Motipalli	Scientist 'C'	
13.	Shri P.R. Sakhare	Research Officer	
