

**MINUTES OF THE 14th RECONSTITUTED EXPERT APPRAISAL COMMITTEE
(INDUSTRY) HELD DURING 19th TO 20th DECEMBER, 2013**

VENUE: Scope Complex, Core 6, 5th Floor, IOCL Conference Room, Ministry of Petroleum and Natural Gas, Lodhi Road, New Delhi 110 003.

TIME 10.30 A.M.

14.0 Opening Remarks of the Chairman

At the outset, Chairman welcomed the members of the Expert Appraisal Committee (Industry). Thereafter, agenda items were taken up for discussion. The deliberations held and decisions taken are as under.

14.1 Confirmation of the Minutes of the 13th Reconstituted Expert Appraisal Committee (Industry) held during 18th November, 2013 – 20th November, 2013.

The minutes of the 13th Reconstituted Expert Appraisal Committee (Industry) meeting held during 18th November – 20th November 2013 were confirmed.

19th December, 2013

14.2.0 Consideration of the Projects:

Environmental Clearance

14.2.1 Proposed increase in production of Asbestos Sheets from 1,08,000 TPA to 1,44,000 TPA at Village Mau, Taluka Mohanlalganj, District Lucknow, Uttar Pradesh by M/s U.P. Asbestos Limited – regarding Environment Clearance.

The Project Authorities (PAs) and their consultant M/s. Ecomen Laboratories Private Limited - Lucknow gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 31st meeting of the Expert Appraisal Committee (Industry -1) held on 22nd -23rd December, 2011 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide F.No.J-11011/567/2011-IA-II (I) dated 9.1.2012 for preparation of EIA/EMP report. The PAs submitted the final EIA/EMP report vide letter no UPAL/MoEF/Sep-2013 dated 16.9.2013 after conducting Public Hearing for grant of Environmental Clearance. All the Asbestos milling & asbestos based products are listed at S.No. 4 (c) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

2. The salient points of the proposed project as per the final EIA/EMP report submitted by PAs vide letter referred above in para 1 are as follows:

M/s U.P Asbestos Limited have proposed to expand the production of asbestos sheets from 1,08,000 metric TPA to 1,44,000 metric TPA. The proposed expansion will be carried out in the existing plant area of 46.68 acres. No additional land is required for the proposed expansion. The latitude and longitude of the project site is 26^o 41' 29"N to 26^o 41' 43" N and 80^o 58' 44" E to 80^o 58' 59" E respectively. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. No court case/litigation is pending against the proposed project. Total cost of the project is Rs. 30 lakh. Rs. 3.50 lakhs and Rs.7.98 lakhs is earmarked for the capital cost and recurring cost per annum towards the

environmental pollution control measures. Rs. 50 lakhs is earmarked towards the Enterprise Social Commitment related activities.

The capacity of the existing and the proposed expansion project activity has been tabulated below:

S.No.	Asbestos sheet manufacturing	Capacity
I.	Existing	1,08,000 TPA
II.	Proposed expansion	36,000 TPA
	Total asbestos manufacturing capacity	1,44,000 TPA

The existing plant got environmental clearance from the Ministry vide letter no. J-11011/31/1998-IA.II (I) dated 24.3.1999 and J-11011/43/2000-IA.II(I) dated 20.11.2010. Regional Office of MoEF at Lucknow had sent the certified compliance report for the existing unit. The Committee noted that compliance to the EC conditions is satisfactory.

The technology adopted for manufacturing of AC sheets is Hatschek Process. Since it is an expansion project hence the same technology will continue for expansion also. The proposed expansion will be achieved by increase in bigger length of Asbestos sheet. There will be no increase in area, machineries or technology of production as the plant has inbuilt capacity to produce more & longer size of asbestos sheets.

The raw materials required after the proposed expansion are O.P.C Cement (58,830 TPA), Chrysotile Asbestos Fibre (11,100TPA), fly ash (38,850 TPA) and Cotton rag pulp (2220 TPA). The O.P.C cement will be sourced from M/s. ACC Cement, M/s.Jaiprakash Associates, M/s. J.K.Laxmi & M/s.Ultra Tech cement and then transported to the plant site by rail/road. The Chrysotile Asbestos Fibre will be imported from Poland, Zimbabwe, and Russia etc and transported to the plant site by road. The fly ash and cotton rag pulp will be sourced from NTPC thermal power plant at Sat Unchahar, Shaktinagar & Rihand and Unnao respectively. The power requirement will be met from steam turbine of 1.25 MW capacity (rice husk based). D.G. sets of 1250 KVA, 625 KVA and 200 KVA are available as standby arrangement.

Ambient air quality monitoring has been carried out at 8 locations during January to April 2012 and the data submitted indicated: PM₁₀ (54.3 to 127 µg/m³), SO₂ (9.5 to 15.50 µg/m³) and NO_x (15.80 to 30.0 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 10.45 µg/m³, 1.83 µg/m³ and 3.17 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. Stack of adequate height will be provided for wider dispersion of air emissions. Industrial vacuum cleaners will be used to sweep the floor in the plant. All internal roads will be made pucca to ensure no fugitive emission due to plying of trucks. Water sprinkling will be done on the roads and monitoring of stack will be done regularly to check the emission levels. From godown to milling section the asbestos fibre handling will be done by automatic mechanized system. Automatic bag opening system will be used for opening asbestos fibre bag. Good housekeeping practices will be adopted to control the fugitive emissions.

The water requirement after the proposed expansion will be 342 KLD and it will be met from bore wells. The project proponent has already received the permission for Ground water withdrawal of 270 KLPD. The application for 72 KLPD more is reported to be under process. The wastewater will be recycled in the process itself and there will be no effluent generation. The process water is passed through decantation tank & reused in the process. The solids in the process water, which are separated in the decantation tank is continuously tapped off in a concentrated form and utilized in the sheet manufacturing process. Domestic waste water generation is about 10 KL per day which is being sent to the septic tank.

Wet sheets formed on the bole are re-circulated back to process after pulping in waste pulper. Rejects generated at depiling stage, sorting, laboratory testing and commercial loading point will be collected, sorted and recuperated to the next smaller standard sizes at Carbo cutting plant. The net rejects after recuperation is sent to Hard Ground Waste (HGW) plant where the rejects are pulverized and reused in the process in slow dosing. Only a small amount which cannot be recycled in to the process will be disposed through authorized vendor. Area of about 25.06 acre is covered under green belt.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Uttar Pradesh Pollution Control Board on 23.03.2013 at 2.00 P.M. at Factory Premises under the chairmanship of Shri Devendra Kumar Pandey, Additional District Magistrate. The issues raised during the public hearing are - separate shed for storage of hazardous waste, continuous water sprinkling, handling of asbestos fibre, use of rice husk as fuel in boiler, use of dust mask which were addressed in the final EIA/EMP report.

3. After detailed deliberations, the Committee sought the following additional information for reconsideration:-

- i. Data on asbestos fibre count, total particulate count in stack emissions and work zone environment; and
- ii. Health impacts due to asbestos fibre including chest X ray, spirometry and medical examination of all the workers.

14.2.2 Expansion of existing 1x6 MVA Ferro Silicon Plant by addition of 2x9 MVA Submerged Arc Furnace to produce 35,000 TPA of Fe-Mn / Si-Mn and Fe-Chrome alloys at Ambakata, P.S. Barkote, District Deogarh in Orissa **by M/s Ispat Alloys India Pvt. Limited - regarding Environmental Clearance**

The Project Authorities (PAs) and their EIA Consultant Global Experts - Bhubaneswar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 28th meeting of the Expert Appraisal Committee (Industry -1) held on 26th-27th September, 2011 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide F.No. J-11011/363/2011-IA.II(I) dated 18.10.2011 for preparation of EIA/EMP report. The PAs submitted the final EIA/EMP report vide letter No. IA/PL/ENV-02/2012-13 dated 01.03.2013 after conducting Public Hearing for grant of Environmental Clearance. All the Ferro Alloy Plants are listed at S.No. 3(a) in Primary Metallurgical Industries under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2. The salient points of the proposed project as per the final EIA/EMP report submitted by the PAs vide letter referred above in para 1 are as follows:

M/s Ispat Alloy India Private Limited have proposed to expand the existing 1x6 MVA Fe-Si capacity plant by setting up 2x9 MVA ferro alloy plant to produce 35,000 TPA of Ferro-Manganese, Silico-Manganese and Ferro-Chrome alloys at Ambakata, P.S. Barkote, District Deogarh, Odisha. The land acquired for the proposed project is 15.35 acres of private land which was purchased from private parties. The longitude and latitude of the project site is 84° 57.1' E and 21° 31.32' N respectively. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. No court case/litigation is pending against the proposed project. The brahmani river is located at a distance of 6km from the project site. Total cost of the project is Rs 45.95 crores. Rs. 1.84 crores and Rs.11.70 lakhs is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control

measures. Rs. 2.30 crores is earmarked towards the Enterprise Social Commitment based on Public Hearing issues over a period of five years.

The capacity of existing and proposed expansion is as tabulated below:

S.No.	Name of the product	Quantity in TPA
Existing		
1.	Ferro silicon (Fe-Si)	5,000
Proposed expansion		
1.	Ferro manganese (Fe-Mn)	15,000
2.	Silico manganese (Si-Mn)	10,000
3.	Ferro chrome (Fe-Cr)	10,000

The Consent to Establish (CTE) and Consent to Operate (CTO) was granted by the Odisha Pollution Control Board (OPCB) on 26.9.2011 and 6.7.2012 respectively. Member Secretary, OPCB have sent the certified compliance report in respect of CTE and CTO to the Ministry vide letter no.21485/NOC-5793 dated 20.11.2013. As per the said report, the plant was not in operation since May, 2013. The Committee noted that compliance to the consent conditions is satisfactory.

In Ferro-alloy plant Ferro-manganese is commercially produced by carbothermic reduction of manganese ores, primarily in electric submerged arc furnaces (SAF). Silico-manganese (SiMn) is also produced by carbothermic reduction of oxidic raw materials in electric submerged arc furnaces. Production of high carbon Ferro-chrome involves chemical reduction of the oxide ore, Chromite with some carbonaceous material as reducing agent and using quartzite and lime and or/dolomite as fluxes

The raw materials required are Mn Ore (54, 000 TPA), Chrome ore lumps (7,200 TPA), Chrome ore fines (17,000 TPA), Quartzite Ore (600 TPA), Low ash coke (20,800 TPA), electrode paste (750 TPA) and dolomite (10,800 TPA). The Mn-ore will be sourced from Joda/Barbil, Odisha and transported to the plant site by road. The chrome ore will be sourced from Sukinda, Odisha. The Quartzite Ore, Low ash coke and electrode paste will be procured from local markets and transported to the plant site by road. The power requirement is 20 MW which will be met from the State Grid.

Ambient air quality monitoring has been carried out at 8 locations during November 2011 to February 2012 and the data submitted indicated: PM₁₀ (32.60 to 56.40 µg/m³), PM_{2.5} (10.8 to 20.50µg/m³), SO₂ (6.8 to 10.30 µg/m³) and NO_x (6.5 to 10.1 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 14.09 µg/m³, 4.46µg/m³ and 1.41 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The SAF units will be equipped with Water scrubber/bag filter/ESP arrangement with 99.9% efficiency. Atomized water sprinkling system will be provided at material conveyors. Water spraying arrangements will be made, particularly in raw material storage area, and truck tippler areas. Good housekeeping practices will be adopted to control the fugitive emissions.

The water requirement for the project would be 100 KLPD and it will be met from bore wells. The waste water generated shall be treated and utilized for Greenbelt Development. Rooftop Rainwater harvesting will be practiced within the plant premises. Rain water shall be utilized to reduce ground water drawl.

Slag generated from Ferro-Manganese manufacturing process (14,700 TPA) shall be used as raw material in Silico-Manganese production. Slag from Si-Mn (6,900 TPA) shall be used as land fill. Dust collected from various pollution control equipments will be recycled

back to the process. Fe-Cr slag (9,800 TPA) after recovery of alloy through jigging and FeSO₄ treatment will be used as land fill. Out of the total plant area (i.e. 15.32 Ac), 33% of total plant area will be developed under green belt / plantation in consultation with forest department around the plant boundary, roadside, office buildings and stretches of open land.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by the Odisha Pollution Control Board, Rourkela on 07.12.2012 under the chairmanship of ADM, Deogarh at Rajiv Gandhi Seva Kendra of Bijaynagar gram panchayat. The issues raised during public hearing are pollution control measures, employment to local people, separate approach road to NH-6, construction of a temple etc. which were addressed in the EIA/EMP report.

3. After detailed deliberations, the Committee sought the following additional information for reconsideration:-

- i. TCLP test for Fe-Cr slag;
- ii. Work zone environment management plan including exposure specific health of the workers; and
- iii. Revised risk assessment and disaster management plan.

14.2.3 Proposed Iron ore Beneficiation Plant (1.2 MTPA) and Pellet Plant (1.2 MTPA) at Village Kotegal, Tehsil Badami, District Bagalkot, Karnataka by **M/s. KNK Corp Pvt. Limited - regarding Environment Clearance.**

The Project Authorities (PAs) and their consultant EIA Consultant: M/s. Metamorphosis - Bengaluru gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 3rd meeting of the Reconstituted Expert Appraisal Committee (Industry) held on 3-5th December 2012 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide F.No. J-11011/217/2012-IA II (I) dated 12.2.2013 for preparation of EIA/EMP report. The PAs submitted the final EIA/EMP report vide letter no.nil dated 10/10/2013 after conducting Public Hearing for grant of Environmental Clearance. The proposed project activity is covered under Category (A) and listed at S.N.3(a) of the Schedule of the EIA notification 2006 and have to be appraised at the Central level.

2. The salient points of the proposed project as per the final EIA/EMP report submitted by project authorities vide letter referred above in para 1 are as follows:

M/s. KNK Corp Private Limited have proposed to set up an Iron ore Beneficiation Plant (1.2 MTPA) and Pellet Plant (1.2 MTPA) at Village Kotegal, Tehsil Badami, District Bagalkot, Karnataka. The land requirement for the proposed project is 318.182 acres (Private land and allotment through Karnataka Industrial Area Development Board, Government of Karnataka). The longitude and latitude of the project site is 75⁰ 45' 50.68" E and 16⁰4' 55.38" N. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. No court case/litigation is pending against the proposed project. Hiregudda reserve forests is located at a distance of 5km from the project site. The Krishna river is located at a distance of 16km from the project site. Total cost of the project is Rs. 569.46crores. Rs. 26.6487crores and Rs.3.53crores is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 28.473 crores (5% of project cost) is earmarked towards the Enterprise Social Commitment based on Public Hearing issues over a period of ten years.

The details of the proposed project activities are as below:

Sr. No.	Facility	Production Capacity
1.	Iron Ore Beneficiation Plant	1.2 million tons per annum
2.	Iron ore Pelletization Plant	1.2 million tons per annum

The beneficiation plant is based on the wet process with filter press technology and pellet plant is of straight grate process technology.

The main raw materials required is low grade iron ore which will be met from Bellary-Hospet-Sandur sector and also through e-auction. The iron ore will be transported to the plant site through tippers/trucks. The power requirement is 35 MW which will be met from M/s. Hubli Electricity Supply Company Limited (HESCOM).

Ambient air quality monitoring has been carried out at 8 locations during December 2012 – February 2013 and the data submitted indicated: PM₁₀ (28 to 52 µg/m³), PM_{2.5} (13 to 16 µg/m³), SO₂ (15.6 to 22.20 µg/m³) and NO_x (19.7 to 25.30 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 2.8 µg/m³, 1.61µg/m³and 1.91 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The pellet plant will be equipped with ESP with 99.8% efficiency and bag filter arrangement up to 98% efficiency. To control air emission in the plant, bag house, bag filters, cyclones and ESP will be installed. Atomized water sprinkling system will be provided at crushing & screening unloading hopper and handling area. Water spraying arrangements will be made, particularly raw material storage area and truck tippler areas. Good housekeeping practices will be adopted to control the fugitive emissions.

The water requirement for the project would be 3600 KLPD and it will be met from Krishna river basin. Approval in principle for the drawl of 3600 KLD has been obtained from Government of Karnataka. No industrial effluent will be generated. Domestic waste water generated from Plant and other facilities will be treated in the STP. The treated water will be utilized for Greenbelt Development. Rooftop Rainwater harvesting will be practiced within the plant premises.

Solid waste in the form of dry tailings will be generated from the beneficiation plant and the same will be dispose to local cement and brick manufacturing units located within the district of Bagalkot. 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. Out of the total plant area (i.e. 318.182 acres), 35% (111.363 Acres) of total plant area will be developed under green belt / plantation in a scientific manner around the plant boundary, roadside, office buildings and stretches of open land.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Karnataka Pollution Control Board on 5.8.2013, 11 AM, under the chairmanship of Deputy Commissioner, Bagalkot at proposed project site, Village Kotikal, Badami Taluka, District Bagalkot. The issues raised during public hearing are proper mitigative measures towards air pollution, protection of rainwater flow, exposure to such plants operating elsewhere, development work in near-by villages, employment to the locals, plantation & maintenance of trees, facilities for higher education & health, water conservation, road development, employment facilities etc. The Committee noted from the proceedings of the Public Hearing that the President Gram Panchayat – Kotikal along with the Panchayat proceedings have objected for the establishment of Iron ore Beneficiation Plant (1.2 MTPA) and Pellet Plant (1.2 MTPA). Further, the President Gram Panchayat – Kotikal also requested the district administration not to grant any license to M/s. KNK Corp Private Limited.

3. After detailed deliberations and taking into consideration the objections raised by the President Gram Panchayat – Kotikal, the Committee deferred the proposal and sought the following information for reconsideration:-

- i. Resolution passed by the Gram Panchayat – Kotikal supporting the establishment of Iron ore Beneficiation Plant (1.2 MTPA) and Pellet Plant (1.2 MTPA) at Village Kotegal, Tehsil Badami, District Bagalkot, Karnataka; and
- ii. Undertaking from PAs that they will be complying the fugitive emission standards of MoEF

14.2.4 Proposed Steel and Power Plant at Village Kesda, Tehsil Simga, District Raipur in Chhattisgarh by **M/s Krishna Iron Steel & Power Private Limited - regarding Environment Clearance.**

The Project Authorities (PAs) and their consultant M/s. Pioneer Enviro Laboratories & Consultants Private Limited - 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 16th Meeting of the Expert Appraisal Committee (Industry) held during 22nd - 24th November, 2010 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide F. No. J-11011/510/2010-IA-II (I) dated 15.12.2010 for preparation of EIA/EMP report. Thereafter, Ministry vide letter dated 22.2.2013 extended the validity of the ToR for a period of one year with effect from 15.12.2012. The PAs submitted the final EIA/EMP report vide dated 24.9.2013 after conducting Public Hearing for grant of Environmental Clearance. 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) of MoEF.

2. The salient points of the proposed project as per the final EIA/EMP report submitted by PAs vide letter referred above in para 1 are as follows:

M/s Krishna Iron Steel & Power Private Limited have proposed to set up an Integrated Steel Plant at Khasra Nos. 409, 411, 412/1, 412/2, 413, 415, 416, 417, 418, 419, 420, 422, 423, 424, 425/1, 425/2, 426, 427, 428, 429, 430, 431, 432, 436, 438, 446, 447, 449/2, 449/3, 451, 455, 759, 766, 790/1, Village Kesda, Tehsil Simga, District Raipur in Chhattisgarh. Total land envisaged for the proposed project is 39.75 acres and the land has been acquired by the PAs. The latitude and longitude of the project site is 21^o 36' 3.38"N and 81^o 47' 57.84" E respectively. No forest land is involved in the project site. PAs have confirmed that proposed project is not located within 10 km of critically polluted area. No National Park / wildlife sanctuary is located within 10 km. Nearest village is Kesda situated at a distance of 1.0 Kms. from the site. Jamuniya river (non-perennial) is flowing at distance of 3.3 Kms. from the project site. Mahanadi canal is at a distance of 1.5 Kms. from the project site. Bilari RF & Bilari Ghughua RF are present within 10 Km. radius of the project site. No litigation or court case is in pending against the project and/or land. Total cost of the project is Rs. 140 Crores. Rs. 12 Crores and Rs. 60 lakhs / annum will be earmarked towards capital cost and recurring cost for environmental pollution control measures.

Following are the plant configuration & production capacities:-

S.No.	Details	Proposed capacity	
		Units	Capacity
1.	Sponge Iron (through DRI Kilns)	3 x 100 TPD	90,000 TPA
2.	Billets / Ingots (through Induction furnaces)	2 x 15 TPD	90,000 TPA

3.	TMT bars / Structural Steels (through Rolling Mill)		1 x 300 TPD	90,000 TPA
4.	Ferro Alloys (through SEAF)		1 x 9 MVA	FeSi – 6300 TPA SiMn – 14200 TPA FeMn – 18500 TPA
5.	Power Generation	through WHRBs attached to DRI Kilns	3 x 2 MW	20 MW
		through FBC	1 x 14 MW	

Sponge Iron will be manufactured in coal based Direct Reduction (DR) kilns. Billets will be manufactured by melting in Induction furnace and casting in continuous casting machine. Rolled products will be manufactured in reheating furnace and coal fired rolling mill. Waste heat recovery boiler (WHRB) and FBC boiler will be installed.

Iron ore (1,44,000 TPA), coal (1,17,000 TPA), dolomite (4,500 TPA) are the raw materials required for the sponge iron plant. The iron ore will be sourced from Barbil, Odisha and NMDC, Chhattisgarh. The iron ore will be transported to the plant site by rail and road. The coal will be sourced from South Eastern Coalfields Limited (SECL) Chhattisgarh, MCL Odisha and also imported from South Africa. As per the MoU submitted, the ash and sulphur content in the coal will be 15-25% and 0.4-0.5% respectively. Calorific value of the coal will be 5800-6500 kcal/kg. The dolomite will be sourced from Raipur/Durg. Power requirement will be met from the captive power plant.

Ambient air quality monitoring has been carried out at 8 locations during March to May 2012 and the data submitted indicated: PM₁₀ (21.5 to 42.5 µg/m³), PM_{2.5} (12.9 to 25.5 µg/m³), SO₂ (5.8 to 9.5 µg/m³) and NO_x (6.6 to 10.6 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 0.6 µg/m³, 6.2 µg/m³ and 4.20 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. Electrostatic precipitator (ESP) will be provided to DRI kiln and FBC boiler to control particulate emissions within 50 mg/Nm³. Bag filters will be installed to control emissions from induction furnace and rolling mill. Flue gases for DRI plant will be utilized in Waste heat recovery boiler (WHRB) and passed through ESP and then into atmosphere through ID fans and chimney. Hot gases for DRI plant will pass through dust settling chamber (DSC) and after burning chamber (ABC), WHRB and stack. Fume extraction system with ID fan will be provided to IF. Dust suppression will be provided to control emissions. Bag filters will be provided to material handling areas, coal handling areas, crusher, stock house, cooler discharge area, screening area etc.

The proposed project requires about 675 KLD of water. Water required for the proposed project will be sourced from Ground Water source. PAs is yet to obtain the permission from CGWA for groundwater withdrawal. Closed circuit water system will be provided in the Sponge Iron, Induction Furnaces, Rolling mill and SEAF. Hence there will not be any waste water generation from process and cooling. Boiler blowdown & DM plant regeneration waste water generated from power plant will be treated in Neutralization tanks and will be mixed in a Central Monitoring Basin (CMB). The treated effluent from CMB will be utilized for dust suppression, ash conditioning and for greenbelt 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. Rain water harvesting structure will be constructed.

The dolochar generated from the DRI plant will be utilized as fuel in the AFBC Boiler. Accretion slag will be used in road construction, ash & dust from bag filters will be given to brick manufacturers in the area. Slag will be crushed and after iron recovery the inert material will be used in road construction/given to brick manufacturers. Mill scales will be

reused in SMS. Slag from FeMn to be reused in manufacture of Silico Manganese as it contains high MnO₂ and Silicon. Slag from FeSi to be used in cast iron foundries / road construction / slag cement manufacture. Waste oil and used batteries will be sold to authorized recyclers/re-processors. Out of 39.75 acres, green belt will be developed in 13.75 acres.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Chhattisgarh Environment Conservation Board (CECB) on 6.4.2013. The main issues raised in the public hearing meeting were development of local area, providing employment, pollution control, and Medical camps etc. The Committee noted that from the proceedings of the Public Hearing that several local residents have objected for the establishment of proposed project.

3. After detailed deliberations and taking into consideration the severe objections raised by the local people, the Committee deferred the proposal and sought the following information for reconsideration:-

- i. Resolution passed by the Gram Panchayat – Kesda supporting the establishment of proposed Steel and Power Plant at Village Kesda, Tehsil Simga, District Raipur in Chhattisgarh

14.2.5 Enhancement of capacity of Asbestos Fibre Cement Sheets & Accessories unit from 72,000 TPA to 1,08,000 TPA at R S No. 71 Ibrahimpatnam Village and Mandal, Krishna District, Andhra Pradesh by **M/s Ramco Industries Limited – regarding Environment Clearance.**

The project authorities and their consultant M/s. Pioneer Enviro Laboratories & Consultants Private Limited - 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 34th Meeting of the Expert Appraisal Committee (Industry) held during 29th - 30th March, 2012 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide F.No. F. No. J-11011/76/2012-IA-II (I) dated 26.4.2012 for preparation of EIA/EMP report. The PAs submitted the final EIA/EMP report vide letter dated 4.10.2013 after conducting Public Hearing for grant of Environmental Clearance. All the Asbestos milling and asbestos based products have been kept at S.N. 4(c) under Metal Processing industries under category – A and to be appraised at Central level.

2. The salient points of the proposed project as per the final EIA/EMP report submitted by PAs vide letter referred above in para 1 are as follows:

M/s Ramco Industries Limited have proposed to enhance the capacity of Asbestos Fibre Cement Sheets & Accessories unit from 72,000 TPA to 1,08,000 TPA at R S No. 71 Ibrahimpatnam Village and Mandal, Krishna District, Andhra Pradesh. Total land envisaged for the project is 20 acres. The land is taken on lease from Vijayawada Thermal Power Station (VTPS). Nearest village is West Ibrahimpatnam at a distance of 0.6 Kms from the existing plant. There are no National Parks / Wildlife sanctuaries situated within 10 kms. radius of the proposed site. Kondapalli RF is situated at a distance of 0.5 Kms from the proposed site. Krishna River is flowing at a distance of 2.0 Kms from the site. Kondapalli fort is situated at a distance of 2.7 Kms from the existing Plant. No court case/litigation is pending against the proposed project site features. There will be no additional capital investment, except for expenditure of Rs. 13 lakhs for upgradation of environmental equipments and Rs.4 lacs for green belt development.

The capacity of the existing and the proposed expansion project activity has been tabulated below:

Name of product	Existing capacity (TPA)	Proposed expansion (TPA)	After Expansion (TPA)
Asbestos cement sheets & accessories	72,000	36,000	1,08,000

The additional production of the plant will be achieved by optimum utilization of the existing machineries and facilities without any additional cost investment for plant and machineries.

The existing plant got environmental clearance from the Ministry vide letter no. J-11011/69/2004-IA.II (I) dated 4.8.2013. Regional Office of MoEF at Bangalore had sent the certified compliance report for the existing unit. The Committee noted that compliance to the EC conditions is satisfactory.

Asbestos Cement Corrugated Sheet Plant shall be based on fully automated closed system by adopting "Hatschek Process" which is more commercially viable and is currently in use in the majority of the Asbestos Cement Corrugated Sheet plants in India. This process is adopted in all countries and it is proposed to introduce the same process with latest development in the technology and machines

Raw material required for the proposed enhancement is 15000 MT/Annum of cement, 10000 MT/Annum of fly ash, 3000 MT/annum of Asbestos Fibre & 175 KL/Annum of wood pulp. Power required for the proposed plant will be sourced from AP Transco.

Ambient air quality monitoring has been carried out at 8 locations during March – May 2012 and the data submitted indicated: PM₁₀ (24.8 to 54.8 µg/m³), PM_{2.5} (15.6 to 31.2 µg/m³), SO₂ (6.5 to 16.3 µg/m³), NO_x (6.7 to 18.5 µg/m³) and Asbestos Fibre Count (0.022 to 0.052 (f/CC)). Fugitive Dust generated from the proposed plant will be arrested by providing Dust Extraction and Suppression system. Treated waste water will be used for spraying on coal stockpile to minimize dust emission.

Total water required for the proposed plant will be 100 m³/day & same will source from Ground water resources. Closed loop water system will be adopted, hence no process water will be discharged and zero discharge will be adopted and entire process waste water will be reused / recycled in the manufacturing process. The Domestic wastewater from plant will be treated in septic tank followed by soak pit.

Entire solid waste generated including process pipe / sheet cuttings, rejects, dust from bag filters and empty asbestos bag after shredding will be recycled and reused in the manufacturing process. The cut and damaged fibre bags will immediately be repaired. Piling of AC sheets will be done in wet condition only. The disposal facilities for asbestos waste will be in accordance with the Bureau of Indian Standards. Green belt will be developed in 33% area of the total land (7.0 acres) including existing.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Andhra Pradesh Pollution Control Board on 28.6.2013 in the existing plant premises. The Public Hearing was presided over by Smt. P.Usha Kumari I.A.S, Jt. Collector & ADM, Krishna district. The main issues raised in the public hearing meeting were development of local area, providing employment, pollution control, and infrastructure development etc. which were addressed in the EIA/EMP report.

After detailed deliberations, the Committee recommended the proposal for environmental clearance and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance.

- i. The project proponent shall adhere to the prescribed BIS standards and laws regarding use and handling of asbestos, safety of employees etc. Raw materials like asbestos fibre and cement shall be transported in closed containers. Asbestos fibre shall be brought in pelletized form in impermeable bags and under compressed condition.
- ii. Only Chrysotile white asbestos fibre shall be used. Blue asbestos shall not be utilized as raw material in the manufacturing process.
- iii. There shall be no manual handling/opening of asbestos fibre bags. The company shall install fully automatic asbestos fibre debagging system.
- iv. Fugitive emissions shall be controlled by bringing cement in closed tankers, fly ash in covered trucks and asbestos in impervious bags opening inside a closed mixer. Dust collectors shall be provided to Fibre mill, Bag opening device (BOD), Cement and Fly ash silos to control emissions. Bag filters followed by wet washer shall be provided at automatic bag opening machine, bag shredder, fibre mill and to cement silo to collect the dust and recycle it into the process. Fugitive emissions generated from hopper of Jaw crusher and pulverizer shall be channelized through hood with proper suction arrangement, bag filter and stack.
- v. The Company shall comply with total dust emission limit of 2 mg/Nm^3 as notified under the Environment (Protection) Act, 1986. Adequate measures shall be adopted to control the process emission and ensure that the stack emission of asbestos fibre shall not exceed the emission limit of 0.2 fiber/cc . Asbestos fibre in work zone environment shall be maintained within 0.1 fibre/cc .
- vi. Bags containing asbestos fibre shall be stored in enclosed area to avoid fugitive emissions of asbestos fibre from damaged bags, if any.
- vii. Proper housekeeping shall be maintained within the plant premises. Process machinery, exhaust and ventilation systems shall be laid in accordance with Factories Act. Better housekeeping practices shall be adopted for improvement of the environment within the work environment also. These include:
 - a) All monitoring transfer points shall be connected to dust extraction system.
 - b) Leakages or dust from machines and ducts shall be plugged.
 - c) Floor shall be cleaned by vacuum cleaner only.
 - d) Enclosed belt conveyer shall be used instead of manual transportation of asbestos within the premises.
- viii. Quarterly monitoring of pollutant (PM_{10} , asbestos fibre count) in the work zone area and stack(s) shall be undertaken by the Project proponents. In addition, the asbestos fibre count including the fugitive dust in the work zone area shall be monitored by an Independent monitoring agency like NIOH / ITRC / NCB or any other approved agency on six monthly basis and reports shall be submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB.
- ix. As reflected in the Environmental Management Plan, all the treated effluent shall be recycled and reused in the manufacturing process. No process water shall be discharged outside the premises and 'zero' discharge shall be maintained. All the

domestic wastewater shall be treated in septic tank followed by soak pit and used for green belt development.

- x. The Company shall ensure that the entire solid waste generated including process rejects, cement, fly ash, dust from bag filters and empty asbestos bag shall be recycled back in the manufacturing process. There will be no solid waste disposal outside the plant premises. Asbestos fibres which cannot be further recycled due to contamination of iron dust shall be stored in HDPE lined secured landfill. The disposal facilities for asbestos waste shall be in accordance with the Bureau of Indian Standard Code.
- xi. The cut and damaged fibre bags shall be repaired immediately. Empty fibre bags will be shredded into fine particles in a bag shredder and recycled into the process. Piling of AC sheets shall be done in wet condition only.
- xii. The Company shall obtain a certificate from the supplier of Chrysotile fibre that it does not contain any toxic or trace metals. A copy of certificate shall be submitted to the Ministry of Environment and Forests.
- xiii. Regular medical examination of the workers and health monitoring of all the employees shall be carried out and if cases of asbestosis are detected, necessary compensation shall be arranged under the existing laws. A competent occupational health physician shall be appointed to carry out medical surveillance. Occupational health of all the workers shall be monitored for lung function test, chest x-ray, sputum for acid-fast-bacilli (AFC) and asbestos body (AB), urine for sugar and albumen, blood tests for TLC, DLC, ESR, Hb and records maintained for at least 40 years from the beginning of the employment or 15 years after the retirement or cessation of employment whichever is later. Occupational Health Surveillance shall be carried out as per the directives of the Hon'ble Supreme Court including the recent Kalyaneswari case.
- xiv. To educate the workers, all the work places where asbestos dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xv. The company shall also undertake rain water harvesting measures and plan of action shall be submitted to the Ministry's Regional Office at Bangalore within three months.
- xvi. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 28.6.2013 shall 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.
- xvii. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xviii. 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 should be ensured accordingly in a time bound manner.
- xix. 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.

14.2.6 Expansion of Integrated Steel Plant (0.20 MTPA to 0.60 MTPA) at village Komando, Tehsil Bonai, District Sundergarh, Orissa by **M/s Rungta Mines Limited – regarding Environment Clearance**

Terms of Reference (ToR) to the proposal cited above was accorded by the Ministry vide F.No.J-11011/434/2009-IA.II(I) dated 4.9.2009. The Project Authorities (PAs) vide letter no.RML/KSP-288/143/12-13 dated 23.11.2012 submitted the final EIA/EMP report for the grant of Environment Clearance. Ministry vide letter dated 25.6.2013 sought clarification from Odisha Pollution Control Board regarding the officer details (Project Administrator, I.T.D.A) who has presided over the Public Hearing held on 16.11.2012 for the proposal cited above. The OPCB vide letter dated 14.8.2013 clarified that Project Administrator, I.T.D.A is equivalent to the post of Addl. District Magistrate. The proposal was deferred by the Ministry as the EIA/EMP report was prepared by M/s. MinMec Consultancy Private Limited, who was a non-accredited consultant by QCI/NABET.

The PAs vide letter no. 28.11.2013 submitted the EIA/EMP report through the QCI/NABET accredited consultant – M/s. CTRAN Consulting Private Limited - Bhubaneshwar. The said EIA/EMP report was placed before the EAC

The PAs and their consultant M/s. CTRAN Consulting Private Limited - Bhubaneshwar gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 2nd meeting of the Expert Appraisal Committee (Industry -1) held on 17-18th August 2009 for preparation of EIA/EMP report. The ToR was awarded by MoEF vide F.No. J-11011/434/2009-IA.II(I) dated 4.9.2009 for preparation of EIA/EMP report. All the Steel Plants are listed at S.No. 3(a) under Primary Metallurgical Industries under "Category A" of the Schedule of EIA Notification 2006 and appraised at the Central level.

2. The salient points of the proposed project as per the final EIA/EMP report submitted by PAs vide letter referred above in para 1 are as follows:

M/s. Rungta Mines Limited have proposed to expand their integrated steel plant from 0.2 MTPA to 0.6 MTPA at village Komando, tehsil Bonai, district Sundergarh, Odisha. The Environment Clearance for the existing 0.20 MTPA steel plant was accorded by the MoEF vide letter no.J-11011/304/2007-IA.II(I) dated 12.12.2008. The land requirement after the proposed expansion would be 381.74 acres. Out of 381.74 acres, 38.29 acres of government land is allotted and 111.08 acres private land has been already purchased and under the possession of M/s.RML. The remaining 232.37 acres is under advance stages of acquisition. The longitude and latitude of the project site is 85° 13' 16" E to 85° 13' 52" E and 21° 55' 33" N to 21° 55' 58" N respectively. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. No court case/litigation is pending against the proposed project. Torha RF (0.55 km, NW), Karo RF (1.0 km, N), Uliburu RF (6.3 km, NNE), Mendhamaruni RF (3.5 km, E), Kathmala RF (0.5 km, SE), Sarkanda RF (5.5 km, S) and Khajurdihi RF (9.2 km, SSE) are located within 10 km radius of the proposed project site. Karo River (0.2 km E), Samji Nala (2.4 km NW), Suna nadi (8.5 km E), Teherai Nalla (6.5 km SE), Sarkanda nadi (10 km S), Gera nalla (6.2 km W) etc. flow within 10 km radius of the proposed site. Total cost of the project is Rs. 1257.33 Crores. Rs. 24.2517 crores and Rs.2.93 crores is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures. Rs. 2.05 crores is earmarked towards the Enterprise Social Commitment related activities.

Following are the existing and proposed production capacities:

PLANT/ FACILITY	EXISTING	PROPOSED	TOTAL
DRI plant	0.585 MTPA	0.33 MTPA	0.915 MTPA
Mini blast furnace	0.383 MTPA	0.23 MTPA	0.613 MTPA
Steel melting shop, Induction Furnace Ladle Furnace	0.20 MTPA 15Tx4 15Tx2	0.43 MTPA 15 T X 9 15 T X 5	0.63 MTPA
Billets/ slab/ bloom caster	0.20 MTPA	0.42 MTPA	0.62 MTPA
WHR based CPP	42 MW	24 MW	66 MW
Coal based CPP	25 MW	51 MW	76 MW
Beneficiation Plant	-	1.1 MTPA	1.1 MTPA
Pelletisation Plant	-	0.60 MTPA	0.60 MTPA
Coal Washery	-	0.92 MTPA	0.92 MTPA
Sinter plant	-	0.24 MTPA	0.24 MTPA
Coke Oven Plant	-	0.14 MTPA	0.14 MTPA
Flats/ Round/ Structural mill	-	0.41 MTPA	0.41 MTPA

Regional Office of MoEF at Bhubaneswar had sent the certified compliance report for the existing unit vide letter 101-522/09/EPE dated 18.3.2013. As per the report, the Committee noted that the proponent has not complied with the following major conditions:

- a) Monitoring of fugitive dust in the work area is not being done
- b) Project has not initiated to provide online Ambient Air Quality monitoring stations
- c) There is no water balance of the plant to find out consumption of water per unit generation of Sponge Iron. The project should take up water audit of the plant immediately
- d) There is no ETP to treat plant effluent. A low lying area is used to collect all the plant effluents and is located near the Char Dump yard.
- e) Monitoring of groundwater is not being carried out
- f) Agreement with all cement/brick manufactures to use fly ash in a long term basis
- g) Studies any reduction of consumption of surface water and maximize use of collected rainwater including recycle of plant effluent for different purposes
- h) Monitoring of noise level in the ambient has not been done

The Committee asked the PAs to initiate necessary actions for the effective compliance of the aforesaid findings as reported by the RO- Bhubaneshwar. The Committee recommended that fresh site inspection shall be undertaken by the RO- Bhubaneshwar and the inspection report shall be sent to the Ministry for further consideration of the proposal.

The raw materials required are iron ore (27,81,104 TPA), BF grade iron ore (1,02,375 TPA), Fluculant (33 TPA), Bentonite (9000 TPA), Dolomite (18,08,67 TPA), Lime stone (36,285 TPA), Coke breeze (10,200 TPA), Coke fines (15,275 TPA), Coke(3,87,413 TPA), Coal (14,26,300 TPA), Coal fine (48,335 TPA), Quartzite (27,131 TPA), Middling (3,92,700 TPA) and Char (1,68,300 TPA). The iron ore will be sourced from Sundergarh, Odisha and the Coal will be sourced from mines at Bokaro district, Jharkhand. The power requirement will be 115 MW (Existing – 40 MW and Expansion – 75 MW) which will be met from the CPP.

Ambient air quality monitoring has been carried out at 8 locations during 2009 and further during December 2012 – March 2013 and the data submitted indicated: PM₁₀ (38.9-85.4 µg/m³), SO₂ (9-24.1 µg/m³) and NO_x (10.7-25.5µg/m³). AAQ modeling study for point

source emissions indicates that the maximum incremental GLCs would be $6.51 \mu\text{g}/\text{m}^3$, $14.16 \mu\text{g}/\text{m}^3$ and $5.15 \mu\text{g}/\text{m}^3$ with respect to PM_{10} , SO_2 and NO_x respectively. Hot gases from sponge iron kiln will be successively passed through dust settling chamber (DSC), after burning chamber (ABC), WHRB and then cleaned in ESP before venting to atmosphere through the chimney. In the DRI plant, dust extraction system with bag filters will be provided to kiln inlet area, crushing unit, cooler outlet area to suppress PM level below $50 \text{ mg}/\text{Nm}^3$. BF gas will be passed through a gas cleaning plant (GCP) comprising of dust catcher and 2-stage wet scrubber. BF gas will be partly used in stoves and the balance in boiler. Flue gases from WHRB and AFBC boiler will be routed to a stack through an ESP. Bag filters and dust collectors will be provided to pelletization plant. Flue gases from coke oven will be passed through a stack of adequate height. The emissions from induction furnace and ladle furnace will be collected by hood and passed through bag filters and discharged through a stack of adequate height. Bag filters will be provided to stock house. Fugitive emissions will be controlled through water sprinkling and dust extraction system. ESP will be provided to Sinter Plant. Coke oven plant will be provided with leak proof doors and frames, ascension pipe gooseneck isolation valves, spray system etc.

Total water requirement after the proposed expansion will be $1493 \text{ m}^3/\text{hr}$ (Existing – $365 \text{ m}^3/\text{hr}$; proposed – $1128 \text{ m}^3/\text{hr}$). Water will be sourced from Karo river. The State Government of Odisha has permitted withdrawal of $1669.437 \text{ m}^3/\text{hr}$ from Karo river vide their agreement dated 7.7.2004. Cooling tower blow down, DM Plant wastewater and service water effluents will be collected in a sump and utilized for dust suppression and ash handling. Wastewater streams comprising of boiler blow down and pre-treatment wastewater will be collected in another sump and utilized for horticulture and greenbelt development. Sewage and sanitary wastewater will be treated in septic tank followed by septic tank. The run-off from coal, iron ore and solid waste handling and storage areas will be guided through suitably designed drains in to the reservoirs so that most of the solids will be settled and the remaining suspended solids settle down in reservoirs. Coal washery effluent will be treated in a thickener. The thickened tailing will be dewatered in a belt press while the clarified water will be recycled back in the process circuit.

Coal and char will be used as fuels in FBC power plant. Fly ash from FBC power plant will be used for cement and brick making and unused fly ash will be dumped. Granulated BF slag will be sold to cement plants. CPP fly ash and bottom ash will be used in brick/cement manufacturing plants. Oil and lubricant will be sold and the DM resin will be disposed in properly constructed pit as per CPCB norms. Sewage sludge will be used as compost/manure. ESP & bag filter dust will be sold to Cement plants. Green belt will be developed in 33% of total plant area.

The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Odisha Pollution Control Board on 16.11.2012 at Kamando Football Play Ground (near plant) under Koira block under the Chairmanship of Project Administrator, I.T.D.A., Bonai. The issues raised during public hearing are employment, pollution control, monetary support to State Brigade school of Komando village and provision of mini hospital etc which were addressed in the final EIA/EMP report.

3. After detailed deliberations, the Committee sought the following additional information for reconsideration:-

- i. Gram Sabha approval for the acquisition of 381.74 acres of land;
- ii. State of land award letter passed by the District Collector including involvement of SC/ST land;
- iii. Socio-economic survey of the study area;
- iv. R&R action plan;
- v. Risk and Disaster management plan;

- vi. Occupational health and safety management plan including medical reports of the existing workers;
- vii. Status of Environment Clearance for the Iron ore mines and Coal mines;
- viii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared over a period of five years and shall be submitted; and
- ix. Point wise compliance of the aforesaid findings as reported by the RO- Bhubaneshwar along with the fresh site inspection report of RO- Bhubaneshwar.

Terms of Reference

14.2.7 Proposed 1.2 MTPA Pellet plant and 3.6 MTPA Feed preparation units (Beneficiation Plant) at Somalapura village, Sandur taluka, Bellary District, Karnataka by **M/s.Karnataka Ferro Concentrates (KFC) Pvt. Limited – regarding ToR.**

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 along with the draft Terms of References for the preparation of EIA/EMP report. The proposed integrated project activity is covered under Category (A) and listed at S.N.3(a) of the Schedule of the EIA notification 2006 and have to be appraised at the Central level.

M/s. Karnataka Ferro Concentrates (KFC) Limited have proposed to set up 1.2 MTPA Iron Ore Pellet Plant, 3.6 MTPA Iron Ore Beneficiation plant at Somalapura Village, Taluka Sandur District Bellary in Karnataka. The land requirement for the proposed project is 277 acres. The latitude and longitude of the project site is 15⁰ 01' 24.7" N and 76⁰ 30' 35.6" E respectively. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. Narihalla stream is flowing at a distance of 4km from the project site. Yashwantnagar Railway Station is about 1.0 km from plant site. Ramgad RF (5km), Kumarsvami Betta RF (0.5 km), Somalpura RF(1.5km), SM block(2.5 km) and Tumbara Guddi RF exists within the study area. No court cases/litigation is pending against the project. Project cost is Rs. 878 Crores. Rs. 50 crores and Rs. 6 crores per annum is earmarked towards the capital cost and recurring cost per annum towards the environmental pollution control measures.

The raw materials required are iron ore fines (36,00,000TPA), Coke Breeze (21,621 TPA), limestone (21,700 TPA) and bentonite (8,395TPA). The power requirement is 18 MVA 10 MW and will be met from Chornoor sub-station. The make up water requirement is 220 m³/hr which will be met from Ankamanal tank (5km from the site), Raghavapura tank (6km from the site) and water harvesting.

Adequate control measures like installation of Dust Suppression System, Dust Extraction System, Bag Filters, ESP and stacks of adequate height at relevant points will be installed. There will be no discharge of Industrial Effluent (zero discharge plant).

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. Copies of iron ore/coal linkage documents
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. Nallahs/water bodies passing through the project site shall not be disturbed.
8. 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.
9. 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.
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. Project site layout plan to scale using AutoCAD showing green belt at least 10 m wide along the periphery on all sides especially towards west direction, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, water bodies, rivers/drainage passing through the project site should be included.
12. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also 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 along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
20. Studies for iron content, tailings, slurry, sludge material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
21. Manufacturing process details for all the process units should be included.
22. Possibility of installation of WHRB will be explored and details included
23. Mass balance for the raw material and products should be included.
24. Energy balance data for all the components should be incorporated.
25. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
26. 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.

27. 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.
28. Vehicular pollution control and its management plan should be submitted.
29. 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.
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 all the plants proposed for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included.
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 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.
36. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
37. One season data for gaseous emissions other than monsoon season is necessary.
38. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
39. 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.

40. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
41. Ground water modelling showing the pathways of the pollutants should be included
42. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
43. 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.
44. 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.
45. A note on the impact of drawl of water on the nearby River during lean season.
46. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
47. 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.
48. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
49. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
50. 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.
51. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
52. 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.
53. 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 and its composition should be covered.
54. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
55. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
56. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
57. Disaster Management Plan including risk assessment & damage control needs to be addressed and included.
58. Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of

workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.

59. 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.
60. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
61. A note on identification and implementation of Carbon Credit project should be included.
62. Total capital cost and recurring cost/annum for environmental pollution control measures.
63. 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.
64. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

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

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (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. The draft EIA/EMP report shall be submitted to the Karnataka 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.

14.2.8 Proposed expansion of Clinkerization capacity from 1.98 MTPA to 3.2 MTPA at Villages – Risda & Dhandhani, Tehsil- Baloda Bazar, District-Baloda Bazar-Bhatapara, Chhattisgarh by **M/s Emami Cement Limited – regarding ToR.**

The project authorities along with their consultant (M/s. J.M. EnviroNet Pvt. Ltd, Gurgaon) gave a detailed presentation on salient features of the project and proposed environmental protection measures to be undertaken along with draft Terms of Reference for preparation of EIA/EMP Report. The proposed activity is listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Emami Cement Limited has proposed to enhance the clinkerization capacity from 1.98 MTPA to 3.2 MTPA (1.22 MTPA) by increasing the size of Kiln (capacity from 6000 TPD to 9700 TPD) at Villages- Risda & Dhandhani, Tehsil: Baloda Bazar, District-Baloda Bazar-Bhatapara, Chhattisgarh. No additional land is to be acquired for the proposed enhancement. The proposed enhancement will be carried out in the existing land of 188.25 ha which has already acquired by the proponent. The longitude and latitude of the project site is 82°04' 30" E to 82° 07' 18.3" E and 21° 37' 15" N to 21° 38' 30.80" N respectively. The existing project had obtained Environment Clearance from MoEF vide letter no. J-11011/372/2007-IA II (I) dated 31.10.11. There is no National Park, Bird sanctuaries and biosphere reserve exists within 10 km radius of the project site. No Forest land is involved. The water bodies exists in the study area are – Mahanadi river (3.5km in NW), Banjari Nala (8.6km in WNW), Khosri nala (3.0 km in SE) and Kukurdih Talav (0.5 km in NNW). The Dhabadih reserve forest, Sinbarsa reserve forest and Latwa reserve forest are falling within the 10 km radius of the project site. No court cases/litigation is pending against the project. Total cost of the project is Rs. 1831 crores (This cost includes the existing project which is in the stage of construction phase).

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

S.No.	Particular	Capacity as per EC letter dated 31.10.11	Additional Capacity	Total Capacity after Expansion
1.	Cement	2.50 MTPA	No Change	2.50 MTPA
2.	Clinker	1.98 MTPA	1.22 MTPA	3.20 MTPA
3.	Captive Power Plant	40 MW	No Change	40 MW
4.	WHRB	NIL	9 MW	9 MW

The raw materials required are Limestone 4.99 MTPA and Iron Ore 0.06 MTPA. No additional water is required for the proposed enhancement. The existing requirement is 1822 KLD, for which permission has already been obtained from the CGWA.

The major sources of pollution in a cement plant are the stacks attached to the process units. All major sources of air pollution will be provided with bag house, bag filters & ESP to maintain particulate matter emissions within permissible limit. No major water, noise & soil pollution is envisaged from the project activity. Various mitigation measures will be undertaken to take care of the environment in respect of air, water, noise, soil & the green cover of the project site & nearby villages.

No industrial waste water will be generated from the Cement manufacturing process. Domestic waste water from Colony and administration building will be treated in the STP. The treated water will be utilized for Greenbelt Development. Rain water harvesting structures will be constructed to conserve the water.

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. Out of the Total existing project area i.e. 188.35 ha, about 34% of the area i.e. 64.60 ha has been marked for the greenbelt development/plantation.

After detailed deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

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. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing I existing operation of the project by the Regional Office of the Ministry of Environment and Forests and 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. Copies of coal/limestone linkage documents
8. A line diagram/flow sheet for the process and EMP
9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
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.
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 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
12. 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.

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 green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, water bodies, rivers/drainage passing through the project site should be included.
15. Details and classification of total land (identified and acquired) should be included.
16. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land 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 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.
19. A list of industries containing name and type in 10 km radius shall be incorporated.
20. Residential colony should be located in upwind direction.
21. 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".
22. 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.).
23. 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.
24. 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.
25. 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.
26. Manufacturing process details for all the plants should be included.
27. Possibility of installation of WHRB will be explored and details included
28. Mass balance for the raw material and products should be included.
29. Energy balance data for all the components including proposed power plant should be incorporated.
30. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
31. 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.

32. 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.
33. Vehicular pollution control and its management plan should be submitted.
34. 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.
35. 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.
36. 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.
37. 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.
38. Air quality modeling for all the proposed plants 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 on the ambient air quality shall be assessed.
39. 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.
40. Ambient air quality monitoring 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.
41. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
42. One season data for gaseous emissions other than monsoon season is necessary.
43. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
44. 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.
45. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 46. Ground water modelling showing the pathways of the pollutants should be included
 47. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
 48. 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.
 49. 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.
 50. A note on the impact of drawl of water on the nearby River during lean season.
 51. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 52. 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.
 53. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
 54. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
 55. 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.
 56. 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.
 57. 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.
 58. 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.
 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 development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
 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.
 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 (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
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.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.

- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (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. The draft EIA/EMP report shall be submitted to the Rajasthan 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.

14.2.9 Expansion of Sponge Iron Plant, Induction Furnaces, TMT Rolling Mill and installation of Ferro Alloys Unit, Alloy Steel Billet Plant, and Rolling Mill and Structure Mill at Village Heti, Tehsil Umred, District Nagpur, Maharashtra by M/s Top Worth Urja and Metals Ltd.- regarding ToR.

The project authorities along with their consultant M/s. Pollution & Ecology Control Services - Nagpur 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 report. The proposed project is listed at S.No. 3(a) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Top Woth Urja and Metals Limited (TUML) have proposed to enhance the production of Sponge iron from 60,000 TPA to 2,91,000 TPA by installing 2 x 350 TPD rotary kiln, MS billets from 240 TPD to 480 TPD & TMT Bar From 66,000 TPA To 1,50,000 TPA. In addition to this, it is also proposed to install 2 X 16.5 MVA Submerged Arc Furnaces to produce 50000 TPA Ferro Alloys, 200000 TPA Steel Melt Shop, 200000 TPA Alloy Steel Bar Mill, and 100000 TPA Section Mill for Rolling of Steel section at Village Heti, Tehsil Umred, District Nagpur, Maharashtra. The proposed expansion will be carried out within the existing premises of 160 acres. The land is in possession of TUML. The latitude and longitude of the project site is 20°55'39.10"N and 79°14'47.96"E respectively. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area located within 10 km radius of the project site. Welsakhra village is located at a distance of 2 km from the project site. The Reserved Forests exists in the study area is Bhivapur R.F. at 0.5 km in the North direction from the project site. The Open mixed jungle exists in study area are 8.0 km in SW direction & 6.0 km in West direction from the project site. No court cases/litigation is pending against the project. The cost of the project is Rs. 1014.93 crores.

The status of existing and proposed expansion units are as given below:-

SR. NO.	NAME OF UNITS	EXISTING CPACITY	PROPOSED EXPANSION	TOTAL AFTER EXPANSION
1.	Sponge Iron Plant	60000 TPA	2,31,000 TPA	2,91,000 TPA
2.	TMT Bar	66000 TPA	84000 TPA	150000 TPA
3.	Steel Billets	240 TPD	240 TPD	480TPD
4.	Captive Power Plant.	100MW	-	100MW
5.	Ferro Alloys Plant,	-	50000 TPA	50000 TPA
6.	Steel melt shop	-	200000 TPA	200000 TPA
7.	Alloy Steel Bar Mill.	-	200000 TPA	200000 TPA
8.	Section Mill For Rolling of Steel Sections	-	1 00000 TPA	1 00000 TPA

The existing 60,000 TPA sponge iron has obtained consent to establish from Environment Department, Govt. of Maharashtra vide letter dated 9.1.2003. The 30 MW CPP has obtained environment clearance from SEAC, Govt. of Maharashtra on 27.7.2010. The 2x35 MW CPP and 66,000 TPA rolling mill has environment clearance from SEAC, Govt. of Maharashtra on 17.10.2011. Further, the 240 TPD M.S. Billets mill has obtained environment clearance from SEAC, Govt. of Maharashtra on 1.10.2010.

M.S scrap, pig iron, sponge iron, dolomite, Manganese Ore, Ferro Alloy, Coal, Billetes etc are the raw materials that will be used. The water requirement after the proposed expansion is 2205 m³/day (Existing: 594 m³/day; Additional: 1611 m³/day) which will be met from Paradgaon dam. The power requirement is 78 MW which will be met from Captive Power Plant of 100 MW.

The Sponge Iron Plant will be equipped with ESP and WHRB. Fume extraction system with Bag Filters will be provided. Stack of adequate height will be provided for wider dispersion of air emissions. For control of fugitive dust emissions due to vehicular movement water sprinkling and spraying system will be installed. Internal roads will be asphalted. The requirement of water for proposed units is only for cooling & domestic purpose. This will be recycled for cooling purpose through closed cooling circuit and there will not be any effluent generation. However domestic effluent will be treated through well designed septic tanks and soak pits.

Char from Sponge Iron Plant will be used in Power Plant. The slag generated in M.S. Billetes plant and Alloy Steel Billet Plant will be processed/crushed in-house in slag granulation plant for recovery of magnetic and the balance granulated slag will be sold to cement, brick manufacturers and the process waste will be sold to recyclers along with use for filling of low lying areas. Mill scale generated in the Bar Mill is collected in the mill scale pit and sold in the market.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. Executive summary of the project
2. Iron ore/Coal linkage documents
3. Photographs of the existing and proposed plant area

4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
6. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
7. 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)
8. A line diagram/flow sheet for the process and EMP
9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
10. A copy of the mutual agreement for land acquisition signed with land oustees.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
17. Details and classification of total land (identified and acquired) should be included.
18. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
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 modelling 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 modelling 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 modelling showing the pathways of the pollutants should be included
 48. Column leachate study for all types of stockpiles or waste disposal sites at 20oC-50oC 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, and 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. need to be addressed.
62. A note on the treatment, storage and disposal of all type of slag 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. 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.
69. 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.

70. 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.
71. 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.
72. 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.
73. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
74. 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.
75. 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.
76. A note on identification and implementation of Carbon Credit project should be included.
77. 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.

The following general points should be noted:

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

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (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 Maharashtra 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

14.2.10 Proposed Clinker production capacity (5.35 MTPA to 8.0 MTPA) and WHRB (15 MW to 25 MW) at Village: Jaykaypuram, Teshil: Pindwara, District: Sirohi, Rajasthan **by M/s. JK Lakshmi Cement Ltd. – regarding ToR.**

The project authorities along with their consultant (M/s. J.M.EnviroNet Pvt. Ltd, Gurgaon) gave a detailed presentation on salient features of the project and proposed environmental protection measures to be undertaken along with draft Terms of Reference for preparation of EIA/EMP Report. The proposed activity is listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. JK Lakshmi Cement Limited (JKLCL) is having an existing Integrated Cement Plant with Clinker production capacity (5.35 MTPA), Cement (8.70 MTPA), Captive Power Plant (2x20 MW & 1x18 MW), WHRB (15 MW) & DG Set (19 MW) at Village-Jaykaypuram, Tehsil-Pindwara, District-Sirohi (Rajasthan). Environmental Clearance for Clinker Production - 5.35 MTPA, Cement Production - 8.70 MTPA, & Captive Power Plant 18 MW has been obtained from MoEF, New Delhi vide letter no. J- 11011/291/2006-IA.II(I) dated 24.1.2007 and WHRB 15 MW dated 20.1.2010. The Captive Power Plant 2x20 MW has obtained NOC from Dept. of Environment, Govt. of Rajasthan vide letter F.5(3)NOC/Env/97/Pt.I dated 23.2.2006.

M/s. JK Lakshmi Cement Limited (JKLCL) have proposed to expand the clinker production capacity from 5.35 MTPA to 8.0 MTPA and WHRB from 15 MW to 25 MW at Village: Jaykaypuram, Teshil: Pindwara, District: Sirohi, Rajasthan. The proposed enhancement in Clinker production capacity (5.35 MTPA to 8.0 MTPA) & WHRB (15 MW to 50 MW) will be carried out within the existing plant premises of 380.74 ha. No additional land is required for the proposed expansion. The longitude and latitude of the project site is 72° 59' 50.51" E to 73° 0' 041.68" E and 24° 41'6.98" N to 24° 42' 6.78" N respectively. There is no National Park, Bird sanctuaries and biosphere reserve exists within 10 km radius of the project site. No Forest land is involved. Banas dam and few seasonal water bodies are exists within 10km radius of the project site. No court cases/litigation is pending against the project. Total cost of the project is Rs. 1140 crores. Rs.120 crores and Rs.3.5 crores is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures.

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

Units	Existing Capacity	Proposed Expansion in Line I, II & III	New Line IV	Total Capacity after Expansion
Clinker (MTPA)	5.35	0.65	2.0	8.0
Cement (MTPA)	8.70	Nil	Nil	8.70
Captive Power Plant (MW)	2x20 1x18	Nil	Nil	2x20 1x18
WHRB (MW)	15	20	15	50
DG Set (MW)	19	Nil	Nil	19

The cement plant is based on the dry process technology for cement manufacturing with pre-heater and pre-calcliner technology. Raw materials required for the proposed expansion of cement plant are Limestone, Fuel (Coal / Petcoke / Lignite / WDF / Biomass etc.) which will be catered/procured from Captive Limestone Mine, Indigenous/Imported coal/Pet coke from RIL Jamnagar, Kandla port, Navlakhi port etc., Biomass from nearby areas and other parts of Rajasthan respectively.

The Existing water requirement for the project is 4260 KLD (3700 KLD i.e. Fresh water + 560 KLD i.e. recycled water from CPP and STP). Additional water requirement for the proposed expansion project will be 1120 KLD. Thus, total water requirement after expansion will be 5380 KLD which will be sourced from West Banas Dam, Ground water & Recycled water from CPP /STP. Total power requirement after proposed expansion project will be 112.25 MW which will be sourced from Captive Power Plant, RSEB Grid, VSLP & WHRB.

The major sources of pollution in a cement plant are the stacks attached to the process units. All major sources of air pollution have been/will be provided with bag house, bag filters & ESP to maintain particulate matter emissions within permissible limit. No major water, noise & soil pollution is envisaged from the project activity. Various mitigation measures are being undertaken to take care of the environment in respect of air, water, noise, soil & the green cover of the plant site & nearby villages. Same practices will be followed for proposed expansion project. No industrial waste water will be generated from the Cement manufacturing process. Domestic waste water generated from Cement Plant/Colony will be treated in the STP. The treated water will be utilized for Greenbelt Development/Horticulture activities and cooling purpose. Rain water harvesting structures has been constructed to conserve the water.

No solid waste will be generated in cement manufacturing process. Dust collected from various pollution control equipments is being/will be recycled back to the process. STP Sludge will be utilized as manure for green belt development within the plant premises.

The Committee noted that baseline data collected during December 2013 – February 2014 will be used for the preparation of EIA/EMP report.

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. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing I existing operation of the project by the Regional Office of the Ministry of Environment and Forests and 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. Copies of coal/limestone linkage documents
8. A line diagram/flow sheet for the process and EMP
9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
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.
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 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
 12. 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.
 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 green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, water bodies, rivers/drainage passing through the project site should be included.
 15. Details and classification of total land (identified and acquired) should be included.
 16. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land 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 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.
 19. A list of industries containing name and type in 10 km radius shall be incorporated.
 20. Residential colony should be located in upwind direction.
 21. 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".
 22. 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.).
 23. 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.
 24. 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.
 25. 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.
 26. Manufacturing process details for all the plants should be included.
 27. Possibility of installation of WHRB will be explored and details included

28. Mass balance for the raw material and products should be included.
29. Energy balance data for all the components including proposed power plant should be incorporated.
30. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
31. 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.
32. 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.
33. Vehicular pollution control and its management plan should be submitted.
34. 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.
35. 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.
36. 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.
37. 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.
38. Air quality modeling for all the proposed plants 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 on the ambient air quality shall be assessed.
39. 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.
40. Ambient air quality monitoring 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.
41. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.

42. One season data for gaseous emissions other than monsoon season is necessary.
43. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
44. 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.
45. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
46. Ground water modelling showing the pathways of the pollutants should be included
47. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
48. 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.
49. 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.
50. A note on the impact of drawl of water on the nearby River during lean season.
51. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
52. 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.
53. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
54. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
55. 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.
56. 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.
57. 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.
58. 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.
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 development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.

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.
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 (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
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.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.

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

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (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. The draft EIA/EMP report shall be submitted to the Rajasthan 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.

14.2.11 Proposed Ferro Alloy Plant (5x11 MVA) to manufacture 1,18,000 TPA Fe- Mn and Manganese Ore Sinter Plant (2x500 TPD) to manufacture 3,30,000 TPA Mn-Sinter along with Captive Power Plant (2x30 MW – CFBC based) at Mouza: Ghutgaria, Barjora, District: Bankura, West Bengal **by M/s Brahm Energy Pvt. Ltd. - 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 draft Terms of References for the preparation of EIA/EMP report. The proposed project is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Brahm Energy Private Limited have proposed to set up an Ferro Alloy Plant (5x11 MVA) to manufacture 1,18,000 TPA Fe- Mn and Manganese Ore Sinter Plant (2x500 TPD) to manufacture 3,30,000 TPA Mn- Sinter along with Captive Power Plant (2x30 MW – CFBC based) at Mouza: Ghutgaria, Barjora, District: Bankura, West Bengal. The longitude and latitude of the project site is 87°15'15.07" E and 23° 26'19.06" N respectively. The land requirement for the proposed project is 38 acres. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. Damodar river is at a distance of 5km from the project site. The makeup water requirement is 253 m³/hr and will be met from Barjora Gram Panchayat Samity water supply system. The power requirement is 72 MW which will be met from the CPP and DVC supply. Project cost is Rs. 434 crores.

Following are the details of the proposed product details.

Unit	Capacity	Product
Ferro Alloy Plant (5x11 MVA SAFs)	1,18,000 TPA	Ferro Manganese
Manganese Ore Sinter Plant (2x500 TPD)	3,30,000 TPA	Manganese Sinter
Captive Power Plant	2x30 MW (CFBC Based)	Power

To control air emissions, adequate control measures like installation of Dry Fog Dust Suppression System, Dust Extraction System, Bag Filters, ESP and stacks of adequate height at relevant points will be provided. There will be no discharge of Industrial Effluent (zero discharge plant). Blow down from Cooling Towers after treatment will be used in dust suppression and greenery purposes. Domestic wastewater will be treated in Septic tank – Soak pit system.

The Ferro Manganese Slag will be supplied to Silico-Manganese producers. Bottom ash will be used for land filling and road construction. Fly ash will be used for Cement and Paver Block manufacturing. Dust as collected in the dedusting system from Sinter Plant will be used in the process again.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. Copies of iron ore linkage documents
4. Thermal radiation control and suction hood arrangement in furnace areas and impact of such devices
5. A line diagram/flow sheet for the process and EMP
6. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
7. 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.
8. 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.
9. 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.
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. 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. Studies for slurry, sludge material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
 20. Manufacturing process details for all the process units should be included.
 21. Possibility of installation of WHRB will be explored and details included
 22. Mass balance for the raw material and products should be included.
 23. Energy balance data for all the components should be incorporated.
 24. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
 25. 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.
 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. Vehicular pollution control and its management plan should be submitted.
 28. 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.
 29. 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.
 30. 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.
 31. 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.
 32. Air quality modeling for all the plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included.
 33. 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.
 34. Ambient air quality monitoring 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.
35. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
 36. One season data for gaseous emissions other than monsoon season is necessary.
 37. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 38. 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.
 39. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 40. Ground water modelling showing the pathways of the pollutants should be included
 41. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
 42. 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.
 43. 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.
 44. A note on the impact of drawl of water on the nearby River during lean season.
 45. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 46. 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.
 47. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.

48. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
49. 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.
50. 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.
51. 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.
52. 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 and its composition should be covered.
53. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
54. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
55. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
56. Disaster Management Plan including risk assessment & damage control needs to be addressed and included.
57. Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.
58. 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.
59. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
60. Total capital cost and recurring cost/annum for environmental pollution control measures.

61. 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.
62. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

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

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (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. 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 report including public hearing proceedings.

14.2.12 Expansion of Integrated Steel Plant (3.0 MTPA) by installation of 2.0 MTPA Pellet plant at Village: Mandpal, near Nagarnar, District: Bastar, Chhattisgarh by M/s. NMDC Limited – regarding ToR.

The project authorities and their consultant (M/s J.M. EnviroNet Private Limited, Gurgaon) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA/EMP report. The proposed integrated project activity is covered under Category (A) and listed at S.N.3(a) of the Schedule of the EIA notification 2006 and have to be appraised at the Central level.

M/s. NMDC Limited have proposed to expand their Integrated Steel Plant (3.0 MTPA) by installation of 2.0 MTPA Pellet plant at Village: Mandpal, near Nagarnar, District: Bastar, Chhattisgarh. The existing plant obtained environment clearance from MoEF vide letter no. J-11011/681/2008-IA.II(I) dated 15.9.2009. The land requirement for the proposed expansion

is 48.74 ha. The site is in close proximity to the steel plant. The latitude and longitude of the project site is 19° 05'N and 82° 09' E respectively. No Forest land is involved. No National Park, Wildlife Sanctuary exists within 10 km radius of the project site. Amaguda railway station is located at a distance of 1.5km from the project site. Kanger RF and Kakadapasara RF is located at a distance of 5km and 2.5km from the project site respectively. Indravathi river is located at a distance of 3.5km from the project site. No court cases/litigation is pending against the project. Project cost is Rs. 572 Crores.

The Committee noted that public hearing for the ISP project was conducted on 27.2.2009 as per EIA Notification, 2006. Therefore, the Committee exempted the project from public hearing under 7 (ii) of the EIA Notification 2006.

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

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

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

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. Executive summary of the project
2. Photographs of the existing and proposed plant area.
3. Copies of iron ore and coal linkage documents
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
6. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
7. 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)
8. A line diagram/flow sheet for the process and EMP

9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
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.
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 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
12. 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.
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 green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, water bodies, rivers/drainage passing through the project site should be included.
15. Coordinates of the plant site with topo sheet co-ordinates should also be included.
16. Details and classification of total land (identified and acquired) should be included.
17. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
18. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
19. 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.
20. A list of industries containing name and type in 10 km radius shall be incorporated.
21. Residential colony should be located in upwind direction.
22. 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".
23. Studies for iron content, tailings, 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 process units 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 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 for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included.
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 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 modelling 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, and 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 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. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
59. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
60. Disaster Management Plan including risk assessment & damage control needs to be addressed and included.
61. 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.

62. 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.
63. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
64. A note on identification and implementation of Carbon Credit project should be included.
65. Total capital cost and recurring cost/annum for environmental pollution control measures.
66. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

- i) All documents should be properly indexed, page numbered.
- ii) Period/date of data collection should be clearly indicated.
- iii) Authenticated English translation of all material in Regional languages should be provided.
- iv) The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v) The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi) The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.

- viii) The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall 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. The Committee noted that public hearing for the ISP project was conducted on 27.2.2009 as per EIA Notification, 2006. Therefore, the Committee exempted the project from public hearing under 7 (ii) of the EIA Notification 2006. The final EIA/EMP report for obtaining environmental clearance shall be submitted to the Ministry.

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

- 14.2.13 Proposed Manufacturing of Ferro Manganese, Master Alloy, Various Ferro Alloys and metal Power at Butibori Industrial area, plot no. B4/23, District: Nagpur, Maharashtra by **M/s Vigour Metals and Alloys - regarding ToR.**

The project authorities along with their consultant M/s. Pollution and Ecology Control Services – Nagpur 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 report. The proposed project is listed at S. No. 3(a) under Category 'A' of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Vigour Metals and Alloys have proposed to manufacture Ferro Manganese, Master Alloy, Various Ferro Alloys and metal powder at Plot no. B4/23, MIDC Butibori, Taluka:Hingna, District: Nagpur, Maharashtra. The total land available is 1000 sq mt. The latitude and longitude of the project site is 20°55'55.77"N and 78°57'35.72"E respectively. No Forest land involved. No national park/ wild life sanctuary / ecologically sensitive area located within 10 km radius of the project site. Chichkotha Village is located at a distance of 1 km from the project site. The Reserved Forest exist in the study area are - Degma Reserved Forest 9.0 km:(NW), Dongargao Reserved Forest 5 km: (SE) and Junapani Reserved Forest 7 km :(S). Vena River, Krishna nala, Wakeshwar lake and Khadki lake are located at a distance of 2.5km(E), 3km (SE), 9.6km and 10km(NW) from the project site. No court cases/litigation is pending against the project. The cost of the project is Rs.145 lakhs.

The details of the proposed units are as given below:-

SR. NO.	NAME OF ITEMS	PRODUCTS CATEGORY	QTY PER YEAR (IN MT)
By Thermite Process:			
1.	Low/Medium Carbon Ferro Manganese AND/OR	Lumps & Powder	1200 /Year OR
2.	Ferro Molybdenum AND/OR	Lumps & Powder	80 / year OR
3.	Ferro Vanadium AND/OR	Lumps & Powder	80 / year OR
4.	Ferro Titanium	Lumps & Powder	80 / year
By using induction furnace			
5.	Ferro Aluminum AND/OR	Lumps, Piglet / Powder	200 /year OR
6.	Aluminum Master Alloys	Lumps, Piglet / Powder	100 / year

Mn ore, Ilmenite sand, Si-mn, Aluminum powder & scrap, Steel/iron scrap, Molybdenum concentrate, Titanium scrap, Limestone powder, Vanadium pentoxide and furnace oil are the raw materials that will be used. The makeup water requirement is 5 KLD which will be provided by the MIDC. The power requirement is 125 HP which will be supplied by the State Electricity Board.

Public hearing / consultation for project cited above was exempted by the EAC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 due to project being located in notified industrial area. Further, the EAC asked the proponent to carryout baseline data collection for a period two months (Jan – Feb 2014) within 5km radius of the project site and submit the EIA/EMP report to the Ministry.

Adequate stack height will be provided to ensure wider dispersion of emissions. Water sprinkling system will be installed at various locations to control fugitive emissions. Proper care will be taken by installing Bag filters followed by Stack to control source emission. It is estimated that total effluent generation from the proposed installation will be from jiggling operation and domestic effluent. The water from jiggling will be treated in settling tank and will be reused in the process. Zero discharge condition from the proposed plant will be maintained. Slag generated from manufacturing of Ferro manganese will be sold to manufacturer of Silico-manganese.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. Executive summary of the project
2. Photographs of the proposed plant area
3. Details of raw material and the source of raw material shall be included.
4. Manufacturing process details of all the plants with process flow chart shall be included.
5. Sources and quantity of fuel for the boiler.
6. Action plan to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
7. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, and NO_x should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
8. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
9. An action plan to control and monitor secondary fugitive emissions from all the sources.
10. Surface and ground water quality within the study area.
11. Details of water requirement, wastewater generation and water balance chart shall be included. Measures for water conservation by recycling and reuse to minimize the fresh water requirement.
12. Proposed effluent treatment system for the process units shall be included.
13. Details of solid waste management including management plan of disposal of boiler ash.
14. Green belt development as per the CPCB guidelines.
15. List of flora and fauna in the study area.
16. Noise levels monitoring at five locations within the study area.

17. Traffic study of the area for the proposed project in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
18. Detailed Environment Management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
19. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
20. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
21. Action plan for rainwater harvesting measures at plant site to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
22. Details of occupational health surveillance programme.
23. Details of socio-economic welfare activities.
24. Action plan for post-project environmental monitoring.
25. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
26. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

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

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (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 final EIA report shall be submitted to the Ministry for obtaining environmental clearance. Public hearing / consultation for project cited above was exempted by the EAC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 due to project being located in notified industrial area.

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

- 14.2.14 Proposed Clinkerisation unit of 1.65 MTPA capacity and Cement Grinding (90% PPC & 10% OPC) of 2.3 MTPA capacity at Village: Bansa, Tehsil- Huzur, District: Rewa, Madhya Pradesh **by M/s Mesco Magic Cement Limited - regarding ToR.**

The project authorities and their consultant (M/s. MITCON Consultancy and Engineering Services Limited - Pune) 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 report. The proposed activity is listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Mesco Magic Cement Limited have proposed to set up Clinkerisation unit of 1.65 MTPA capacity and Cement Grinding (90% PPC & 10% OPC) of 2.3 MTPA capacity at Village: Bansa, Tehsil – Huzur, District Rewa, Madhya Pradesh. Total 150 acres of land is envisaged for the cement plant & colony. The entire land is non irrigated, low fertile & belongs to private owners. Out of the 150 acres of land, 70 acres of land is already acquired & the balance is under acquisition. The latitude and longitude of the project site is 24°22'32.25"N and 81°18'52.62"E respectively. No Forest land is involved. No National Park, Wildlife Sanctuary is located within 10 km radius of the project site. No court cases/litigation is pending against the project. Beehar river is located at a distance of 10km from the project site. Total cost of the project is Rs.1,117.56 Crores. Rs. 40 crores and Rs.2 crores is earmarked towards the capital cost and recurring cost per annum towards the environmental pollution control measures.

The raw materials required are limestone/clay(2.50 MTPA), iron ore (0.02 MTPA), gypsum (0.1 MTPA), Coal (0.3 MTPA) and fly ash (0.6 MTPA). The limestone will be sourced from captive mines located at a distance of 3-4 km from the project site. Coal will be sourced from the mines at Tandsi III & Tandsi II extension, Chiddwara. Gypsum will be sourced from Rajasthan. Fly ash will be sourced from Singrauli thermal power station. The water requirement is 3500 KLD which will be met from Beehar river. The power requirement is 36 MVA which will be sourced from Madhya Pradesh Electricity Board.

To control air pollution, water sprinkling on haul roads will be done to avoid dust generation during transportation. All material transfer points will be provided with bag filters to entrap the emissions at the source itself. Clinker will be stored in silos /covered stock piles and gypsum in covered shed. Fly ash will be stored in silos. Proper pollution control equipment like Bag Houses, Bag filters and ESP will be installed.

No industrial waste water will be generated during cement manufacturing process. Domestic waste water generated from the office toilets and township will be treated in the STP and treated water will be used for green belt development. Rain water harvesting will be practiced at plant and colony area. No water will be disposed off on ground outside the plant premises.

No solid waste will be generated from the cement manufacturing process, hence zero solid waste generation from the Cement Plant. Dust collected from air pollution control equipment will be totally recycled back in the process. Sludge from Sewage Treatment Plant (STP) will be used as manure for green belt development. Waste oil/grease will be sold to the authorized vendors as per SPCB guidelines.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report.

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. Copies of coal linkage and limestone linkage documents
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. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
9. 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.
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. Project site layout plan to scale using AutoCAD showing green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, 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 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.).
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. 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 process units 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 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 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 modelling 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 development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
58. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
59. 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.
60. Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.
61. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
62. 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.
63. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
64. A note on identification and implementation of Carbon Credit project should be included.
65. Total capital cost and recurring cost/annum for environmental pollution control measures.
66. 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.
67. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

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

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (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. The draft EIA/EMP report shall be submitted to the Madhya Pradesh 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.

14.2.15 Proposed Integrated cement project – clinker (2.4 MTPA), cement (2.5 MTPA), Captive Power Plant (30 MW), WHRB (10 MW) & D.G. Set (2x6 MW) at Village – Bhundel, Tehsil Khinwsar, District Nagaur, (Rajasthan) by **M/s Theta Cement Pvt. Ltd. - regarding ToR.**

The project authorities and their consultant (M/s. J.M.EnviroNet Private Limited, Gurgaon) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. The proposed activity is listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Theta Cement Private Limited have proposed to set up an Integrated Cement Project - Clinker (2.4 MTPA), Cement (2.5 MTPA), Captive Power Plant (30 MW), WHRB (10 MW) & D.G. Set (2 x 6 MW) at Village: Bhundel, Tehsil: Khinwsar, District: Nagaur, Rajasthan. The land requirement is 198 ha. The latitude and longitude of the project site is 27°12'8.11"N to 27°13'16.92"N and 73°21' 30.32 "E to 73°22' 50.73"E respectively. No Forest land is involved. No National Park, Wildlife Sanctuary is located within 10 km radius of the project site. No court cases/litigation is pending against the project. Rindyali Nadi and Mandeliya Nadi is located at a distance of 3 km and 7km from the project site. Total cost of

the project is Rs. 1500 Crores. Capital cost for Environmental Protection Measures is Rs. 30 Crores and Recurring Cost is Rs. 3.0 Crores / annum.

The raw materials required are limestone (3.6 MTPA), additive (0.1 MTPA), gypsum(0.125 MTPA), fly ash (0.625 MTPA), coal/petcoke/imported coal (0.2-0.7 MTPA) and HFO (50 KLD). The limestone will be sourced from adjacent captive mines by conveyor belt. Gypsum will be sourced from Rajasthan State Mines and Minerals Limited. Coal will be sourced from SECL, Petcoke from Reliance Industries, Jamnagar and the imported coal from Indonesia. The water requirement is 2000 KLD which will be met from ground/surface water. The power requirement is 30 MW which will be met from CPP and the Rajasthan State Electricity Board.

The capacity of the proposed project activity been tabulated below:

S. No.	Units	Proposed Capacity
1.	Clinker	2.4 MTPA
2.	Cement	2.5 MTPA
3.	Captive Power Plant	30 MW
4.	WHRB	10 MW
5.	D.G. Set	2 x 6 MW

The cement plant will be based on the dry process technology for cement manufacturing with pre-heater and pre-calciner technology.

The major sources of pollution in a cement plant will be stacks attached to the process units. All major sources of air pollution will be provided with bag house, bag filters & ESP to maintain particulate matter emissions within permissible limit. No major water, noise & soil pollution is envisaged from the project activity. Various mitigation measures will be undertaken to take care of the environment in respect of air, water, noise, soil & the green cover of the plant site & nearby villages.

No industrial waste water will be generated from the cement manufacturing process. Domestic waste water generated from Cement Plant/Colony will be treated in STP & the treated water will be utilized for Greenbelt Development. Rain water harvesting structures will be constructed.

No solid waste will be generated in cement manufacturing process. Dust collected from various pollution control equipments will be recycled back to the process. Fly ash generated from CPP will be utilized in manufacturing of cement. STP Sludge will be utilized as manure for green belt development within the plant premises. Out of the total project area (i.e. 198 ha), 65.34 ha (i.e. 33% of the total area) will be developed under green belt/ plantation. Green belt development will be done all along the road, plant boundary & colony which will attenuate noise level, arrest dust & to increase aesthetic beauty of the area. Native plant species will be planted in consultation with local horticulturist.

The Committee noted that baseline data collected during December 2013 – February 2014 will be used for the preparation of EIA/EMP report.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. Executive summary of the project
2. Photographs of the proposed plant area.

3. Copies of coal linkage and limestone linkage documents
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. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
9. 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.
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. Project site layout plan to scale using AutoCAD showing green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, 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 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. 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 process units 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 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 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 modelling 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 development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
58. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
59. 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.
60. Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.
61. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
62. 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.
63. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
64. A note on identification and implementation of Carbon Credit project should be included.
65. Total capital cost and recurring cost/annum for environmental pollution control measures.
66. 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.
67. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

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

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (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. The draft EIA/EMP report shall be submitted to the Rajasthan 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.

- 14.2.16 Proposed project of 50 m³ MBF Plant for Pig Iron, 0.3 MTPA Pellet Plant, 2x50000 TPA Iron Ore Sinter Plant, 4500 TPA Thermit Process Plant, 100000 TPA Integrated Steel complex (With Steel Melting shop, Induction furnace along with billet caster, Re-Rolling mill, LD process, LRF & Oxygen) & 25 tones capacity AOD in Biswadih village in the district of Giridih in the State of Jharkhand by **M/s Shivam Iron & Steel Co. Ltd. - regarding ToR.**

The Committee noted that the proponent vide their email communication dated 16.12.2013 expressed their inability to attend the meeting due to some unavoidable circumstances and requested to consider the proposal in the next EAC meeting. The Committee decided that the proposal may be placed before the EAC in the next EAC meeting.

- 14.2.17 Proposed project of 1x6 MVA Ferro Alloy Plant, 2x10 TPD EAF Refining, Thermit Plant for 2500 TPA & Manganese Ore Sinter Plant for 90000 TPA in village Jambad, Tehsil Udnabad, Routgadi, District Giridih, Jharkhand by **M/s Shivam Iron & Steel Co. Ltd. - regarding ToR.**

The Committee noted that the proponent vide their email communication dated 16.12.2013 expressed their inability to attend the meeting due to some unavoidable circumstances and requested to consider the proposal in the next EAC meeting. The

Committee decided that the proposal may be placed before the EAC in the next EAC meeting.

14.2.18 Proposed Expansion of the Ferro Alloy Plant through setting up of 3x9 MVA Submerged Arc Furnaces at Haldia District Purba Medinipur, West Bengal by M/s Modern India Con-Cast Ltd. - regarding ToR.

The project authorities along with their consultant M/s. Envirotech East Private Limited - 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 References for the preparation of EIA/EMP report. The proposed expansion project is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Modern India Con-Cast Limited have proposed to expand their existing Ferro Alloy Plant by installation of 3x9 MVA Submerged Arc Furnace at Haldia, District Purba Medinipur, West Bengal. The existing plant obtained Environment Clearance from MoEF vide letter no.J-11011/1297/2007-IA.II(I) dated 25.9.2008. The longitude and latitude of the project site is 88°10'20" E and 22° 05'38" N respectively. The proposed expansion will be carried out in the existing area of 39.50 acres. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. River Hoogly is located at a distance of 1.0km from the project site. No court cases/litigation is pending against the project. The power requirement after the proposed expansion is 28.65 MW which will be met from M/s.West Bengal State Electricity Board. The water requirement will be 56.75 m³/hr which will be supplied by the Haldia Development Authority. The raw materials required are quartzite, mill scale, coke breeze, electrode paste, Mn-ore and dolomite. Project cost is Rs. 60 crores.

Following are the details of the existing and proposed product details.

Unit	Unit Capacity	Product
EXISTING PROJECT:		
Submerged Arc Furnaces (6x9 MVA)	1,10,745 TPA	Ferro Manganese & Silico Manganese
PROPOSED PROJECT:		
Submerged Arc Furnaces (3x9 MVA)	49,200 TPA	Silico Manganese & Ferro Silicon

To control air emissions, adequate control measures like bag filters, dust suppression system & Stack of adequate height at relevant point will be installed. There will be no industrial effluent generation from the proposed plant (zero discharge plant). Furnace cooling water will be recycled. Domestic wastewater will be treated in Septic tank–Soak pit system. Slag generated during Silico Manganese production will be used for road construction / land filling / paver block making.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. Executive summary of the project
2. Photographs of the existing and proposed plant area.
3. Copies of iron ore linkage documents
4. Thermal radiation control and suction hood arrangement in furnace areas and impact of such devices

5. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
6. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB concerned.
7. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
8. 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)
9. A line diagram/flow sheet for the process and EMP
10. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. Details and classification of total land (identified and acquired) should be included.
17. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
18. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
19. 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.
20. A list of industries containing name and type in 10 km radius shall be incorporated.
21. Residential colony should be located in upwind direction.
22. 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".
23. Studies for 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 process units 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 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 for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included.
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 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 modelling 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 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. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.

60. Disaster Management Plan including risk assessment & damage control needs to be addressed and included.
61. 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.
62. 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.
63. 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.
64. Total capital cost and recurring cost/annum for environmental pollution control measures.
65. 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.
66. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.

- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (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. 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 report including public hearing proceedings.

14.2.19 Proposed expansion of Steel Plant along with installation of Cement Grinding Unit at Village Dasna, Jamuria, P.O. Bahadurpur, PS. Jamuria, District Burdwan, West Bengal by **M/s Shyam Sel & Power Ltd. - regarding ToR.**

The project authorities along with their consultant (M/s Envirotech East Private Limited - 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 preparation of EIA/EMP report. The proposed integrated project activity is listed at S.No. 3(a) in Primary Metallurgical Industries under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Shyam Sel & Power Limited have proposed to expand the existing steel plant along with the installation of cement grinding unit at Village Dasna, Jamuria, P.O. Bahadurpur, PS. Jamuria, District Burdwan, West Bengal. The existing plant has obtained environment clearance from the Ministry vide F. No. J-11011/887/2007-IA II (I) dated 18.3.2009. The land requirement for the proposed expansion is 125 acres of non-agricultural barren land. The longitude and latitude of the project site is 87°7'14" E and 23° 41'37" N respectively. No Forest land is involved. No national park/wild life sanctuary/ecologically sensitive area is located within 10 km radius. Ajoy river is located at a distance of 7km from the project site. The water requirement is 990 KLPD and will be sourced from Ajoy river. The power requirement will be 87 MW which will be sourced from CPP. No court case/litigation is pending against the proposed project. Total cost of the project is Rs.1469.54 crores.

The details of the existing units and proposed expansion are as below:-

EXISTING PLANT SCENARIO		
Unit	Capacity	Product

EXISTING PLANT SCENARIO		
Unit	Capacity	Product
Pellet Plant	5,00,000 TPA	Pellet
Sponge Iron Plant (2x100 TPD+ 2x90 TPD)	60,000 TPA	Sponge Iron
Induction Furnace (2x18 T)	1,30,000 TPA	Liq. Steel
Structural Mill	48,000 TPA	Channel, Beams etc.
Rolling Mill	55,000 TPA	TMT Bars
Ferro Alloys (2x9 MVA; 2x4.5 MVA)	47,520 TPA	Ferro Manganese & Silico Manganese
Captive Power Plant	21 MW (WHRB Based)	Power
	43 MW (CFBC Based) – Under Construction	

PROPOSED EXPANSION		
Unit	Capacity	Product
Pellet Plant with Iron ore Beneficiation Unit	1.2 MTPA	Pellet
Cold Rolling Mill Unit	0.35 MTPA	CR Coils/Sheets from HR Coils
Continuous Galvanising Line	0.3 MTPA	Galvanised CR Coils
Corrugation	0.3 MTPA	Corrugated Sheet
Producer Gas Plant	480 TPD or 75,000 Nm ³ /hour	Producer Gas
Cement Grinding Unit	1.2 MTPA	Portland Slag Cement & Portland Pozzolona Cement

The raw materials required are iron ore fines, coal, coke, bentonite, limestone and gypsum. The said materials will be procured mostly from the local sources.

Adequate control measures like installation of bag filters, dust suppression system, Electrostatic Precipitator (ESP) and stacks of adequate height at relevant point will be installed. There will be no discharge of Industrial Effluent (zero discharge plant). Domestic wastewater will be treated in Septic tank – Soak pit system. Solid waste (dust as collected in the dedusting systems) from Pellet Plant will be used in the palletizing mix. Tar collected from electric de-tarer shall be stored separately in lined tanks as specified by WBPCB in CTE and shall be sold to vendors. Dust as collected in the dedusting systems from Cement Plant will be re-used in the process.

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

1. Executive summary of the project
2. Iron ore/Coal/limestone linkage documents
3. Photographs of the existing and proposed plant area
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
6. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
7. 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)
8. A line diagram/flow sheet for the process and EMP
9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
10. A copy of the mutual agreement for land acquisition signed with land oustees.
11. 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.
12. 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.
13. 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.
14. 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.
15. Project site layout plan to scale using AutoCAD showing green belt at least 10 m wide along the periphery on all sides, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, water bodies, rivers/drainage passing through the project site should be included.
16. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates should also be included.
17. Details and classification of total land (identified and acquired) should be included.
18. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
19. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
20. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
21. A list of industries containing name and type in 25 km radius should be incorporated.

22. Residential colony should be located in upwind direction.
23. 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".
24. 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..
25. 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.
26. 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.
27. Action plan for excavation and muck disposal during construction phase.
28. 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.
29. Manufacturing process details for all the plants should be included.
30. Mass balance for the raw material and products should be included.
31. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
32. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
33. 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.
34. 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.
35. 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.
36. 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.
37. 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.
38. Air quality modelling 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.
39. 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.
40. Ambient air quality modelling 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.
41. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
 42. 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.
 43. One season data for gaseous emissions other than monsoon season is necessary.
 44. 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.
 45. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 46. 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.
 47. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 48. Ground water modelling showing the pathways of the pollutants should be included
 49. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
 50. 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.

51. 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.
52. A note on the impact of drawl of water on the nearby River during lean season.
53. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
54. 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.
55. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
56. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
57. 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.
58. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
59. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
60. 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.
61. 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.
62. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
63. 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.
64. 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.
65. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
66. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
67. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
68. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
69. 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.
70. 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.
71. 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.
72. 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.
73. 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.
74. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
75. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted.
76. 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.
77. A note on identification and implementation of Carbon Credit project should be included.
78. 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.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.

- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (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 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.

14.2.20 Proposed for additional 30 Coke Ovens and 4 MW Waste Heat Recovery Boiler, Non-Recovery Coke Oven Plant and Waste Heat Recovery Power Plant at Alichak, P.O: Khajanchak, Haldia, District: East Midnapore, West Bengal by **M/s. Ennore Coke Ltd. – regarding amendment in the Environment Clearance**

Environmental Clearance (EC) to the above proposal was accorded by Department of Environment, Government of West Bengal vide letter no.EN/2068/T-11-1/084/2007 dated 22.9.2008. The EC was accorded for setting up of Non Recovery type coke oven plant (1,50,000 TPA) and Waste Heat Recovery power plant (12MW) at Alichak, P.O: Khajanchak, Haldia, District: East Midnapore, West Bengal. The Consent To Establish and Consent To Operate was accorded by the West Bengal Pollution Control Board on 15.12.2008 and 9.9.2009 respectively.

The Ministry of Environment and Forests vide O.M.No.J-11013/5/2010-IA.II(I) dated 13.1.2010 has declared Haldia, West Bengal as a Critically Polluted Area. As per the EIA Notification 2006, any project or activity specified in Category 'B' will be treated as Category A, if located in whole or in part within 10 km from the boundary of Critically Polluted areas as notified by the Central Pollution Control Board from time to time.

In the present proposal under consideration, the project site is located within 10km radius of the Haldia, West Bengal. In view of this, the proponent vide letter dated 30.9.2013 along with the Form I application and Pre-feasibility report requested MoEF for the amendment/modification in the EC dated 22.9.2008. The proposal was placed before the EAC for consideration. The project proponent along with their consultant made a presentation before the Committee.

The amendment/modification sought by the proponent in the EC are as below:-

Sl. No.	Description	Battery (Ovens) / Boilers	Coke Production	Power Generation	Remarks
1.	Environmental Clearance obtained from State Level Environmental Impact Assessment Authority, West Bengal	<ul style="list-style-type: none"> 6 Non Recovery Coke Oven Batteries 72 ovens (12 Ovens per Battery) 3 Waste Heat Recovery Boilers 	1,50,000 TPA	12 MW	After commissioning of the plant, the actual production capacity achieved was 90,000 TPA with 6 MW power generation
2.	Actual Production achieved	<ul style="list-style-type: none"> 6 Non Recovery Coke Oven Batteries 72 ovens (12 Ovens per Battery) 3 Waste Heat Recovery Boilers 	90,000 TPA	6 MW	-
3.	Proposed additional installation	<ul style="list-style-type: none"> 2 Non Recovery Coke Oven Batteries 30 ovens (15 ovens per Battery) 1 Waste Heat Recovery Boiler 	60,000 TPA	4 MW	To meet with the balance coke production and power generation w.r.t. Environmental Clearance.
4.	Total production	<ul style="list-style-type: none"> 8 Non Recovery Coke Oven Batteries 102 ovens 4 Waste Heat Recovery Boiler 	1,50,000 TPA	10 MW	As mentioned in the Environmental Clearance

Additionally, PAs informed that the cost of the project for the aforesaid modification i.e for the additional 2 batteries (30 ovens) and 1x4 MW waste heat recovery boiler will be Rs.67.12 crores. Further, due to the said modification, the requirement of raw materials will be increased from 1,26,801 TPA to 2,11,116 TPA, water from 915 KLD to 1523 KLD and power requirement from 250 KVA to 500 KVA.

After detailed deliberations, the Committee sought the following additional information for reconsideration:-

- Undertaking from proponent stating that they will be complying with the emissions standards of Coke Oven Plants;

- ii. Certified compliance report from Regional Office of MoEF at Bhubaneswar for the existing unit;
- iii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared over a period of five years and shall be submitted; and
- iv. Environment Statement submitted to the West Bengal Pollution Control Board

14.2.21 Proposed of manufacturing of Manganese oxide and installation of new unit to manufacture various Ferro Alloys at Village Gondkhairy, Tehsil Kamlmeshwar, District-Nagpur, Maharashtra by **M/s Nagpur Pyrolusite Pvt. Ltd. – regarding ToR.**

The project authorities along with their consultant M/s. Pollution and Ecology Control Services - Nagpur 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 report. The proposed project is listed at S. No. 3(a) under Category 'A' of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Nagpur Pyrolusite Private Limited have proposed to expand the existing unit of Manganese oxide and installation of new unit to manufacture various Ferro Alloys at Survey no. 472/2 Village Gondkhairy, Tehsil Kalmeshwar, District Nagpur, Maharashtra. M/s. Nagpur Pyrolusite Private Limited is in possession of 100 Acres of land. The latitude and longitude of the project site is 21°8'46.38"N and 78°53'26.53"E respectively. No Forest land involved. No national park/ wild life sanctuary / ecologically sensitive area located within 10 km radius of the project site. Gondkhairy Village is located at a distance of 1 km from the project site. The Reserved Forest exists in the study area are - Bazargao Reserved Forest (5 kms W) and Madhogarh Reserved Forest (9 kms W). Vena Talav and Vena River are located at a distance of 1.5 kms W and 2.5 kms SW from the project site. No court cases/litigation is pending against the project. The cost of the project is Rs.150 Lacs.

The status of existing and proposed expansion units are as given below:-

S.N	Name	Existing	Proposed	Total
1	Manganese oxide	840 MTPA	6000 MTPA	6840 MTPA
2	Manganese dioxide	---	6000MTPA	6000 MTPA
3	<u>By thermite process</u> (10 Nos. of MS crucibles of 500kg each) Ferro Titanium OR	---	500 MTPA	500 MTPA
4	Low/medium carbon ferro manganese OR	---	4000 MTPA	4000 MTPA
5	Ferro molybdenum OR	---	200 MTPA	200 MTPA
6	Ferro vanadium OR	---	200 MTPA	200 MTPA
7	Low/medium Carbon silico manganese OR	---	400 MTPA	400 MTPA

8	<u>By installing Induction Furnance (2 Nos. of 500kg each)</u>			
	Ferro aluminium OR	---	6000 MTPA	6000 MTPA
9	Ferro silicon zirconium OR	--	500 MTPA	500 MTPA
10	Ferro silicon magnesium OR	--	500 MTPA	500 MTPA
11	Lead/ Aluminum shots	--	100 MTPA	100 MTPA
12	Aluminium master alloy	--	200 MTPA	200 MTPA
13.	<u>By installing Crusher/ Raymond Mill</u>			
	All Ferro alloys and metal powder	--	1000 MTPA	1000 MTPA

Mn ore, Ilmenite sand, Si-mn, Aluminum powder & scrap, Steel/iron scrap, Molybdenum concentrate, Titanium scrap, Limestone powder, Vanadium pentoxide and furnace oil etc. are the raw materials that will be used. The makeup water requirement is 20 KLD which will be met from the ground water. The power requirement is 1200 KVA which will be supplied by the State Electricity Board.

EAC asked the proponent to carryout baseline data collection for a period two months (Jan – Feb 2014) within 5km radius of the project site.

Adequate stack height will be provided to ensure wider dispersion of emissions. Water sprinkling system will be installed at various locations to control fugitive emissions. Proper care will be taken by installing Bag filters followed by Stack to control source emission. It is estimated that total effluent generation from the proposed installation will be from jiggging operation and domestic effluent. The water from jiggging will be treated in settling tank and will be reused in the process. Zero discharge condition from the proposed plant will be maintained. Slag generated from manufacturing of Ferro manganese will be sold to manufacturer of Silico-manganese.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

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. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
5. Details of raw material and source of raw material shall be included.
6. Manufacturing process details of all the plants with process flow chart shall be included.
7. Sources and quantity of fuel for the boiler.

8. Action plan to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
9. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂ and NO_x should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
10. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
11. An action plan to control and monitor secondary fugitive emissions from all the sources.
12. Surface and ground water quality within the study area.
13. Details of water requirement, wastewater generation and water balance chart shall be submitted. Measures for water conservation by recycling and reuse to minimize the fresh water requirement.
14. Proposed effluent treatment system for the process units and CPP shall be included.
15. Details of solid waste management including management plan of disposal of boiler ash.
16. Green belt development as per the CPCB guidelines.
17. List of flora and fauna in the study area.
18. Noise levels monitoring at five locations within the study area.
19. Traffic study of the area for the proposed project in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
20. Detailed Environment Management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
21. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
22. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
23. Action plan for rainwater harvesting measures at plant site to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
24. Details of occupational health surveillance programme.
25. Details of socio-economic welfare activities.
26. Action plan for post-project environmental monitoring.
27. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
28. 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.
29. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages should be provided.
- iv. The letter/application for environmental clearance should quote the MOEF file No. and also attach a copy of the letter.

- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee (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 Maharashtra 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.

14.3.0 Reconsideration

- 14.3.1 Proposed Ferro Alloys manufacturing unit (4x9 MVA) Submerged Electric Arc Furnaces at sy. no. 191 & 192, Sancham Village, Ranastalam Mandal, Srikakulam District, Andhra Pradesh by **M/s Refulgent Alloys & Steel Limited – regarding reconsideration for grant of Environment Clearance.**

The above proposal was considered in the 1st meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 24-25th September, 2012 for the grant of Environment Clearance, wherein EAC sought the following additional information for the reconsideration of the proposal.

- i. The representations received during Public Hearing along with their English translation and response to the issues raised in the representations.
- ii. Wind rose data needs to be rechecked and resubmitted. AAQ data also needs to be rechecked as values of PM_{2.5}, PM₁₀, SO₂ and NO_x are reported to be low.
- iii. Mn ore analysis in ppms/absolute values.
- iv. Management plan for high levels of fluoride in the ground water and Defluoridation/fluoride management plan as part of CSR.
- v. The water requirement needs to be reworked.
- vi. Management plan for CO in the flue gas generating from the furnace.

Ministry vide letter no J-11011/42/2011-IA.II(I) dated 2.1.2013 requested the Project Authorities (PAs) to submit the additional information cited above. Thereafter, Ministry vide letter dated 12.2.2013 delisted the proposal from the pending list in accordance with the procedure prescribed by the Ministry's Office Memorandum dated 30.10.2012 pertaining to delisting of pending projects.

PAs vide letter No. RANSL/EC/2013-2 dated 28.10.2013 submitted the aforesaid additional information to the Ministry. The said information was placed before the EAC for consideration. The PAs along with their EIA consultant – M/s. Sri Sai Manasa Nature Tech Private Limited - Hyderabad made a presentation before the Committee.

After detailed deliberations, the Committee found the additional information submitted by the proponent is satisfactory and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance.

- i. No charcoal shall be used as fuel. Pet coke shall be used as fuel instead of charcoal from unknown sources.
- ii. Continuous monitoring facilities for the process 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.
- 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 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.
- v. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. 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.
- vi. The total water requirement shall not exceed 34 m³/day. The water requirement shall be met from ground water. The unit shall obtain ground water drawl permission from Central Ground Water Authority. 'Zero' effluent discharge shall be strictly followed and no wastewater should be discharged outside the premises.
- 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 should be met from other sources.
- viii. Slag produced in Ferro Manganese (Fe-Mn) production shall be used in manufacture of Silico Manganese (Si-Mn). The Si-Mn slag and Fe-Si slag shall be used in the preparation of building materials.
- ix. No Ferro Chrome shall be manufactured without prior approval from the Ministry of Environment & Forests.
- x. An action plan for control of Cr and As in air and water should be prepared and submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xi. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.

Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

- xii. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 10.2.2012 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 Bangalore.
- xiii. Occupational health surveillance of the workers including regular analysis for respiratory and audiometric parameters should be done on a regular basis and records shall be maintained as per the Factories Act.
- xiv. Proper housekeeping should be maintained within the plant premises. Process machinery, exhaust and ventilation systems should be laid in accordance with Factories Act. Better housekeeping practices should be adopted for improvement of the environment within the work environment.
- xv. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details 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. 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.
- xvii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

14.3.2 Expansion of Sponge Iron Plant (1x350 TPD) into integrated Steel Plant at Village Godwall & Bastali Biran, Tahsil Devassar & Chitarangi, District, Singrauli, Madhya Pradesh by **M/s Trimula Industries Limited-regarding reconsideration for grant of Environment Clearance (*Internal Discussion by EAC*)**

The above proposal was considered in the 13th meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 18-20th November, 2013 for the grant of Environment Clearance, wherein the Committee sought the following additional information for reconsideration:-

- i. Trace element analysis of iron ore to be used especially for Arsenic (As), Nickel (Ni), Mercury (Hg) and Lead (Pb) parameter;
- ii. Undertaking from PAs stating that all the show cause notice issued by MPPCB have been replied and closed; and
- iii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared over a period of five years and shall be submitted.

PAs vide letter No. TIL/MOEF/13-14/337 dated 25.11.2013 submitted the aforesaid additional information to the Ministry. The said information was placed before the EAC for consideration.

The Committee noted that an amount of Rs.20.5 crores is earmarked for the Enterprise Social Commitment (ESC) related activities over a period of five years. The ash content in the coal will be 12.6-18.2%. Gross Calorific value in the coal would be 5955 kcal/kg. Further, PAs informed that all the show cause notice issued by MPPCB have been replied and closed.

After detailed deliberations, the Committee found the additional information submitted by the proponent is satisfactory and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance.

- i. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks 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.
- 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 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.
- iv. Dust suppression system and bag filters shall be installed to control the fugitive dust emissions at conveyor and transfer points, product handling, loading and unloading points.
- v. Hot gases from the 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 dispersion out into the atmosphere through ID fan and stack. ESP shall be installed to control the particulate emissions from the WHRB.
- vi. Total make up water requirement shall not exceed 2788 m³/day. The water consumption shall not exceed as per the standard prescribed for the sponge iron plants and steel plants.
- vii. 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.
- viii. 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. The cooling tower blow down shall be recycled for slag granulation.

- ix. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.
- x. All the char from DRI plant shall be utilized in FBC boiler of power plant and no char shall be disposed off anywhere else. FBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning.
- xi. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash 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 Bhopal.
- xii. Risk and Disaster Management Plan along with the mitigation measures should 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.
- xiii. A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Bhopal. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.
- xiv. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xv. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Sponge Iron Plants and Steel Plants should be implemented.
- xvi. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details 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
- xvii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/ procedure to bring into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xviii. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 8.11.2011 shall 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. 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.

14.3.3 Proposed Integrated Cement Plant (Clinker:2.0MTPA, Cement – 2.5MTPA) along with 40MW coal based Captive Power Plant and WHRB 10 MW at villages Tonki, Temberni, Sonudal & Gopalpura Tehsil Manawar, District Dhar in Madhya Pradesh by **M/s UltraTech Cement Limited – regarding reconsideration for grant of Environment Clearance (*Internal Discussion by EAC*)**

The above proposal was considered in the 13th meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 18-20th November, 2013 for the grant of Environment Clearance, wherein the Committee sought the following additional information for reconsideration:-

- i. English translation of the award letter of District Magistrate;
- ii. Details of the land acquired especially from SC/ST community;
- iii. Permission obtained from the State Govt. for tribal land acquisition;
- iv. Arrangement for transport of coal from place of import to the plant site;
- v. Revised water balance chart for the proposed project with focus on reduction in consumption and enhancement on quantum of recharge;
- vi. Undertaking from PAs stating that PAs will be complying with the revised SO₂ and NOx emission standards;
- vii. Revised Risk Assessment and Disaster Management Plan;
- viii. R&R action plan;
- ix. Commitment for fossil conservation, if any; and
- x. Commitment for effective management of work-zone environment.

PAs vide letter No. UTCL/ENV/DEL/2013/104 dated 21.11.2013 submitted the aforesaid additional information to the Ministry. The said information was placed before the EAC for consideration.

The Committee noted that out of the total land (231.28 ha), the ST land is 46.898 ha. The imported coal from South Africa and Indonesia will be received at the Hazira & Mundra port (Gujarat) and then transported to the plant site by rail/road. The revised water requirement will be 2800 KLD instead of 3000 KLD.

After detailed deliberations, the Committee found the additional information submitted by the proponent is satisfactory and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance.

- i. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system. Electrostatic precipitators

to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO_x burners should be provided to control NO_x emissions. Regular calibration of the instruments must be ensured.

- 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 Bhopal 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. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- vi. The coal yard shall be lined and covered.
- 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 shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions should be regularly monitored.
- viii. Total fresh water requirement after the proposed expansion of the cement and captive power plant shall not exceed 2800 m³/day which will be sourced from the Ground Water & Surface Water. A five year water management plan should be made so as to achieve reduction in ground water withdrawal.
- ix. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- x. 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.
- xi. 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 Environment (Protection) Act, 1986 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 Bhopal, SPCB and CPCB.
- xii. 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.

- xiii. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008. Efforts should be made to use fly ash maximum in making Pozzolona Portland Cement (PPC).
 - xiv. A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Bhopal. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.
 - xv. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
 - xvi. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision should be made accordingly.
 - xvii. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
 - xviii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.
 - xix. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 30.5.2013 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 Bhopal.
 - xx. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details 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. Risk and Disaster Management Plan along with the mitigation measures should 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.
 - xxi. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
 - xxii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, 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.
- 14.3.4 Proposed Cement plant (Cement 5.5 MTPA; Clinker 4.5 MTPA) alongwith Captive Power Plant (3x25 MW), DG Set (3x6 MW) and Waste Heat Recovery (15 MW) at District Karur, Tamil Nadu by **M/s Grasim Industries Ltd (UltraTech Cement Limited) -regarding reconsideration for grant of Environment Clearance (*Internal Discussion by EAC*)**

The above proposal was considered in the 13th meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 18-20th November, 2013 for the grant of Environment Clearance, wherein the Committee sought the following additional information for reconsideration:-

- i. Requisite coal linkage documents along with the logistics arrangement for transport of coal from place of import to the plant site;
- ii. Revised list of flora and fauna exists in the study area;
- iii. Revised water balance chart for the proposed project;
- iv. Revised coal consumption details for the proposed CPP
- v. Undertaking from PAs stating that PAs will be complying the revised SO₂ and NO_x emission standards; and
- vi. Revised Risk Assessment and Disaster Management Plan

PAs vide letter No. UTCL/ENV/DEL/2013/105 dated 21.11.2013 submitted the aforesaid additional information to the Ministry. The said information was placed before the EAC for consideration.

The Committee noted that the coal will be imported from South Africa/Indonesia. As per the MoU submitted, the ash and sulphur content in the coal for the cement plant will be 15% and 1% respectively. The calorific value in the coal would be 6000 kcal/kg. The ash and sulphur content in the coal for the CPP will be 27% and 1% respectively. The calorific value in the coal would be 4800 kcal/kg. The revised water requirement will be 3000 KLD. The coal requirement for the CPP will be 7,50,000 TPA.

After detailed deliberations, the Committee found the additional information submitted by the proponent is satisfactory and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance.

- i. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO_x burners should be provided to control NO_x emissions. Regular calibration of the instruments must be ensured.
- 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. Arsenic and Mercury shall be monitored in emissions, ambient air and water.

- vi. The coal yard shall be lined and covered.
- 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 shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions should be regularly monitored.
- viii. Total fresh water requirement after the proposed expansion of the cement and captive power plant shall not exceed 3000 m³/day which will be sourced from the Ground Water & Surface Water. A five year water management plan should be made so as to achieve reduction in ground water withdrawal.
- ix. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- x. 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.
- xi. 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 Environment (Protection) Act, 1986 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.
- xii. 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.
- xiii. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008. Efforts should be made to use fly ash maximum in making Pozzolona Portland Cement (PPC).
- xiv. A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Bangalore. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.
- xv. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
- xvi. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision should be made accordingly.
- xvii. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.

Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

- xviii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.
 - xix. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 22.5.2013 and 23.5.2013 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 Bangalore.
 - xxi. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details 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
 - xx. 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.
 - xxi. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
 - xxii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, 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.
- 14.3.5 Expansion of Integrated Cement Project-Clinker (2.0 to 6.0MTPA), Cement (3.25 to 8.0 MTPA), CTPP (40 MW to 80 MW), D.G. Set (2.0 MW to 7.0 MW) & WHRB (2x9 MW) at Villages: Sangaria, Borakheri, Peerkhera and Rasulpura, Tehsil-Nimbahera, District-hittorgarh (Rajasthan) by **M/s. Wonder Cement Limited regarding reconsideration for grant of Environment Clearance (*Internal Discussion by EAC*)**

The above proposal was considered in the 13th meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 18-20th November, 2013 for the grant of Environment Clearance, wherein the Committee sought the following additional information for reconsideration:-

- i. Report on last Public Hearing(PH) conducted and how WCL has addressed the issues raised during the PH;
- ii. Pet Coke analysis;
- iii. Undertaking from PAs stating that PAs will be complying the revised SO₂ and NO_x emission standards;
- iv. Commitment from PAs that 90% of SO₂ emission will be reduced by lime firing;
- v. Report from D/o Agriculture, State Govt. of Rajasthan regarding ground water level in the project site and effects on cropping pattern in the surrounding villages due to the cement plant operations;

- vi. Revised Risk Assessment and Disaster Management Plan;
- vii. Details of land acquisition particularly from SC/ST community;
- viii. Medical reports of the workers employed in the WCL;
- ix. Action plan for control of fugitive emissions; and
- x. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared over a period of five years and shall be submitted.

PAs vide letter No. Nil dated 22.11.2013 submitted the aforesaid additional information to the Ministry. The said information was placed before the EAC for consideration.

The Committee noted that the ash and sulphur content in the pet coke will be 3.20% and 4.60% respectively. The calorific value in the pet coke would be 7784 kcal/kg. Out of the total land of 191.064 ha, the land pertaining to the SC/ST community is 89.861 ha and 5.949 ha respectively. Rs. 65.86 crores is earmarked towards the Enterprise Social Commitment based on Public Hearing needs over a period of five years.

After detailed deliberations, the Committee found the additional information submitted by the proponent is satisfactory and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance.

- i. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO_x burners should be provided to control NO_x emissions. Regular calibration of the instruments must be ensured.
- 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 Lucknow 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. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- vi. The coal yard shall be lined and covered.
- 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

shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions should be regularly monitored.

- viii. Total fresh water requirement after the proposed expansion of the cement and captive power plant shall not exceed 6244 m³/day which will be sourced from the Ground Water, Mine sump and Ghambiri reservoir. A five year water management plan should be made so as to achieve reduction in ground water withdrawal.
- ix. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- x. 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.
- xi. 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 Environment (Protection) Act, 1986 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 Lucknow, SPCB and CPCB.
- xii. 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.
- xiii. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008. Efforts should be made to use fly ash maximum in making Pozzolona Portland Cement (PPC).
- xiv. A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Lucknow. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.
- xv. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
- xvi. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision should be made accordingly.
- xvii. As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xviii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.

- xix. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 13.5.2013 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 Lucknow.
- xx. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing Issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program shall be ensured accordingly in a time bound manner.
- xxi. Risk and Disaster Management Plan along with the mitigation measures should 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.
- xxii. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xxiii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

14.4.0 Any Other Items

- 14.4.1 Manufacturing of both white and grey cement from existing grey Cement Plant at Village Andheri Deori, District Ajmer, Rajasthan **by M/s Shree Cement Limited - regarding Environment Clearance.**

The Project Authorities (PAs) vide letter no.SCL/ENV/SWR/2013-14 dated 16.12.2013 requested the Ministry to postpone the consideration of the proposal cited above till their next request.

The Committee recommended that the proposal may be placed before the EAC as and when requested by the project proponent.

- 14.4.2 Proposed Aluminium Project (Smelter 7.2 Lakhs TPA) along with captive power plant (1,650 MW) at Sonahatu Block, District Ranchi Jharkhand by **M/s Hindalco Industries limited (Jharkhand Aluminum Project) –regarding Extension of Validity of ToR.**

The Project Authorities did not attend the meeting. The Committee recommended that the proposal may be placed before the EAC as and when requested by the project proponent.

- 14.4.3 Expansion of Sponge Iron Plant into Integrated Mini Steel plant (0.21 MTPA) along with WHRB (14 MW) and Captive Power plant (25 MW) at Village Chaliyama, Tehsil Rajnagar, District Saraikela Kharsawan, West Singhbhum, Jharkhand by **M/s Rungta Mines Ltd. – regarding Extension of Validity of Environment Clearance.**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/838/2007-IA II (I) dated 4.11.2008. The Project Proponent (PP) vide letter

No. RML/MOEF/CSP/13-14/767 dated 22.7.2013 along with the updated Form I and requested MoEF for extension of validity of EC. Regional Office of MoEF at Bhubaneswar had sent the certified compliance report vide letter no.103-170/08/EPE dated 28.12.2012. The PP also made a presentation before the Committee.

The EC was accorded for setting up the following units:

As per the EC dated 4.11.2008				Status of implementation	
S.No.	Particulars	Capacity	Production (MTPA)	Facilities operational	Yet to be installed
1.	Sponge Iron Unit	7x100 TPD	2,10,000	2,10,000	--
2.	Mini blast furnace	2x262 m ³	3,82,520	--	3,82,520
3.	Steel Melting Shop a) Induction Furnace b) Ladle Furnace c) Continuous casting machine	4x15 T 2X15 T 1X2 Strand	2,00,000	2,00,000 4x15 T --	-- -- 2X15 T
4.	Rolling Mill	--	2,00,000	--	2,00,000
5.	Captive Power Plant a) WHRB Boiler b) AFBC Boiler	7x2 MW 1x 25 MW	39 MW 14 MW 25 MW	39 MW 14 MW 25 MW	--

Further, the proponent submitted that the aforesaid project could not be established within validity period of the granted Environmental Clearance mainly because of:-

- i. Industrial recession from 2009 onwards
- ii. Poor uptake of Steel Product
- iii. Steel market fluctuation

The Committee noted that as per the certified compliance report, the RO- Bhubaneswar reported that several conditions of the Environment Clearance dated 4.11.2008 requires the special attention of the M/s Rungta Mines Limited including no safety gadgets for the contractual workers, no rain water harvesting structures at the plant site and non-submission of six monthly compliance report in respect of the stipulated environment clearance conditions.

The Committee asked the PAs to initiate necessary actions for the effective compliance of the aforesaid findings as reported by the RO- Bhubaneswar. The Committee recommended that fresh site inspection shall be undertaken by the RO- Bhubaneswar and the inspection report shall be sent to the Ministry for further consideration of the proposal.

14.4.4 Applicability of EIA Notification, 2006 for Pellet alone projects – **Presentation by Project Proponents**

A. M/s. Ardent Steel Limited

The proposal for expansion of Iron Ore Pelletizing Plant (0.6 MTPA to 2.1 MTPA) by addition of Iron Ore Washery (3.0 MTPA), DRI Plant (1.2 MTPA), SMS (1.2 MTPA), Rolling Mill (1.2 MTPA) along with Power Plant (100 MW) at village Phuljhar, Block-Bansapal, Tehsil Telkoi, District Keonjhar, Odisha by M/s. Ardent Steel Limited (ASL) was considered was considered by the Expert Appraisal Committee (EAC) - Industry in its 9th meeting held during 10-11th June, 2013 for the grant of Terms of Reference. While appraising the project, the EAC noted that proponent has already established and operating 0.6 MTPA Iron Ore

Pelletization Plant without obtaining prior environmental clearance from the Ministry and this case is a violation of Environment (Protection) Act, 1986. EAC has recommended that the MoEF shall deal with the violation matter in accordance with its Office Memorandum dated 12.12.2012.

Meanwhile, MoEF vide O.M. dated 27.6.2013 decided that directions under section 5 of the Environment (Protection) Act, 1986 will be issued to the project proponent in respect of the violations committed by them.

In accordance with the Ministry's O.M. dated 12.12.2012 and 27.6.2013 the proposal was processed and vide letters dated 12.12.2013 following actions were taken by the Ministry:-

- i. M/s.ASL was requested to put up the matter relating to violation to the Board of Directors of the Company or to the Managing Committee, for consideration of their environment related policy/plan of action and a written commitment in the form of a formal resolution shall be submitted to MoEF to ensure that violations will not be repeated.
- ii. Secretary, Department of Environment, State Government of Odisha with a copy to Odisha Pollution Control Board(OPCB) was requested to take credible action against M/s ASL by invoking powers under Section 19 of the Environment (Protection) Act, 1986 for the period for which the unit had operated without obtaining the requisite prior environmental clearance.
- iii. Direction under section 5 of the Environment (Protection) Act, 1986 was issued to M/s.ASL with a copy to Regional Office of MoEF at Bhubaneswar and OPCB to stop the production of 0.6 MTPA iron ore pelletization plant till the required EC is obtained.

Meanwhile, M/s.ASL submitted four representations to MoEF vide their letters dated 24.9.2013, 7.10.2013, 7.11.2013 and 13.11.2013 regarding the purported violation of the Environment (Protection) Act, 1986. These representations were placed before the EAC for consideration. M/s. ASL made a presentation before the Committee.

It was submitted by M/s. ASL that they have obtained Consent To Establish and Consent To Operate for the 0.6 MTPA iron ore pelletization plant from OPCB on 17.11.2008 and 12.10.2010 respectively. Consent renewals are being issued by OPCB on regular basis and the current renewal is valid up to 31.3.2014.

It was informed by M/s. ASL that the stand-alone pelletizing process does not come under the primary metallurgical process as referred in the schedule 3(a) of the EIA Notification 2006. Several stand alone iron ore pellet plants are operating in the State of Chhattisgarh, Jharkhand and Odisha without obtaining prior environment clearance. Further, M/s. ASL submitted that the aforesaid violation may please be condoned as there is a conflict of opinion regarding applicability of EC for pellet plants between SPCB and MoEF.

The Committee noted that the pelletizing process consists of process of converting iron ore fines into sized pellets i.e. agglomeration of ore. The binding materials viz. bentonite is used in the pelletizing process. Further, the pellets are heated and baked in a kiln using fuel such as coal, furnace oil and gas. No melting or refining involved in the pelletising process. No Chemical or Physical Properties of the Ore is improved.

The Committee was of the view that the iron ore pellet plants are falls under S.No. 3(a) [Primary Metallurgical Industries] under category 'A' of the Schedule of EIA Notification, 2006 and requires Environment Clearance from MoEF. The Committee also noted that there is a conflict of opinion regarding applicability of EC for pellet plants between SPCBs and MoEF.

After detailed deliberations, the Committee recommended the following course of action:-

- i. Ministry may send a communication to all the State Pollution Control Boards/ Pollution Control Committees stating that the iron ore pellet plants are falls under S.No. 3(a) [Primary Metallurgical Industries] under category 'A' of the Schedule of EIA Notification, 2006 and requires Environment Clearance (EC) from MoEF. The iron ore pellet plants which are operating within their jurisdiction without obtaining EC may be advised to regularize their statutory approvals by applying to MoEF for the grant of EC in accordance with the procedure stipulated in the EIA Notification 2006 within a time frame of six months.
- ii. Ministry may take a holistic view regarding applicability of EC for the iron ore pellet plants which are under operation with the valid consents as there is a conflict of opinion regarding applicability of EC for pellet plants between SPCBs and MoEF.
- iii. Further, action taken against M/s.ASL in respect of their violation may be reviewed by the Ministry as there is a conflict of opinion regarding applicability of EC for pellet plants between SPCBs and MoEF.

B. M/s. Sarda Energy and Minerals Limited

The proposal of expansion of 1.1 MTPA Integrated Steel Plant by addition of 2x1.2 MTPA Iron Ore Pelletization Plant, Coal Gasifier and 2.4 MTPA Iron Ore Grinding and Beneficiation Plant at Phase-I of Siltara Industrial Growth Centre, Village Mandhar, District Raipur in Chhattisgarh by M/s. Sarda Energy and Minerals Limited (SEML) was considered in the 10th meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 29-31st July, 2013. The Committee deferred the consideration of the proposal as the proponent has already established and is operating 0.6 MTPA iron ore pelletization plant without obtaining prior environmental clearance from the Ministry and recommended that MoEF shall deal with the violation matter in accordance with its Office Memorandum dated 12.12.2012 and 27.6.2013.

Based on the EAC recommendation, the proposal was processed and vide letters dated 10.12.2013 following actions was taken by the Ministry:-

- i. M/s.SEML was requested to put up the matter relating to violation to the Board of Directors of the Company or to the Managing Committee, for consideration of their environment related policy/plan of action and a written commitment in the form of a formal resolution shall be submitted to MoEF to ensure that violations will not be repeated.
- ii. Secretary, Department of Environment, State Government of Chhattisgarh with a copy to Chhattisgarh Environment Conservation Board (CECB) was requested to take credible action against M/s SEML by invoking powers under Section 19 of the Environment (Protection) Act, 1986 for the period for which the unit had operated without obtaining the requisite prior environmental clearance.
- iii. Direction under section 5 of the Environment (Protection) Act, 1986 was issued to M/s.SEML with a copy to Regional Office of MoEF at Bhopal and CECB to stop the production of 0.6 MTPA iron ore pelletization plant till the required EC is obtained.

Meanwhile, M/s.SEML submitted a representation to MoEF vide their letter dated 6.12.2013 regarding sympathetic consideration of violation under the Environment

(Protection) Act, 1986. The said representation was placed before the EAC for consideration. M/s. SEML made a presentation before the Committee.

It was submitted by M/s. SEML that they have obtained Consent To Establish and Consent To Operate for the 0.6 MTPA iron ore pelletization plant from CECB on 10.11.2006 and 15.9.2009 respectively. Consent renewals are being issued by CECB on regular basis and the current renewal is valid up to 30.9.2016. Thereafter, Ministry has issued EC for the expansion of pellet plant into integrated steel plant (1.1 MTPA) along with WHRB (2X30 MW) at Siltara Industrial Growth Center, Mandhar, Raipur on 23.12.2008. M/s. SEML has never concealed the existence of the pellet plant from CECB as well as MoEF.

It was informed by M/s. SEML that applicability of EIA Notification 2006 for the stand-alone pelletizing process may be reconsidered as there is no improvement in the chemical or physical properties of the ore and further no extraction of metal takes place. Several stand alone iron ore pellet plants are operating in the State of Chhattisgarh without prior environment clearance. In view of this, M/s. SEML submitted that the aforesaid violation matter may be reviewed by the EAC.

The Committee noted that the pelletizing process consists of process of converting iron ore fines to sized pellets. The binding materials viz. bentonite is used in the pelletizing process. Further, the pellets are heated and baked in a kiln using fuel such as coal, furnace oil and gas.

The Committee was of the view that the iron ore pellet plants are falls under S.No. 3(a) [Primary Metallurgical Industries] under category 'A' of the Schedule of EIA Notification, 2006 and requires Environment Clearance from MoEF. The Committee also noted that there is a conflict of opinion regarding applicability of EC for pellet plants between SPCBs and MoEF.

After detailed deliberations, the Committee recommended the following course of action:-

- i. Ministry may send a communication to all the State Pollution Control Boards/ Pollution Control Committees stating that the iron ore pellet plants are falls under S.No. 3(a) [Primary Metallurgical Industries] under category 'A' of the Schedule of EIA Notification, 2006 and requires Environment Clearance (EC) from MoEF. The iron ore pellet plants which are operating within their jurisdiction without obtaining EC may be advised to regularize their statutory approvals by applying to MoEF for the grant of EC in accordance with the procedure stipulated in the EIA Notification 2006 within a time frame of six months.
 - ii. Ministry may take a holistic view regarding applicability of EC for the iron ore pellet plants which are under operation with the valid consents as there is a conflict of opinion regarding applicability of EC for pellet plants between SPCBs and MoEF.
 - iii. Further, action taken against M/s.SEML in respect of their violation may be reviewed by the Ministry as there is a conflict of opinion regarding applicability of EC for pellet plants between SPCBs and MoEF.
- 14.4.5 Expansion of Integrated Steel Plant (10.0 MTPA to 16.0 MTPA) along with Captive Power Plant (600 MW) near Village Tornagallu, District Bellary in Karnataka by **M/s JSW Steel Limited - regarding Environment Clearance**

The proposal cited above was considered in the 17th Expert Appraisal Committee (Industry-1) meeting held during 13-14th December, 2010 and further considered in its 27th

meeting held during 26-27th August, 2011. The Committee recommended the proposal for Environment Clearance (EC) subject to stipulation of specific conditions along with other environmental conditions.

The Hon'ble Supreme Court vide its order dated 29.7.2011 and 26.8.2011 in W.P.(C) No.569 of 2009 had banned iron ore mining operations in the districts of Bellary, Tumkur and Chitradurga in the State of Karnataka. In compliance to the said orders of the Hon'ble Court, MoEF vide Office Memorandum (O.M) No. J-110132/41/2006-IA.II(I) dated 5.10.2011 had decided that MoEF will not consider any proposal relating to EC to integrated steel plants/sponge iron plants, which are linked to iron ore as a raw material to be obtained from these three districts till the Hon'ble Supreme Court lifts the ban in these districts. In the proposal under consideration, one of the source of iron ore for the project is from Bellary District. Due to this, the project was kept on hold by MoEF for the grant of EC.

The Hon'ble Supreme Court vide its order dated 18.4.2013 has allowed the resumption of mining operations in the aforesaid three districts in all Category 'A' mines and 63 Category 'B' mines subject to certain conditions including overall cap on production. MoEF vide O.M. dated 1.7.2013 lifted the moratorium for consideration of proposals for EC for integrated steel plants/sponge iron plants, as imposed earlier vide O.M. of 5.10.2011 subject inter-alia to the condition that while considering such proposals, the Expert Appraisal Committee will look into and satisfy themselves about availability of requisite iron ore, transportation requirements and other parameters of Environment law and rules for such projects.

M/s JSWSL vide their letter dated 2.7.2013 requested MoEF to grant EC for expansion of Integrated Steel Plant (10.0 MTPA to 16.0 MTPA) along with Captive Power Plant (600 MW) near Village Tornagallu, District Bellary in Karnataka as the MoEF has lifted the moratorium on 1.7.2013.

In accordance with the provisions under the Ministry's O.M. dated 1.7.2013, the aforesaid proposal was placed before the Expert Appraisal Committee (Industry) for consideration.

After detailed deliberations, the Committee asked the PAs to circulate the documents concerned with the proposal cited above as most of the Committee members have not received the requisite documents. Further, EAC sought additional information regarding availability of requisite iron ore and its transportation arrangements for further consideration of the proposal.

20th December, 2013

14.5.0 Consideration of the Projects:

Environmental Clearance

14.5.1 Expansion of Resin Manufacturing Unit (400 MTPM to 2500 MTPM) at Village Mahiyal, TlaukaTalod, District Sabarkantha, Gujarat by M/s Sterling Lam Ltd. - **regarding Environment Clearance.**

The project authorities and their consultant (Anand Consultant) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 4th Meeting of the Expert Appraisal Committee (Industry) held during 8th-9th January, 2013 for preparation of EIA/EMP report. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) of the EIA Notification, 2006 under category 'A' and appraised at Central level.

M/s Sterling lam Ltd have proposed for expansion of resin manufacturing unit (400 MTPM to 2500 MTPM) at Village Mahiyal, TlaukaTalod, District Sabarkantha, Gujarat. Plot area of existing unit is 25091 m². Out of which greenbelt will be developed in 8280 m². No additional land is required for the proposed expansion. No Forest land is involved. No National Park, Wildlife Sanctuary/reserved forest is located within 10 km radius of the project site. Total cost of the resin project is Rs.37 lakhs. It was noted that the TOR was issued for the following products:

S.N.	Name of the product	Existing (MT/Month)	Proposed (MT/Month)	Total (MT/Month)
1	Melamine Urea Formaldehyde Resin	--	200	200
2	Melamine Formaldehyde Resin	200	100	300
3	Phenol Formaldehyde Resin	200	800	1000
4	Urea Formaldehyde Resin	--	1000	1000

However, EIA /EMP report has been prepared for the following products :

S.N.	Name of the product	Existing (MT/Month)	Proposed (MT/Month)	Total (MT/Month)
1	Melamine Formaldehyde Resin	200	100	300
2	Phenol Formaldehyde Resin	200	800	1000
2	Melamine Urea Formaldehyde Resin	Nil	200	200
3	Urea Formaldehyde Resin	nil	1000	1000
4	Total	400	2100	2500

Ambient air quality monitoring was carried out at 8 locations during March –May, 2013 and submitted data indicates as PM₁₀ (46.2–86.7ug/m³), PM_{2.5} (9.7–38.2 ug/m³), SO₂ (8.2 – 23.7 ug/m³) and NO_x (12.2-28.3 ug/m³). Predicted value of ground level concentration due to proposed project is PM₁₀ (2.19 ug/m³), SO₂ (3.81ug/m³) and NO_x (0.91ug/m³). The resultant

concentrations are within the NAAQS. Bag filter will be provided to saw dust/coal/fire wood fired boiler and thermic fluid heater. Vents on reactors will be attached to condenser system. The condensate will be collected and reused in the process. All the storage tanks will be provided with proper dip arrangement for exhausts/vents and breather valve. Fresh water requirement from ground water source will be 43.7 m³/day. Effluent generation will be 5.16 m³/day and treated in ETP. Treated effluent will be evaporated. No effluent will be discharged outside the plant premises. ETP Sludge will be sent to TSDF. Fly ash will be sent to paver block/building block manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 4th September, 2013 under the Chairmanship of Collector and District Magistrate. The issues raised during public hearing were regarding apprehension for any damage to agriculture crops due to air pollution created by unit, local employment etc. Public hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter alongwith stack of adequate height shall be provided to saw dust/coal/fire wood fired boiler and thermic fluid heater to control particulate emission.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- iv) Total ground water requirement should not exceed 43.7 m³/day and prior permission should be obtained from the Central Ground Water Authority/State Ground Water Board.
- v) Total industrial effluent generation shall not exceed 5.2m³/day. Effluent shall be treated in ETP and evaporated.
- vi) No effluent shall be discharged outside the plant premises and 'Zero' effluent discharge shall be maintained.
- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- viii) Green belt should be developed in 33% of total plant area.
- ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- x) All the commitment made regarding issues raised during the public hearing/ consultation meeting held on 4th September, 2013 shall be satisfactorily implemented.

- xi) At least 5 % of the total cost of the project should be earmarked towards the Enterprise social responsibility 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.

14.5.2 Rare Metal (Uranium) Recovery Plant at Village Bijayachandrapur, TalukaKujanga, District Jagatsingpur, Orissa by M/s Department of Atomic Energy, Heavy Water Board, Government of India – **Environmental Clearance reg.**

The project authorities and their Consultant (M/s Bhagavathi Ana Labs Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 18th Meeting of the Expert Appraisal Committee (Industry) held during 20th–21st January, 2013 for preparation of EIA/EMP report. Nuclear power projects and processing of nuclear fuel and all the Synthetic Organic Chemical located outside notified industrial area are listed at S.N. 1 (e) and 5(f) respectively under Category 'A' and appraised at the Central level. Public hearing was exempted as per stage Section 7 (i) III Stage (3), Para (i)(f) of EIA Notification, 2006 as project being involved strategic consideration.

M/s Department of Atomic Energy, Heavy Water Board, Government of India has proposed for setting up of Rare Metal Recovery Plant at Village Bijayachandrapur, Tehsil Kujanga, District Jagatsinghpur, Odisha. The aforesaid plant will be set at IFFCO, Paradeep for the extraction of rare material from weak phosphoric acid (WPA) using Solvent Extraction Process and reagents like TOPS-99 & TOPS-03. Total plot area is 100 acres. Land is available at IFFCO premises and they will supply the raw material. Total cost of the project is Rs. 285 Crore. Out of which Rs. 10.00 Crore and Rs. 50.00 Lakh are earmarked towards capital cost and recurring cost per annum for pollution control measures. It is reported that no national wildlife sanctuaries/national parks. Water bodies such as Bay of Bengal (7 Km), Mahanadi River (1.5 Km), Taladanda Canal (1.2 Km) and Atharbanki creek (1.0 Km) are located within 10 Km distance. Hatamundia Reserve Forest and GarhKujang Protected Forest area located within 10 Km distance.

The plant is proposed to be set up in two phase, each of 135 m³/hr feed of weak phosphoric acid (WPA) with RM content averaging 108 ppm. RM recovery from WPA will involve following steps:

1. Pre-treatment of wet phosphoric acid (WPA).
2. Solvent extraction of RM from Phosphoric acid.
3. Product precipitation.
4. Post treatment of phosphoric acid after the recovery of rare metal.

RM (Uranium) is produced in the form of yellow cake which comprises of 70-90% tri-Uranium Octoxide (U₃O₈) by weight. Ambient air quality monitoring was carried out at 7 locations during March –May, 2009 and submitted data indicates as PM₁₀ (16–45ug/m³), SPM (73–154 ug/m³), SO₂ (4.5 – 16.2 ug/m³) and NO_x (8.0-13.6 ug/m³). The resultant concentrations are within the NAAQS.

Gaseous emissions due to vaporization of spilled/leaked volatile solvents, acids, ammonia, carbon dioxide etc will be passed through vent scrubber and then discharged into atmosphere through stack. Total fresh water requirement from IIFCO, Paradeep will be 100 m³/hr. Industrial effluent generation will be 20 m³/hr and treated in ETP. Treated effluent will

be reused for toilet flushing, irrigation/gardening. Cooling tower blow down (20 m³/hr) will be treated through RO plant. RO rejects will be sent to sludge holding tanks. About 5 T/hr. of Na₂SO₄ of 5 % concentration will be generated. Na₂SO₄ crystal from these effluent will be recovered through physic-chemical process. No effluent will be discharged outside the plant premises and zero discharge will be adopted. Before, transportation of the Yellow cake through public domain, necessary permission /clearance from AERB will be obtained.

Spent activated carbon used in adsorption process will be reactivated & recycled or disposed through CPCB authorized vendors. ETP sludge will be sent to TSDF. Green belt will be developed in 20.0 acres out of total land 100.00 acres in phased manner. Power requirement from Grid Corporation Odisha will be 6000 KVA. DG set will be installed for standby arrangement.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Clearance/Permission from Atomic Energy Regulatory Board shall be obtained for the proposed project.
- ii) Process emissions shall be controlled by scrubber and treated gas shall be dispersed through stack of adequate height.
- iii) Total fresh water requirement from IFFCO water supply should not exceed 100 m³/hr.
- iv) Total industrial effluent generation including cooling tower blow down should not exceed 25 m³/day. Effluent shall be treated in ETP. Cooling tower blow down (20 m³/hr) shall be treated through RO plant.
- v) No effluent shall be discharged outside the plant premises and zero effluent discharge concept shall be adopted.
- vi) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from OSPCB should be obtained for disposal of solid / hazardous waste in the TSDF.
- vii) Green belt shall be developed in 20 acres of land.
- viii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

14.5.3 Proposed Expansion of Aliphatic Amines and its derivatives Manufacturing unit at Village Tamalwadi Tehsil Tuljapur District Osmanabad, Maharashtra by M/s Balaji Amines Ltd.-**regarding Environment Clearance.**

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

14.5.4 Expansion of Resin Manufacturing Unit (1000 TPM to 2260 TPM) at Village Sarodhi Tehsil & District Valsad, Gujarat by M/s Amity Thermosets Pvt.Ltd.-
regarding Environment Clearance.

The project authorities and their consultant (Precitech) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 33rd Meeting of the Expert Appraisal Committee (Industry) held during 21st–22nd March, 2012 for preparation of EIA/EMP report. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) of the EIA Notification, 2006 under category 'A' and appraised at Central level.

M/s Amity Thermosets Pvt. Ltd. has proposed for expansion of Resin Manufacturing Unit (1000 TPM to 2260 TPM) at Village Sarodhi Tehsil & District Valsad, Gujarat. Total plot area is 24500 m². No additional land is required for proposed expansion. Out of which greenbelt will be developed in 8550 m². The cost of project is Rs. 5.115 Crore. Aurangariver is flowing at a distance of 0.5 km. No national park/wildlife sanctuary is located within 10 km distance. Following products will be manufactured:

S.N.	Product	Quantity (TPM)			Remark
		Existing	Additional	Total after Expansion	
1	Phenol Formaldehyde Moulding Powder/phenolic Moulding Compound	1000	0	1000	Formulation only (Existing)
2	Phenol Formaldehyde Resin/phenolic Resin (Solid/Lumps)	0	750	750	Solid/lumps (New product)
3	Phenol Formaldehyde Resin/Phenolic Resin (Liquid)	0	500	500	Liquid (new Product)
4	Unsaturated polyester Resin	0	50	50	New product
5	Melamine formaldehyde Resin	0	10	10	New product
Total		1000	1260	2260	

Ambient air quality monitoring was carried out at 6 locations during October – December, 2012 and submitted data indicates as PM₁₀ (59–90 ug/m³), PM_{2.5} (25–50 ug/m³), SO₂ (18 – 32 ug/m³) and NO_x (16-29 ug/m³). Predicted value of ground level concentration due to proposed project is PM₁₀ (1.57ug/m³), SO₂ (23.34 ug/m³) and NO_x (3.91ug/m³). The resultant concentrations are within the NAAQS. Stack of 30 m height will be provided furnace oil fired thermic fluid heaters (4 nos). A vent will be provided to the drier for dispersion of the emission. Fresh water requirement from ground water source will be increased from 16 m³/day to 28 m³/day after expansion. Industrial effluent generation will be 37.5 m³/day after expansion. Effluent will be treated by FACCO (Fenton Activated Catalytic Carbon Oxidation) treatment. Treated water after FACCO treatment will be mixed with other industrial effluent streams and domestic effluent, which will finally be treated in ETP. Treated effluent will be used for cooling tower make up and remaining will be used for irrigation of

greenbelt area. ETP sludge will be sent to TSDF. Used oil will be sold to registered recyclers / reprocesses.

Power requirement will be increased from 190 KVA to 250 KVA after expansion, which will be sourced from DGVCL. FO and HSD will be used as fuel. DG sets (2 x 225 KVA) will be installed. Copy of consent order no. 4539 dated 3.11.2004 issued by GPCB has been submitted. Copy of consent order no. 33518 dated 12.05.2009 issued by GPCB is submitted. They informed that existing product involved formulation only.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 21st August, 2013 under the Chairmanship of District Collector and District Magistrate. The issues raised during public hearing were regarding air emissions, water pollution, effluent discharge, phenol removal from wastewater, ETP, contamination in ground water etc. Public hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Stack of adequate height shall be provided to oil fired heaters to control particulate emission.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- iv) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- v) Total ground water requirement should not exceed 28 m³/day and prior permission should be obtained from the Central Ground Water Authority/State Ground Water Board.
- vi) Industrial effluent will be treated in ETP based on photo fenton process followed by tertiary treatment to achieve zero discharge. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- viii) Green belt should be developed in 33% of total plant area.
- ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- x) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 21st August, 2013 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.

- xi) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility 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.

14.5.5 Expansion of API Bulk Drugs Manufacturing Unit at GIDC Sarigam ,DistrictValsad, Gujarat by M/s Macleods Pharmaceuticals Ltd. - regarding Environment Clearance.

The project authorities and their consultant (Eco Chem Sales & Service) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 6th Meeting of the Expert Appraisal Committee (Industry) held during 5th–7th March, 2013 for preparation of EIA/EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, project site is located within 10 Km of interstate boundary (Daman & Silvassa) and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level. Public hearing of the project was exempted as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 due to project being located in notified industrial area.

M/s Macleods Pharmaceuticals Limited have proposed to expand their API bulk drug manufacturing unit from 4.5 TPM to 12 TPM (Existing: 4.5 TPM; Expansion: 7.5 TPM) at Plot No. 2209, Notified Industrial Estate, GIDC Sarigam, Distt. Valsad, Gujarat. The existing plant got Consent to Operate from Gujarat Pollution Control Board on 30.7.2012. Total plot area is 54265 m². No Forest land is involved. No National Park/Wildlife Sanctuary is located within 10 km distance. Total project cost after the expansion is Rs. 7825 lakhs [Existing: 5815 lakhs; Expansion: 2010 lakhs]. Rs. 200 lakhs is earmarked towards the environmental protection measures. Following are the details of the existing and proposed product details.

Sr. No.	Products	Capacity (in TPM)		
		Existing	Proposed	Total
1	API Bulk Drugs	4.5	7.5	12.0

Ambient air quality monitoring was carried out at 6 locations during March –May, 2013 and submitted data indicates as PM₁₀ (65.19–92.79ug/m³), PM_{2.5} (21.95–43.66ug/m³), SO₂ (24.66 – 36.18ug/m³) and NO_x (21.42-29.62ug/m³). Predicted value of ground level concentration due to proposed project is PM₁₀ (0.775ug/m³), SO₂ (1.95ug/m³) and NO_x (1.281ug/m³). The resultant concentrations are within the NAAQS. Adequate stack height will be provided oil fired boiler (800 kg/hr). Bagfilter alongwith stack of adequate height will be provided to oil/briquettes fired boiler. Process emissions viz (SO₂, HCl, H₂S and Br₂) will be scrubbed in two stage water followed by alkali scrubber. Fresh water consumption from canal of River Damangangan will be increased from 80 m³/day to 190 m³/day after expansion. Industrial effluent generation will be increased from 38 m³/day to 99 m³/day after expansion. Industrial effluent will be segregated into high COD/TDS and low COD /TDS effluent streams. High COD/TDS effluent stream will be treated through solvent stripper and

evaporated through MEE followed by ATFD. Low COD/BOD effluent stream will be treated in ETP comprising primary, secondary and tertiary treatment facilities. Treated effluent (89 m³/day) will be discharged into underground GIDC effluent drainage line for its ultimate disposal into Arabian sea. ETP sludge/sludge of wet scrubber and MEE will be sent to TSDF. Used oil, spent solvent, spent catalyst, will be sent to authorized recyclers/re-processors. Greenbelt will be developed in 13000 m² out of total land area of 46724.5 m².

The Committee also discussed the compliance status report dated 17th October, 2013 on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's regional office, Bhopal. It is reported that water quality of treated effluent is meeting the discharged condition. Stack monitoring is done regularly and found to be within the limits. Generation of hazardous waste was under the prescribed limit. Hazardous waste is sent for incineration /landfilling to Gujarat Enviro Protection & Infrastructure Ltd. It is reported that 150 trees & 500 plant saplings were planted. Project proponent informed that more plantation will be done. Committee was satisfied with the response of the Project proponent.

After detailed deliberations, the Committee found EIA/EMP report satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Bag filter shall be provided to the boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/GPCB guidelines.
- ii) The levels of PM₁₀, SO₂, NO_x, VOC, SO₂, HCl, H₂S and Br₂ shall be monitored in ambient air.
- iii) Adequate scrubbing arrangement should be provided to process vents to control SO₂, HCl, H₂S, Cl₂ etc. The scrubbing solution shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system shall be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant shall be automatically stopped. Stack monitoring shall be done regularly and report shall be submitted to Gujarat Pollution Control Board (GPCB) and the Ministry's regional office at Bhopal.
- iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by GPCB.
- v) Total fresh water requirement from River Damangangan shall not exceed 190 m³/day and prior permission shall be obtained from the competent Authorities.
- vi) Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS/CCOD effluent stream shall be treated in ETP and treated effluent shall be discharged into underground GIDC effluent drainage after conforming to the standards prescribed for the effluent discharge and after obtaining permission from the GPCB. Condensate and recover water will be recycled/reused within factory premises.

- vii) Treated effluent shall be passed through guard pond. Online pH meter, flow meter and TOC analyzer shall be installed.
- viii) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- ix) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF.
- x) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire-fighting facilities in case of emergency.
- xi) Solvent management should be as follows :
 - Reactor should be connected to chilled brine condenser system
 - Reactor and solvent handling pump should have mechanical seals to prevent leakages.
 - The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents should be stored in a separate space specified with all safety measures.
 - Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
 - Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

14.5.6 Butene-1 Project at Panipat Refinery & Petrochem Complex of IOCL at Village Balijathan Tehsil Matlauda M/s Indian Oil Corporation Limited-**Regarding Environmental Clearance.**

The project authorities and their consultant (Envirotech East (P) Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 34th Meeting of the Expert Appraisal Committee (Industry-2) held during 13th-14th April, 2012 for preparation of EIA/EMP report. All petro-chemical complexes are listed at S.N. 5(c) under category 'A' and appraised at Central level.

M/s IOCL has proposed for production of Butene-1 (20,000 MTPA) at Panipat Refinery & Petrochemical Complex of IOCL at Village Baljatan, Tehsil Matlauda, District Panipat, Haryana. The proposed unit will be installed in the existing Panipat Naphtha Cracker Complex. No forest land is involved. Total plot area of existing Panipat Naphtha Cracker Complex is 6300 m². No additional land will be required as the proposed Butene-1 facilities will be installed in vacant plot (90 m x 70 m) available near the swing unit within the existing Panipat Naphtha Cracker Complex. Total project cost is Rs. 190 Crores. The Committee noted that as per action plan prepared by HSPCB and CPCB, oil refinery and naphtha cracker unit are located outside critically polluted area notified by the CPCB.

Ambient air quality monitoring was carried out at 6 locations during 1st October – 31st December, 2012 and submitted data indicates as PM10 (40–80ug/m³), PM2.5 (17–39ug/m³), SO₂ (8 – 26 ug/m³) and NO₂ (9-42ug/m³). The resultant concentrations are within the NAAQS. Based on the fuel consumption, SO₂ emissions will be 3.53 Kg/hr. There will be process emissions during the operation of the proposed Butene-1 project. There will be additional 360 KW power requirement and 2.2 MT/hr steam requirement during the operation of the proposed Butene-1 project, which will be fulfilled by the existing facilities having enough cushion to accommodate the future requirement. Water requirement from Munak Regulator on Western Yamuna Canal for Butene-1 project will be increased from 1808 m³/hr to 1813 m³/hr after implementation of Butene project. Effluent will be treated in ETP. Oil and Chemical sludge will be treated through bioremediation process.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Haryana State Pollution Control Board on 23rd August, 2013. The issues raised during public hearing were regarding bad smell, local employment, mosquito menace, greenbelt etc. Regarding odour, M/s IOCL informed that bad odour may be generated depending on the wind direction but actual source of odour will be identified and necessary measures will be taken to control. Regarding local employment, local people based on qualification & experience will be given preference. Regarding greenbelt, IOCL will be planted additional 25000 trees to increase the greenbelt coverage. Public hearing issues have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Western regional office, Chandigarh. It is reported that RLNG is used as main fuel in Panipat Naphtha Refinery. Ambient air quality is being monitored regularly. Continuous online monitoring analyzers are used for measurement of SO₂ and NO_x. Low NO_x burner has been installed. The secured landfill provision is available within the India Oil Panipat Complex at the Refinery Site. The Committee found compliance report satisfactory.

After detailed deliberations, the Committee found EIA/EMP report satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. All the specific conditions and general conditions specified in the earlier environmental clearance letters accorded vide Ministry's letter nos. J-11011/27/91-IA-II (I) dated 16th July, 1992, J-11011/60/2000-IA-II (I) dated 9th April, 2001, J-11011/52/2000-IA-II (I) dated 30th April, 2001, J-11011/9/2001-IA-II (I) dated 6th December, 2001, J-11011/153/2004-IA-II (I) dated 4th January, 2005 and J-11011/7/2004-IA-II (I) dated 9th August, 2004 shall be implemented.
- ii. The emission standards prescribed by the MoEF under Environment (Protection) Act for petrochemical industry shall be strictly followed. 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. Stack emissions shall be monitored regularly.
- iii. Continuous monitoring system for VOCs at all important places/areas shall be ensured. When monitoring results indicate above the permissible limits, effective measures shall be taken immediately.

- iv. Total fresh water requirement from Yamuna Canal shall not exceed 1813 m³/hr and prior permission shall be obtained from the concerned agency. No ground water shall be used.
- v. Effluent will be treated in the ETP. No process effluent shall be discharged in and around the project site. Water quality of treated effluent shall be monitored regularly.
- vi. Additional 25000 trees shall be planted to increase the greenbelt coverage.

14.5.7 Sodium Cyanide & other Cyanide based products at plot no. 26-37, 54-57, 122, 143, Village Asnabad, Tehsil Olpad, District Surat, Gujarat **by M/s Hindusthan Chemicals Company (Formerly known as M/s Cyanide & Chemicals Company)- Regarding Environment Clearance.**

The project authorities and their consultant (Eco-Chem Sales & Services 'A' '20') gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Cyanide and Cyanide based plants are listed at S.N. 5(b) under Category 'A' and appraised at the Central level.

M/s Hindustan Chemicals Company have proposed for the Expansion of Sodium Cyanite and other Cyanide based products at Plot No. 26-37, 54-57, 122, 143, Village Asnabad, Tehsil Olpad, District Surat, Gujarat. Expansion of existing unit is proposed to manufacture Sodium Cyanide and other cyanide based products. Total plot area is 2,04,995 m² out of which 15,963 sq.m will be used for expansion. Total cost of the proposed expansion project is Rs. 202.50 Crore. Out of which, Rs. 2.50 Crore and Rs. 1.25 Crore per annum are earmarked towards capital cost and recurring cost per annum for pollution control measures. River Tapi is flowing at a distance of 9.5 km. No national park/wildlife sanctuary/reserve forest is located within 10 km distance. Details of existing and proposed products will be as follows:

S.N	Products	Production Capacity (MTPA)		
		Existing	Proposed	Total
1	Hydrocyanic Acid	5100	--	5100
2	Sodium Cyanide	6372	15000	21372
3	Potassium Cyanide	2000	-	2000
4	Sodium Ferrocyanide	1000	-	1000
5	Potassium Ferrocyanide	1000	-	1000
6	Diphenyl Guanidine	1260	-	1260
7	Heat Treatment Salt	720	-	720
8	Mandelonitrile	2500	-	2500
9	Sodium Dicyanamide	300	-	300
CYNOHYDRINES				
10	MetaphenoxyBenzaldehydeCyanophydrin (MPBAD Cyanohydrin))	5000	2000	7000
11	Formaldehyde Cyanohydrin (Glycolonitrile)			
12	Acetone Cyanohydrin			
13	Methyl Ethyl Ketone Cyanohydrin			
14	Acetaldehyde Cyanohydrin (Lactonitrile)			
15	Para Anisaldehyde Cyanohydrin			
16	Cyclohexanone Cyanohydrin			
17	Methyl Propyl Ketone Cyanohydrin			
18	Methyl MercaptoButyronitrile (Methyl			

	MercaptoProponaldehyde Cyanohydrin)			
NITRILES				
19	Isophoron Nitrile	3000	300	3300
20	Succinonitrile			
21	IminoDiacetonitrile			
22	3-Hydroxy Propionitrile			
23	Methyl Amino Acetonitrile Hydrochloride			
CYANIDE BASE PRODUCTS				
24	Sodium Cyano Acetate	3500	6300	9800
25	Cyanamide (Crystals & Aqueous Solution)			
26	Para Anisaldehyde			
27	DiorthoTolyl Guanidine (DOTG)			
By-product				
1	Ammonia Sulphate	2649	-	2649

Ambient air quality monitoring was carried out at 10 locations during March –May, 2012 and submitted data indicates as PM₁₀ (42.8-63.7 ug/m³), PM_{2.5} (21.9–38.5ug/m³), SO₂ (6.2 – 13.3 ug/m³) and NO_x (7.8-14.4 ug/m³). Predicted value of ground level concentration due to proposed project is SPM (0.3704 ug/m³), SO₂ (0.13 ug/m³) and NO_x (0.12ug/m³). The resultant concentrations are within the NAAQS. It was informed that existing ammonia storage sphere will be removed. New bullets (2 nos x 75 MT) will be installed. Waste gases viz. HCN, N₂, H₂, CH₄, NH₄, CO & CO₂ will be fed to Methanation Plant for the recovery of Methane and tail gas which will be burnt in incinerator. Stack height (30 m) will be provided to gas fired auxiliary boiler (1.5 TPH). Bagfilter and wet scrubber will be provided to incinerator. Stack height of 20 m will be provided to DG set (2250 KVA). Material handling will be carried out in closed system to avoid possibility of any emissions. Standby flare system will be provided to overcome any emergency.

Total fresh water requirement from Kakrapar Canal will be increased from 651.2 m³/day to 1105.2 m³/day after expansion. Industrial effluent generation will be increased from 257.9 m³/day to 504.9 m³/day after expansion. Effluent will be segregated into high TDS/COD and Low COD/TDS effluent stream. High TDS/COD effluent stream will be pre-treated and evaporated in MEE. Condensate will be recycled/reused in the plant. Cyanide and Ammonia are the main pollutants in the effluent. Ammonical nitrogen will be reduced by passing through cation exchange. Outlet of cation bed, containing free cyanide as HCN will be fed to air stripping column to strip off HCN and sent to alkali scrubber to form sodium cyanide which will be recycled to Sod Cyanide/Sod Ferro Cyanide Plant. ETP sludge (11 MTPA), tar residues/distillate residues (90 MTPA), spent resin, MEE salt will be sent to TSDF. Activated carbon, ferric hydroxide and iron sludge will be sent for incineration. Waste / used oil will be sold to authorized recyclers/re-processors. Greenbelt will be developed in 92247 m². Power (3600 KW) will be required for the proposed expansion and generated from the steam turbine. Part of the electricity will be sourced from Dakshin Gujarat Vij Co. Ltd. D.G. sets (2x1250 KVA) will be installed for uninterrupted power supply. HSD (200 l/hr) will be used in D.G. sets. Steam (1000 kg/hr) generated from waste heat recovery boiler (WHRB) of Sodium Cyanide Plant.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's regional office, Bhopal. It is reported that monitoring for gaseous emissions and particulate matter has been carried out for incinerator and auxiliary boiler, which was found to be within limit. Waste gasses from all plants are driven under vacuum to existing incinerator. HCN content in flue gas is being monitored on monthly basis. Double wall pipeline for HCN transfer has been provided from HCN plant to NACN plant. Effluent is segregated into low TDS/COD and high TDS/COD effluent streams. High TDS/COD effluent stream is

evaporated in MEE. Unit has obtained authorization for the storage and disposal from GPCB and having valid membership of Nandesari Environment control Ltd. Regarding uploading of compliance on web, it was informed that they have uploaded the latest compliance report and screen photo of company's website will be submitted. regarding greenbelt, it was informed that greenbelt will be developed as per the submitted proposal. The Committee was satisfied with the response of the project proponent.

Public hearing / consultation was exempted as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 due to project being located in notified GIDC.

After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. National Emission Standards for Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3rd February, 2006 and amended time to time shall be followed by the unit.
- ii. Adequate stack height shall be provided to gas fired boilers.
- iii. All the gas from the process containing HCN shall be incinerated in the incinerator. Scrubber and Stack of adequate height shall be provided to incinerator. Bagfilter, water scrubber and stack of adequate height shall be provided to heat treatment salt plant, ammonia absorption column to ammonium sulphate recovery plant and Cyclone separator to control particulate emissions. Efficiency of pollution control device shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped.
- iv. Incinerator should be designed as per CPCB guidelines. SO₂, NO_x, HCN, HCl and CO emissions shall be monitored in the stack regularly.
- v. Chilled brine circulation system should be provided to condensate solvent vapors and reduce solvent losses. It should be ensured that solvent recovery should not be less than 95%.
- vi. All necessary steps should be taken for monitoring of HCN, chlorine, HCl and NH₃ as well as VOCs in the proposed plant.
- vii. A proper Leak Detection and Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per the CPCB guidelines.
- viii. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.
- ix. Total water requirement from Kakrapar Canal should not exceed 1105 m³/day after expansion and prior permission should be obtained from the Competent Authority.

- x. Industrial effluent generation should not exceed 505 m³/day. Effluent shall be segregated into high TDS/COD and Low COD/TDS effluent stream. High TDS/COD effluent stream will be pre-treated and evaporated in MEE. Condensate shall be recycled/reused for cooling tower make up. Cyanide and Ammonia are the main pollutants in the effluent. Low TDS/COD effluent stream shall be treated in ETP and treated effluent shall be discharged to Masma Khadi after meeting the discharge standards and obtaining the approval of GPCB. Ammonical nitrogen shall be reduced by passing through cation exchange. Water quality of treated effluent should meet the norms prescribed by CPCB/SPCB.
- xi. Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed. Efforts shall be also made to explore the possibility of recycling/reuse of the treated effluent.
- xii. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary movement) Rules, 2008 for management of hazardous wastes and prior permission from UPPCB should be obtained for disposal of solid / hazardous waste in the TSDF. The concerned company should undertake measures for fire fighting facilities in case of emergency.
- xiii. As proposed, ETP sludge and incineration ash should be sent to TSDF site. High calorific value waste such as spent organic should be incinerated.
- xiv. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xv. The company should make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.
- xvi. Green belt should be developed at least in 33 % of the plant area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Selection of plant species should be as per the CPCB guidelines.

Terms of Reference

- 14.5.8 Expansion of Dyes & Dye Intermediates at Village Kudikadu, Taluka & District Cuddalore, Tamil Nadu by M/s Clariant Chemicals (India) Ltd. –TOR reg.

The project authorities and their consultant (ABC Techno Labs India Pvt. Ltd., Chennai) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the State Level Expert Appraisal Committee, Tamil Nadu held on 10th January, 2013 for preparation of EIA/EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within 10 km of CPA 'Cuddalore', proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Clariant Chemicals (India) Ltd. has proposed for Expansion of Dyes & Dye Intermediates at Village Kudikadu, Taluka & District Cuddalore, Tamil Nadu. They informed that they have dropped the proposal for power plant. Total plot area is 288250m² of which greenbelt will be developed in 94325 m². Uppanar River, adjacent (E), Bay of Bengal (2 Km), Gadilam River (5.5 Km), Thenpennaiyar River (9.0 Km) are located. No national parks/wildlife sanctuaries are location within 10 km distance. Cost of project is Rs. 14.75 Crore. Following products will be manufactured :

S.N.	Product	Existing (TPM)	Additional (TPM)	Total after Expansion (TPM)
1	Blue Pigments	150 TPM	125 TPM	275 TPM
2	Intermediates	85	30	115
3	Fast Colour Bases (FCB)	20 (dropped)	--	0
4	Naphthols	30 (dropped)	--	0
By-products				
1	Spent Sulphuric Acid	110	--	2700
2	Spent Hydrochloric Acid	100	--	600
3	Impure Sodium Hypochlorite	120	--	700

Ambient air quality monitoring was carried out at 7 locations during March – May, 2013 and submitted data indicates as PM₁₀ (40–66 ug/m³), PM_{2.5} (19–35 ug/m³), SO₂ (5.6 – 10.3 ug/m³) and NO_x (9.4-23.4 ug/m³). Bagfilter is already provided in the powdery material handling area. Scrubber will be provided. Water requirement will be increased from 1155 m³/day to 1602 m³/day after expansion. Out of which fresh water requirement will be 1352 m³/day and remaining water will be met from treated effluent (250 m³/day). Industrial effluent generation will be increased from 877 m³/day to 1249 m³/day after expansion. Industrial effluent will be treated in ETP and treated effluent will be discharged to sea. Effluent will be pumped through 8 inch HDPE pipe line of length 2631 m into sea. The pipeline is laid 1 meter below the ground and river bed. Municipal solid waste will be segregated into biodegradable, recyclables and inert. The biodegradable waste is properly disposed to local body. The recyclable municipal waste

After deliberations, the Committee desired following additional information:

- 1 Carry out baseline study for one month.
- 2 VOC monitoring data to be rechecked.
- 3 Source of water supply.
- 4 Ground water table of the project site for last five years.
- 5 Reduce fresh water requirement. Recycled/reused treated effluent by installing RO.
- 6 Details of rain water reservoir to be constructed for water conservation.

The proposal is deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website.

14.5.9 Installation of (FPU) for (CDWU) at Haldia Refinery, West Bengal by M/s Indian Oil Corporation Ltd. --Regarding TORs

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the

draft Term of References for the preparation of EIA/EMP report. All the Petroleum Refinery Plants are listed at S.N. 4(a) under Category 'A' and appraised at the Central level.

M/s Indian Oil Corporation Ltd. have proposed for Installation of Feed Preparation Unit (FPU) for (CDWU) at Haldia Refinery, West Bengal. The main objectives of proposal are complete elimination of requirement of Raffinate for production of Gr-II/III LOBS by using UCO and to maximize the use of high sulfur lubes bearing crudes. Total cost of project is Rs. 246 Crore. No additional land is required. Proposed project will be installed in plot area of 3600 m² within existing plant premises. No additional equipment is envisaged for CDWU modification. Additional SO₂ emissions will be 20 kg/hr. Additional fresh water requirement will be 51.8 m³/hr, which will be met from existing water supply. Additional effluent generation will be 5 m³/hr. Treated effluent will be reused in Refinery operation. Additional power consumption will be 0.72 MW, which will be met from existing power supply system.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. Executive summary of the project.
2. Project Description and Project Benefits.
3. A separate chapter on environmental clearance accorded for all the existing plants alongwith point-wise compliance report. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
4. Point-wise compliance report to the 'Consent to Establish' 'Consent to operate' and Authorization accorded by West Bengal Pollution Control Board for all the existing units alongwith all the necessary annexure.
5. Existing data for the last 2 years for all the relevant parameters should be included.
6. Site details including satellite imagery for 5 km around the site.
7. A list of industries within 10 km radius of the project.
8. Details of facilities alongwith utilities to be provided for the proposed project.
9. Manufacturing process details alongwith the chemical reactions and process flow diagram.
10. List of products alongwith the production capacities and list of solvents and its recovery plan.
11. Detailed list of raw material required and source, mode of storage and transportation.
12. Details of the storage and technical specifications with safety aspects & standards.
13. Is there additional storage required for the proposed installation.
14. Proposal for safety buffer zone around the proposed site with map.
15. Details indicating National Park/Wild life Sanctuary/Eco sensitive area/reserve forest within 10 Km.
16. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
17. Demography & socio-economics of the area.
18. Baseline data collection for air, water and soil for the period of 3 months (except monsoon season) for :
 - i. Ambient air quality monitoring for PM_{2.5}, PM₁₀, SO₂, NO_x, CO.
 - ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
 - iii. Soil sample analysis.
 - iv. Base line underground and surface water quality in the vicinity of project.
 - v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
 - vi. Measurement of noise levels.

19. Give existing status of stack emission, raw water requirement, treated effluent quantity & quality data, noise pollution and solid waste management in the existing units.
20. Action plan to achieve smokeless flare should be included.
21. Details of Sulphur balance in the existing refinery unit. Additional SO₂ emissions due to the proposed product mix.
22. Unit-wise air pollution control devices to be installed.
23. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire.
24. Details of existing and proposed effluent treatment plant alongwith water quality of inlet and outlet of ETP.
25. Action plan to reduce wastewater discharge from the all existing units.
26. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
27. Note on compliance to the recommendations mentioned in the CREP for oil refineries and petrochemical industries.
28. A note on implementation of new refinery standards for refineries.
29. Quantification of oil sludge generation from the existing and proposed refinery including management of the oil sludge in the existing refinery. Details of temporary storage for the oil sludge.
30. Details of catalyst waste generated from the refinery along with temporary storage facility at site. Action plan for disposal of the catalyst solid waste.
31. Status of existing secured landfill sites. Design details as well as ground water monitoring around the project site.
32. Details of membership of TSDF for hazardous waste disposal.
33. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
34. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
35. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
36. Traffic management with adequate width of approach road to avoid congestion and to have safe exit in emergencies.
37. Type of seismic zone.
38. Environmental Management Plan and industry's environment policy.
39. Full Quantitative Risk Assessment & Disaster Management Plan should include:
 - a. Identification of hazards
 - b. Consequence Analysis
 - c. Determination of Individual Risk and Societal Risk
 - d. List of last Major Refinery Incidents Globally in last 10 years
 - e. Proposed measures for risk reduction.
40. Details of proposed Occupational Health Surveillance program for the employees and other labour.
41. Details including layout of existing green belt. Action plan for development of green belt in 33%.
42. Total capital cost and recurring cost/annum for environmental pollution control measures. Break up details should also be included.
43. Details of environmental management cell alongwith the qualification and duties of all the personnel involved.
44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
45. Environmental monitoring programme including online stack monitoring system as well as continuous ambient air quality monitoring system. Method/System to be adopted to ensure correct calibration of automatic monitoring system.

46. Details of Corporate Social Responsibility (CSR) including sufficient budgetary provision for health improvement, education, water and electricity supply etc. in and around the project.
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.
48. A copy of Corporate Environment Policy as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 available on the Ministry's website.

Corporate Environmental Responsibility

49. (a) 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.
(b) Does the Environmental 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 report.
(c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
(d) Does the company have a system of reporting of non compliance / 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.
50. A tabular chart indicating point-wise compliance of the TOR.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant should be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed 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. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006, subject to submission of authentic document from the State Govt. indicating that the project is located in the notified industrial area. The final EIA/EMP 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.

14.5.10 **Expansion of Vishakh Refinery (from 8.33 MMTPA to 15.00 MTPA) at Village Malkapuram, District Visakhapatnam, Andhra Pradesh by M/s HPCL. - regarding TORs.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All the Petroleum Refinery Plants are listed at S.N. 4(a) under Category 'A' and appraised at the Central level.

The committee noted that sever accidents were taken place in the Vishakh Refinery in the past. Details such as plant configuration, layout map indicating existing configuration of plant vis a vis present proposal as well as safety aspect could not be presented. The Committee noted that proposal is premature and is deferred for consideration after submission of the revised proposal alongwith complete details.

14.5.11 **Carbon Black (1,50,000 MTPA) and Captive Power (45 MW) at Village Menakur, Taluka Naidupeta, District SPS Nellore, Andhra Pradesh by M/s Hi-Tech Carbon- regarding TORs.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All the carbon black manufacturing units are covered under petrochemical based processing units and listed at S.N. 5(e) under Category 'A' due to location outside notified industrial area and appraised at the central level.

M/s Hi-Tech Carbon have proposed for setting up of Carbon Black (1,50,000 MTPA) and Captive Power (45 MW) at Village Menakur, TalukaNaidupeta, District SPS Nellore, Andhra Pradesh. Total plot area is 60 acres (2,42,000 m²) of which greenbelt will be developed in 82870 m². Total cost of project is Rs. 650 Crore. It is 37 Km away from coast. Nearest water bodies are Mamidikalava (1.1 Km) and Swarnmukhi River (5.3 Km).

Hi tech carbon is manufacturing carbon black from highly aromatic petroleum oils, which are thermally cracked at high temperature in specially designed reactor. The heat for this endothermic thermal cracking is supplied by either burning of partially carbon black feedstock oil or auxiliary fuel oil with process air inside the reactor itself or both. Carbon black particles formed are recovered and converted into pellets for ease of storage, handling and transportation. The complete manufacturing process include feedstock storage, reactor section, bagfilter section, pelletiation and drying section, purge gas filter section, conveying and storage section, packing and dispatch section and utility section. CBFS imported from USA; Molasses from Naidupet and Furnace Oil /HSD/SKO from IOCL/BPCL will be used as raw materials. Offgas from filtering process will be used for boiler and steam making. Further steam will be used for generation of electricity. Total fresh water requirement will be 3000 m³/day. Organic solid waste and sewage sludge will be used as composting. Used oil and grease and discarded batteries will be sent to authorized re-processors. It was noted that proposed unit is located in new industrial area. Status of environmental clearance for the new industrial area is not known.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP:

1. Executive summary of the project.
2. Project Description and Project Benefits.
3. 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.
4. Present landuse 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.
5. 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.
6. 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.
7. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
8. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
9. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
10. 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.
11. A list of industries within 10 km radius of the project.
12. Details of facilities alongwith utilities to be provided for the proposed project.
13. Manufacturing process details alongwith the chemical reactions and process flow diagram.
14. List of products alongwith the production capacities.
15. Detailed list of raw material required and source, mode of storage and transportation. Details of the storage and technical specifications with safety aspects & standards.
16. Mass balance for the raw material and products should be included.
17. Proposal for safety buffer zone around the proposed site with map.
18. Baseline data collection for air, water and soil for the period of 3 months (except monsoon season) for :
 - i. Ambient air quality monitoring for PM_{2.5}, PM₁₀, SO₂, NO_x, CO.
 - ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
 - iii. Soil sample analysis.
 - iv. Base line underground and surface water quality in the vicinity of project.
 - v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
 - vi. Measurement of noise levels.
19. Flue gas emission rate alongwith stack height.
20. Source of fugitive emission from the unit alongwith its quantification and proposed measures to control it.
21. Commitment for sulphure content in feed stock should not be more than 3 %.

22. Details of Sulphur balance for the existing and proposed expansion of the refinery unit.
23. Unit-wise air pollution control devices to be installed.
24. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal. Detailed water balance chart (including reuse-recycle, if any) along with quantitative and qualitative analysis of each waste stream to be submitted.
25. Details of proposed effluent treatment plant alongwith water quality of inlet and outlet of ETP.
26. Action plan for rainwater harvesting measures at plant site including creation of water reservoir.
27. Hydrogeological study of the area to be carried out and report submitted.
28. Ground water modeling showing the pathways of the pollutants should be included.
29. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
30. Note on compliance to the recommendations mentioned in the CREP for carbon black industry.
31. Note on comparative analysis with international standards for similar type carbon black industry.
32. Characterization and Quantification of solid waste from the proposed unit including management plan for the oily sludge handling.
33. Land use & cropping pattern, vegetation, ecology, flora & fauna
34. Demography & socio-economics of the area.
35. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
36. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
37. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
38. Traffic management with adequate width of approach road to avoid congestion and to have safe exit in emergencies.
39. Type of seismic zone.
40. Full Quantitative Risk Assessment & Disaster Management Plan should include:
 - a. Identification of hazards
 - b. Consequence Analysis
 - c. Determination of Individual Risk and Societal Risk
 - d. Proposed measures for risk reduction.
 - e. Petroleum vapour intrusion impact study.
41. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.

42. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
43. Total capital cost and recurring cost/annum for environmental pollution control measures. Break up details should also be included.
44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
45. Environmental monitoring programme including online stack monitoring system as well as continuous ambient air quality monitoring system. Method/System to be adopted to ensure correct calibration of automatic monitoring system.
46. Details of Corporate Social Responsibility (CSR) including sufficient budgetary provision for health improvement, education, water and electricity supply etc. in and around the project.

47. Corporate Environmental Responsibility

- (a) 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.
 - (b) Does the Environmental 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 report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / 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.
48. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
 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. A tabular chart indicating point-wise compliance of the TOR.
The following general points should be noted:
 - i. All documents should be properly indexed, page numbered.
 - ii. Period/date of data collection should be clearly indicated.
 - iii. Authenticated English translation of all material provided in Regional languages.
 - iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
 - v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
 - vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
 - vii. Certificate of Accreditation issued by the QCI to the environmental consultant should be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (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. The draft EIA/EMP report should be submitted to the AP Pollution Control Board for conducting public hearing/consultation. The issues emerged

and response to the issues raised during public hearing should be incorporated in the EIA/EMP report and submitted to the Ministry for obtaining environmental clearance.

14.5.12 Expansion of Bulk Drugs Manufacturing Unit at GIDC Chitra , District Bhavnagar Gujarat by M/s Causeway Pharma -Regarding TORs.

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

14.5.13 Bulk Drugs Manufacturing Unit at D-27, Focal Ponit, DeraBassi, District Mohali, Punjab by M/s Adley Lab. Ltd.- Regarding TORs.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Adley Lab. Ltd.have proposed for setting up of Bulk Drugs Manufacturing Unit at D-27, Focal Ponit, Dera Bassi, District Mohali, Punjab. Total plot area is 2500 sq. yard. Total cost of project is Rs. 6.92 Crore. Total production capacity will be 3832 kg/month. Scrubber will be installed in process emissions. Water requirement from municipal supply will be 29.84 m³/day. Effluent generation will be 19.36 m³/day and treated in ETP. Evaporator and Incinerator will be installed. DG set (250 KVA) will be installed. Boiler capacity will be 0.8 TPH. HSD will be used as fuel. Total power requirement will be 261 KW and sourced from PSEB. Spent oil will be sent to authorized recyclers. Hazardous waste will be sent to NIMBUA. Committee noted that copy of the Gazette notification for industrial area was not submitted.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. A map indicating location of the project and distance from severely polluted area.
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
11. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
12. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
13. Details of the total land and break-up of the land use for green belt and other uses.

14. List of products alongwith the production capacities.
15. Detailed list of raw material required and source, mode of storage.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Action plan for the transportation of raw material and products.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
20. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, NH₃ including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
21. Details of water and air pollution and its mitigation plan
22. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
23. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
24. 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. Air quality modelling for proposed plant.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
28. Source and permission from Competent Authority for the drawl of water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
29. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
30. Zero discharge effluent concepts to be adopted.
31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Material Safety Data Sheet for all the Chemicals are being used/will be used.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
36. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
37. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.

- ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.
39. Socio-economic development activities shall be in place.
40. Note on compliance to the recommendations mentioned in the CREP guidelines.
41. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
42. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
43. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 44. Corporate Environmental Responsibility**
- (a) 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.
 - (b) Does the Environmental 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 report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non-compliance / 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.
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.
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. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.

- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

14.5.14 Expansion of Synthetic Organic Manufacturing Unit at Sy.No. 163,174/2 & 175/4, Village Ahmedpura-Sampa.Dahegam-Modasa Road, TalukaDahegam District Gandhinagar, Gujarat by M/s Shree Vallabh Chemical- Regarding TORs.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Shree Vallabh Chemical have proposed for expansion of Synthetic Manufacturing Unit at Sy.No. 163,174/2 & 175/4, Village Ahmedpura-Sampa. Dahegam-Modasa Road, TalukaDahegam District Gandhinagar, Gujarat. Total plot area is 9592 m² of which greenbelt will be developed in 3400 m². Total cost of expansion project is Rs. 148.97 lakhs. Following products will be manufactured:

S.N.	Product	Quantity (MTPM)		
		Existing	Proposed Expansion	Total after proposed expansion
1	Nonyl Phenol Ethoxylate	31.0	129.0	160.0
2	Octyl Phenol Ethoxylate	1.5	28.5	30.0
3	Dodesyl Phenol Ethoxylate	-	10.0	10.0
4	Castor Oil Ethoxylate	1.5	98.5	100.0
5	Poly EhtyleneEthoxylate	--	80.0	80.0
6	Fatty alcohol Ethoxylate	5.5	114.5	120.0
7	HCO (Hydrogen Castor Oil)	0.5	19.5	20.0
8	Poly OI Ethoxylate (De-emulsifier)	--	40.0	40.0
	Total	40.0	520.0	560.0

Multicyclone type dust collector will be provided to coal fired boiler. Water requirement from ground water source will be increased from 2 m³/day to 11.43 m³/day after expansion. Effluent generation will be increased from 0.5 m³/day to 2.33 m³/day after expansion. Industrial effluent will be treated in ETP. Treated effluent will be evaporated to achieve zero effluent discharge.

Total power requirement will be increased from 75 HP to 134 HP after expansion. LDO, imported coal, HSD will be used as fuel. DG set (100 KVA) will be installed.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
7. Copy of NOC/Consent to Establish for the existing unit.
8. Compliance to the conditions stipulated in the NOC granted by the SPCB.
9. 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).
10. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
11. A map indicating location of the project and distance from severely polluted area.
12. Project location and plant layout.
13. Infrastructure facilities including power sources.
14. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
16. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
17. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
18. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products alongwith the production capacities.
21. Detailed list of raw material required and source, mode of storage.
22. Manufacturing process details alongwith the chemical reactions and process flow chart.
23. Action plan for the transportation of raw material and products.
24. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
25. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
26. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, SO₂, NO_x, CO, NH₃ including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
27. Details of water and air pollution and its mitigation plan

28. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. 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. Air quality modelling for proposed plant.
31. Name of all the solvents to be used in the process and details of solvent recovery system.
32. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
33. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
34. Permission from Competent Authority for the drawl of 12 m³/day water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
35. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
36. Zero discharge effluent concepts to be adopted.
37. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
38. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
39. Material Safety Data Sheet for all the Chemicals are being used/will be used.
40. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
41. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
42. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
43. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
44. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
46. Note on compliance to the recommendations mentioned in the CREP guidelines.
47. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency,

responsibility and time bound implementation plan for mitigation measure shall be provided.

48. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
49. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 50. Corporate Environmental Responsibility**
 - (a) 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.
 - (b) Does the Environmental 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 report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non-compliance / 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.
51. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
52. 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.
53. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

14.5.15 Product Mix Change at Existing Epichlorhydrin Plant, Manali, Chennai, Tamil Nadu by M/s Tamil Nadu Petroproducts Ltd.- Regarding TORs.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the petrochemical based

processing units located inside the notified industrial area/estate are listed at S.N. 5(e) under category 'B'. However, applicability of general condition due to project location within 10 km distance from CPA, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Tamil Nadu Petroproducts Ltd. has proposed for product mix change by adding propylene oxide in place of epichlorohydrin at existing Plant, Manali, Chennai, Tamil Nadu. TPL has established facilities to make Epichlorohydrin (ECH) in the year 1995. Which is used as a key material in the manufacture of epoxy resins, pesticides and pharmaceutical formulations. Total plot area is 38.72 acre. Cost of project is Rs. 12.96 Crore. Project is located at 3.5 km away from sea. Following products will be manufactured :

S.N	Product	Existing (MTPD)	Proposed (MTPD)
1	Epichlorohydrin	30.3	--
2	Hydrochloric Acid	17.3	--
3	Chlorinated Organics	13.3	6.75
4	Propylene Oxide	--	45

Chlorine scrubber has been provided. Chlorine sensor has been provided in chlorine scrubber to monitor the abnormal emissions. HCl sensor has been provided in HCl scrubber. Total water requirement will be 2150 m³/day. Industrial effluent will be treated in ETP. Treated effluent will be discharged to sea through pipeline. Waste residue containing oil will be used as fuel in heater. Used oil/spent oil will be sold to authorized recycler. Chemical sludge from wastewater treatment will be disposed to Tamil Nadu Waste management Ltd., Gummidipoondi. Lime sludge will be sent brick manufacturers.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the SPCB.
7. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
8. Project location and plant layout.
9. Infrastructure facilities including power sources.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
12. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
13. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
14. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.

15. Details of the total land and break-up of the land use for green belt and other uses.
16. List of products alongwith the production capacities.
17. Detailed list of raw material required and source, mode of storage.
18. Manufacturing process details alongwith the chemical reactions and process flow chart.
19. Action plan for the transportation and storage of raw materials and products.
20. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
22. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
23. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, HC including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
24. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits. Emphasis should be on effective control of VOC and odour.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Details of water and air pollution and its mitigation plan.
28. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. 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. Air quality modelling for proposed plant.
31. Permission from competent Authority for the drawl of water. Water balance chart for existing and product mix change project including quantity of effluent generated recycled and reused and effluent discharge.
32. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard. Treated wastewater to meet the norms of CETP/marine discharge.
33. Zero discharge effluent concepts to be adopted.
34. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
35. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
36. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
37. Details of chlorine handling and storage facilities. Measures to be taken in case of leakage alongwith alarm system.
38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
39. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.

40. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
41. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
43. Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
45. Note on compliance to the recommendations mentioned in the CREP guidelines.
46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 49. Corporate Environmental Responsibility**
 - (a) 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.
 - (b) Does the Environmental 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 report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / 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.
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.
51. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.

- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed 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. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006, subject to submission of authentic document from the State Govt. indicating that the project is located in the notified industrial area. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

14.5.16 Expansion of Bulk Drugs Manufacturing Unit at Mundargi Industrial Area, Tehsil & District Bellary, Karnataka by M/s Jaya Saketh Chemicals - 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 draft Terms of References for the preparation of EIA/EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Jaya Saketh Chemicals has proposed for expansion of Bulk Drugs Manufacturing Unit at Mundargi Industrial Area, Tehsil & District Bellary, Karnataka. Interstate boundary(Karnataka and Andhra Pradesh) is at a distance of 8.0 km. Total plot area is 1848 m² of which greenbelt will be developed in 610 m². Cost of expansion project is Rs. 61.00 lakhs. Following products will be manufactured :

S.N.	Product	Production Capacity (TPA)
1	4-Nitro3,5Dimethylpyridine –N-Oxide	48
2	4-chloro 2,3-Dimethylpyridine-N-Oxide	24
3	CIS-Bromo Benzoate	24
4	BIS(2-Chlro Ethyl)Amine.Hydrochloride	60

Total water requirement from local vendor supply will be 4.5 m³/day. Committee noted that copy of gazette notification for industrial area was not submitted.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a

- certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
 3. Justification of the project.
 4. Promoters and their back ground.
 5. Regulatory framework.
 6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the KSPCB.
 7. Copy of NOC/Consent to Establish for the existing unit.
 8. Compliance to the conditions stipulated in the NOC granted by the SPCB.
 9. 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).
 10. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
 11. A map indicating location of the project and distance from severely polluted area.
 12. Project location and plant layout.
 13. Infrastructure facilities including power sources.
 14. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
 15. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
 16. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
 17. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
 18. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
 19. Details of the total land and break-up of the land use for green belt and other uses.
 20. List of products alongwith the production capacities.
 21. Detailed list of raw material required and source, mode of storage.
 22. Manufacturing process details alongwith the chemical reactions and process flow chart.
 23. Action plan for the transportation of raw material and products.
 24. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
 25. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
 26. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, SO₂, NO_x, CO, NH₃ including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
 27. Details of water and air pollution and its mitigation plan
 28. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
 29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
 30. 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. Air quality modelling for proposed plant.
 31. Name of all the solvents to be used in the process and details of solvent recovery system.

32. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
33. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
34. Source and permission from Competent Authority for the drawl of 4.5 m³/day water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
35. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
36. Zero discharge effluent concepts to be adopted.
37. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
38. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
39. Material Safety Data Sheet for all the Chemicals are being used/will be used.
40. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
41. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
42. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
43. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
44. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
46. Note on compliance to the recommendations mentioned in the CREP guidelines.
47. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
48. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
49. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 50. Corporate Environmental Responsibility**
 - (a) 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.

(b) Does the Environmental 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 report.

(c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.

(d) Does the company have a system of reporting of non-compliance / 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.

51. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
52. 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.
53. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

- 14.5.17 Resin Manufacturing Unit at Plot no. 19, Sy. No. 52/P, Village Hadamtala, TalukaKotdaSangani, District Rajkot, Gujarat by M/s Shri SaiNath Décor L.L.P - Regarding TORs

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Shri SaiNath Décor L.L.P has proposed for setting up of resin manufacturing unit at Plot no. 19, Sy. No. 52/P, Village Hadamtala, TalukaKotdaSangani, District Rajkot,

Gujarat. Total plot area is 1465 m². No eco-sensitive area is located within 10 km distance. The cost of project is Rs. 5.0 crore. Following products will be manufactured :

S.N.	Product	Production (TPM)	Capacity
1	Phenol Formaldehyde	90	
2	Melamine Formaldehyde	40	

Reverse Pulse Jet type bagfilter will be provided to boiler to control particulate emissions. Packed scrubber will be installed to control emissions of methanol. Total fresh water requirement will be 15 m³/day. Wastewater generation will be 1 m³/day and treated in ETP.

Total power requirement from PGVCL will be 500 KVA. DG set (250 KVA) will be installed as standby arrangement.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. A map indicating location of the project and distance from severely polluted area.
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
11. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
12. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw material required and source, mode of storage.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Action plan for the transportation of raw material and products.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
20. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, SO₂, NO_x, CO, NH₃ including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
21. Details of water and air pollution and its mitigation plan

22. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
23. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
24. 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. Air quality modelling for proposed plant.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
28. Source and permission from Competent Authority for the drawl of 15 m³/day water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
29. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard. A note on treatment of Phenol in the effluent to be provided.
30. Zero discharge effluent concepts to be adopted.
31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. A note on chlorine handling, storage and transfer may be provided.
34. Material Safety Data Sheet for all the Chemicals are being used/will be used.
35. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
36. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
37. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
38. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
39. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.
40. Socio-economic development activities shall be in place.
41. Note on compliance to the recommendations mentioned in the CREP guidelines.

42. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
43. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
44. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 45. Corporate Environmental Responsibility**
 - (a) 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.
 - (b) Does the Environmental 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 report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non-compliance / 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.
46. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
47. 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.
48. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

- 14.5.18 Product Mix Change for Manufacturing of manmade fiber at Village SailySilvassaU.T.Dadra& Nagar Haveli by **M/s WELSPUN Syntex Ltd.**- Regarding TOR

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

- 14.5.19 Expansion of Pesticide Manufacturing Unit at Village Sotanala, Tehsil Behror, District Alwar, Rajasthan by **M/s Ambey Lab. Ltd.**- Regarding TORs

After deliberations, the Committee desired to obtain compliance report of existing environmental clearance from the Regional Office. The proposal is deferred till the inspection report by the Regional Office is submitted.

- 14.5.20 Modernization-cum-Expansion of Sugar Unit (2500 TCD to 7500 TCD), Molasses based Distillery (20 KLPD to 100 KLPD) and installation of Cogeneration Power Unit (38 MW) at Gat No. 21/1 to 21/6, Village Kumathe ,Tikekarwadi, North Solapur District Solapur, Maharashtra by **M/s Shree SiddheshwarSahakariSakharKarkhana Ltd.**- Regarding TORs

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Shree SiddheshwarSahakariSakharKarkhana Ltd. has proposed for Modernization-cum-Expansion of Sugar Unit (2500 TCD to 7500 TCD), Distillery (20 KLPD to 100 KLPD) and installation of Cogeneration Power Unit (38 MW) at Gat No. 21/1 to 21/6, Village Kumathe ,Tikekarwadi, North Solapur District Solapur, Maharashtra. Total plot area is 110.6 ha (276.4 acres) of which greenbelt will be developed in 25.2 ha. (63 acre). Total cost of project including existing and expansion is Rs. 378.14 Crore. Project proponent informed that old distillery will be scrapped. New plant of 100 KLPD will be installed.

Bagasse fired boilers (1&2 @20 TPH; 3@30 TPH; 4 @ 25 TPH; 5 @ 60 TPH) have been installed in existing sugar factory. Biogas fired boiler (6 TPH) has been installed in distillery unit. ESP will be provided to bagasse fired boiler (200 TPH). Bagfilter will be provided coal & spent wash fired boiler (33 TPH). Fresh water requirement from Hotgilake will be increased from 435 m³/day to 2017.5 m³/day. Existing and proposed effluent from sugar and Cogeneration will be treated in ETP. Spentwash will be concentrated in MEE and concentrate will be blended with coal and incinerated in incineration boiler to achieve zero discharge. Other distillery effluent will be treated through RO.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project.

3. Compliance of environmental conditions prescribed by the SPCB for the existing sugar & Distillery unit
4. Detailed breakup of the land area along with latest photograph of the area.
5. Present land use based on satellite imagery.
6. Details of site and information related to environmental setting within 10 km radius of the project site.
7. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
8. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
9. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the MPCB.
10. List of existing distillery units in the study area alongwith their capacity.
11. Number of working days of the sugar, distillery unit and CPP.
12. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
13. Manufacturing process details of sugar plant, distillery and CPP alongwith process flow chart.
14. Details of raw materials and source of raw materials i.e. molasses, bagasse etc.
15. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
16. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
17. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
18. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
19. An action plan to control and monitor secondary fugitive emissions from all the sources.
20. Details of boiler and its capacity. Details of the use of steam from the boiler.
21. Ground water quality around existing spent wash storage lagoon and the project area.
22. Details of water requirement, water balance chart for sugar, distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
23. Prior 'permission' from Competent Authority for the drawl of total fresh water. Details of source of water supply.
24. Hydro-geological study of the area for availability of ground water.
25. Proposed effluent treatment system for sugar unit and distillery as well as CPP and scheme for achieving 'zero' discharge.
26. Lagoon capacity for sugar unit and spent wash as well measures to be taken to control ground water contamination.
27. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
28. Green belt development as per the CPCB guidelines.
29. List of flora and fauna in the study area.
30. Noise levels monitoring at five locations within the study area.
31. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency,

- responsibility and time bound implementation plan for mitigation measure should be provided.
32. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
 33. Details of bagasse storage. Details of press mud requirement.
 34. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
 35. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.
 - viii) Details of socio-economic welfare activities to be provided.
 36. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
 37. Action plan for post-project environmental monitoring.
 - 38. Corporate Environmental Responsibility**
 - (a) 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.
 - (b) Does the Environmental 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 report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / 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.
 39. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
 40. 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.
 41. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.

- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter and that raised in Public Hearing/consultation along with duly filled in Industry Sector questionnaire. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues and the issues raised in the Public hearing have been incorporated.
- vii. 'Certificate of accreditation' issued by QCI to the environmental consultant should be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

14.5.21 Drilling of 20 Development Wells at Baghewala Mining Lease area 210 sq/km in Jaisalmer Rajasthan by M/s Oil India 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. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Oil India Limited have proposed for drilling of 20 Development Wells at Baghewala Mining Lease area 210 sq/km in Jaisalmer Rajasthan. Block falls on the eastern part of Jaisalmer district with its headquarter which is 200 km from the block. No perennial river in the block. A branch of IGN Canal is passing through the block. Mining Lease Area as detailed below:

Location	Size of Project
A-V1	39850 sqm
A-V2	39850 sqm
A-V3	39850 sqm
A-V4	39850 sqm
A-V5	39850 sqm
A-V6	39850 sqm
D-V1	39850 sqm
D-V2	39850 sqm
D-V3	39850 sqm
D-V4	39850 sqm
D-H1	39850 sqm
D-H2	39850 sqm
D-H3	39850 sqm
LOC-1	39850 sqm
LOC-2	39850 sqm
LOC-3	39850 sqm
LOC-4	39850 sqm

LOC-5	39850 sqm
LOC-6	39850 sqm
LOC-7	39850 sqm

Coordinates of Twenty wells to be drilled Baghewala PML Area in Jaisalmer District are as given below:

Location	Latitude (N)	Longitude (E)
A-V1	27°49'03.24"	71°55' 25.19"
A-V2	27°49' 28.37"	71°56' 17.40"
A-V3	27°49' 49.45"	71°57' 19.69"
A-V4	27°49' 55.94"	71°58' 03.66"
A-V5	27°49' 31.62"	71°58' 08.24"
A-V6	27°48' 12.97"	71°54' 24.31"
D-V1	27°48' 12.97"	71° 56' 31.14"
D-V2	27°48' 33.24"	71°55' 23.35"
D-V3	27°48'59.18"	71°55' 53.58"
D-V4	27°49' 27.59"	71°56' 52.21"
D-H1	27°48' 47.83"	71°56' 08.24"
D-H2	27°49' 07.29"	71°56' 37.55"
D-H3	27°49' 17.83"	71°57' 27.93"
LOC-1	27°52' 04.27"	72°04'35.07"
LOC-2	27°50' 46.21"	72°05' 23.35"
LOC-3	27°51' 28.31"	72°06' 22.90"
LOC-4	27°50' 55.49"	72°02' 34.80"
LOC-5	27°49' 19.45"	72°00' 50.38"
LOC-6	27°49' 29.18"	71°58' 07.32"
LOC-7	27°48' 17.83"	71°55' 16.94"

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP:

1. Executive summary of a project
2. Project description, project objectives and project benefits.
3. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area.
4. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
5. Permission from the State Forest Department regarding the impact of the proposed project on the surrounding National Park/Wild life Sanctuary/Reserve Forest/Eco sensitive area, if any. Approval obtained from the State/Central Government under Forest (Conservation Act, 1980 for the forestland should be submitted.
6. Distance from nearby critically/severely polluted area as per Notification dated 13th January, 2010, if applicable.

7. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
8. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing/existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
9. Comprehensive proposal covering surface facilities, pipeline/gas collection system, utilities etc.
10. Design details of all the facilities including CGS, GGS, pipe network, utilities and technology to be used for development project.
11. Details of project cost.
12. Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
13. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
 - (i) Topography of the project site.
 - (ii) Ambient Air Quality monitoring at 8 locations for PM10, SO₂, NO_x, VOCs, Methane and non-methane HC.
 - (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
 - (iv) Ground and surface water quality in the vicinity of the proposed wells site.
 - (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
 - (vi) Measurement of Noise levels within 1 km radius of the proposed wells.
 - (vii) Vegetation and land use; Animal resources
14. Incremental GLC as a result of DG set operation.
15. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
16. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.
17. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
18. Treatment and disposal of waste water.
19. Treatment and disposal of solid waste generation.
20. Disposal of spent oil and lubes.
21. Storage of chemicals and diesel at site.
22. Commitment for the use of WBM only

23. Mud make up and mud and cutting disposal – all options considered should be listed with selective option.
24. Hazardous material usage, storage accounting and disposal.
25. Disposal of packaging waste from site.
26. Oil spill emergency plans in respect of recovery/ reclamation.
27. H₂S emissions control.
28. Produced oil handling and storage.
29. Details of scheme for oil collection system alongwith process flow diagram and its capacity.
30. Details of control of air, water and noise pollution in oil collection system.
31. Disposal of produced/formation water.
32. Whether any burn pits being utilized for well test operations.
33. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.
34. Measures to protect ground water and shallow aquifers from contamination.
35. Risk assessment and disaster management plan for independent reviews of well designed construction etc. for prevention of blow out.
36. Environmental management plan.
37. Documentary proof of membership of common disposal facilities, if any.
38. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This should also include monitoring programme for the environmental.
39. Total capital and recurring cost for environmental control measures.
40. A copy of Corporate Environment Policy of the company as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 available on the Ministry's website.
41. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
42. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- (i) All documents should be properly indexed, page numbered.
- (ii) Period/date of data collection should be clearly indicated.

- (iii) Authenticated English translation of all material provided in Regional languages.
- (iv) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- (v) A copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- (vi) The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues have been incorporated.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation in all districts. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP report submitted to the Ministry for obtaining environmental clearance.

14.5.22 Exploratory Drilling of 3 wells in Chembal Valley Vindhyan ,Frontier Basin ONGC, Rajasthan by M/s ONGC- Regarding TORs.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s ONGC have proposed for Exploratory Drilling of 3 wells in Chembal Valley Vindhyan ,Frontier Basin ONGC, Rajasthan. Block area is 4466 km². Block was spread in three districts (Kota-Jhalawar-Baran). The Cost of project is Rs. 75.68 Crore for 3 wells. Following is the coordinates of the block:

S.N.	Latitude	Longitude
1	24°39'14.89"	76°40'14.05"

Depth of well will be 2800m. Water based mud will be used. Drilling wastewater generation will be 15-20 m³/day. Quantity of drilling waste residual mud will be 1200 m³. Quantity of cutting generation will be 2-3 m³/day of wet drilling cuttings. Total water requirement will be 25 m³/day. DG sets will be installed to meet the power requirement. Wastewater from drilling activities will be collected in HDPE lined waste pits and treated with mobile ETP unit. Treated water is recycled for preparation of mud and other drilling activities.

M/s ONGC informed that they have obtained environmental clearance vide MoEF's letter no. J-11011/544/2007-IA II (I) dated 5th September, 2012 for exploratory drilling of four wells. Public hearing was conducted on 23.01.2012 in Village Arniya Kalan, Tehsil Ramganj Mandi, district Kota. They have requested for allowing the public hearing for one well in Baran district only. The Committee agreed to use existing data collected for four wells in Kota districts in this project.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP:

1. Executive summary of a project
2. Project description, project objectives and project benefits.
3. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
4. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area. All the geological details shall be mentioned in the Topo sheet of 1:40000 scale, superimposing the well locations and other structures of the projects.
5. CRZ clearance/ recommendation from State Coastal Zone Management Authority, if applicable.
6. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
7. Permission from the State Forest Department regarding the impact of the proposed project on the surrounding National Park/Wild life Sanctuary/Reserve Forest/Eco sensitive area, if any. Approval obtained from the State/Central Government under Forest (Conservation Act, 1980 for the forestland should be submitted.
8. Distance from nearby critically/severely polluted area as per Notification, if applicable.
9. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
10. Details of project cost.
11. Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
12. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
 - (i) Topography of the project site.
 - (ii) Ambient Air Quality monitoring at 8 locations for PM10, SO₂, NO_x, VOCs, Methane and non-methane HC.
 - (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
 - (iv) Ground and surface water quality in the vicinity of the proposed wells site.
 - (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
 - (vi) Measurement of Noise levels within 1 km radius of the proposed wells.
 - (vii) Vegetation and land use; Animal resources
13. Incremental GLC as a result of DG set operation.

14. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
15. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, wastewater generation and discharge.
16. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
17. Treatment and disposal of waste water.
18. Treatment and disposal of solid waste generation.
19. Disposal of spent oil and lube.
20. Storage of chemicals and diesel at site.
21. Commitment for the use of WBM only
22. Mud make up and mud and cutting disposal – all options considered should be listed with selective option.
23. Hazardous material usage, storage accounting and disposal.
24. Disposal of packaging waste from site.
25. Oil spill emergency plans in respect of recovery/ reclamation.
26. H₂S emissions control.
27. Produced oil handling and storage.
28. Details of scheme for oil collection system alongwith process flow diagram and its capacity.
29. Details of control of air, water and noise pollution in oil collection system.
30. Disposal of produced/formation water.
31. Whether any burn pits being utilized for well test operations.
32. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.
33. Measures to protect ground water and shallow aquifers from contamination.
34. Risk assessment and disaster management plan for independent reviews of well designed construction etc. for prevention of blow out.
35. Environmental management plan.
36. Documentary proof of membership of common disposal facilities, if any.

37. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This should also include monitoring programme for the environmental.
38. Total capital and recurring cost for environmental control measures.
39. A copy of Corporate Environment Policy of the company as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 available on the Ministry's website.
40. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
41. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

- (i) All documents should be properly indexed, page numbered.
- (ii) Period/date of data collection should be clearly indicated.
- (iii) Authenticated English translation of all material provided in Regional languages.
- (iv) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- (v) A copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- (vi) The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues have been incorporated.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation in Baran District. Public hearing for Kota district was exempted as per para 7 (ii) of EIA Notification, 2006. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised alongwith the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP report submitted to the Ministry for obtaining environmental clearance.

- 14.5.23 New project and expansion of existing specialty chemicals (11400 MT/A) at Plot No.K-38, MIDC Industrial Area, Village Kirmiti, TalukaHigada, District Nagpur, Maharashtra by **M/s Inventys Research Company Pvt. Ltd– regarding TORs.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Pesticides plants are listed at S.N. 5(b) under Category 'A' and appraised at the Central level. Synthetic organic manufacturing units are listed at 5 (f).

M/s Inventys Research Company Pvt. Ltd have proposed for setting up of New project and expansion of existing specialty chemicals (11400 MT/A) at Plot No.K-38, MIDC Industrial Area, Village Kirmiti, TalukaHigada, District Nagpur, Maharashtra. Total plot area is 28, 327 m². The Cost of project is Rs. 326 Crore. No ecological sensitive area is located within 10 km distance. Following products will be manufactured:

S.N.	Product	Existing Capacity (MTPA)	Proposed Capacity (MTPA)
1	Advanced Intermediates	420	2550
2	Bulk Intermediates	Nil	6000
3	Perfumery and Cosmetics	Nil	450
4	Pesticides	Nil	800
5	API's	Nil	1200
6	AP Intermediates	Nil	400
	Total	420	11400

Maximum 10 nos. of products will be simultaneously produced at any time in the ulti purpose facility. Provisions of adequate stack height will be provided for proper dispersion. Multi cyclone, dust collector for controlling particulate matter and dust from bio-coal handling and combustion. Fresh water requirement will be increased from 100 m³/day to 1115 m³/day after expansion. Effluent generation will be increased from 27.5 m³/day to 540 m³/day and segregated into high TDS/COD and low TDS/COD effluent stream. High TDS/COD effluent stream will be evaporated through MEE followed by ATFD. Low TDS/COD effluent stream will be treated in ETP. ETP sludge, MEE salts and filter materials will be sent to TSDF. Residue and waste, Spent Organic and spent carbon will be sent to common incineration facility. The Committee noted that copy of Gazette notification for industrial area was not submitted.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP report:

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the MPCB.
7. Copy of NOC/Consent to Establish for the existing unit.
8. Compliance to the conditions stipulated in the NOC granted by the SPCB.
9. 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).
10. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
11. A map indicating location of the project and distance from Critically/Severely polluted area.
12. Project location and plant layout.
13. Infrastructure facilities including power sources.

14. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
16. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
17. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
18. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products alongwith the production capacities.
21. Detailed list of raw material required and source, mode of storage.
22. Manufacturing process details alongwith the chemical reactions and process flow chart.
23. Action plan for the transportation of raw material and products.
24. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
25. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
26. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x, CO including VOCs and HC shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
27. Details of water and air pollution and its mitigation plan.
28. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. 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. Air quality modelling for proposed plant.
31. Name of all the solvents to be used in the process and details of solvent recovery system.
32. Odour Management Plan.
33. Design details of ETP, incinerator, bagfilter followed by scrubber if any alongwith boiler, scrubbers/bag filters etc.
34. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
35. Source and permission from Competent Authority for the drawl of 1115 m³/day. Water balance chart including quantity of effluent generated, recycled and reused and effluent discharge.
36. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
37. Zero discharge effluent concepts to be adopted.
38. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
39. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.

40. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
41. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
42. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
43. Toxic chemicals management plan.
44. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
45. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
46. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.
47. Socio-economic development activities shall be in place.
48. Note on compliance to the recommendations mentioned in the CREP guidelines.
49. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
50. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
51. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 52. Corporate Environmental Responsibility**
 - (a) 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.
 - (b) Does the Environmental 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 report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non-compliance / 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.
53. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

54. 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.
55. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

14.5.24 Additional crude oil tanks (6 nos.) at Village Singach&Vadinar, Tehsil Lalpur and Khambhaliya, District Jamnagar, Gujarat by **M/s Bharat Oman Refineries 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. All isolated storage & handling of hazardous chemicals are listed at S.N. 6(b) under category 'B' and appraised at state level. However, non-constitution of SEIAA, the project proposal is treated under category 'A' project.

M/s Bharat Oman Refineries Limited have proposed for Additional crude oil tanks (6 nos.) at Village Singach&Vadinar, Tehsil Lalpur and Khambhaliya, District Jamnagar, Gujarat. It was noted that at present BORL has 8 crude oil storage tanks each of capacity 60,000 m³. Even with present throughput of 6 million tonnes per annum, it has been found necessary to have eight more tanks of same capacity, in order to allow for segregation of different varieties of crude, bunch of vessels in bad weather and down time for maintenance. The present occupancy of the SPM and subsea pipeline is as low as 10 %; with expansion of the tank farm capacity to meet the requirements of segregation different varieties of crude, the capacity can be increased 15 MMTPA without any further increase in COT capacity. The cross country Vadinar-Bina pipeline has enough capacity to meet the proposed Refinery processing capacity of 7.5 MMTPA after debottlenecking. Total plot area is 167 ha. The additional storage tanks shall be established within the allotted land. Part of marine sanctuary and marine national park fall within 15 Km distance.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. Executive summary of the project.
2. Project description and project benefits.
3. Copy of CRZ map prepared by one of the agencies authorized by the MoEF for carrying out the CRZ demarcation, on which the project boundary and facilities are superimposed.
4. CRZ clearance/ recommendation from State Coastal Zone Management Authority.
5. Map authenticated by wildlife warden indicating crude oil tankages and marine sanctuary and marine national park including distance.
6. Land use details of the site based on satellite imagery.
7. Process details and design details of all the tanks.
8. A list of industries within 10 km radius of the project.
9. List of villages/residential colonies and population within 5 Km.
10. Layout plan with provision of trucks parking area. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
11. Details of the storage and technical specifications with safety aspects & standards
12. Site details including satellite imagery for 5 km around the site.
13. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
14. Demography & socio-economics of the area.
15. Baseline data collection for air, water and soil for:
 - i. Ambient air quality monitoring for PM₁₀, SO₂ and NO_x.
 - ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
 - iii. Soil sample analysis.
 - iv. Base line underground and surface water quality in the vicinity of project.
 - v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
 - vi. Measurement of noise levels
14. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire.
15. Storm water system should have provision to prevent any unintended oil in the drain to flow out with storm water and should take care of the highest rainfall care. Details of oil water separator.
16. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
17. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
18. Details of proposed preventive measures for leakages and accident.
19. Details of Vapour Recovery System for the storage tanks and lorries.
20. Adequate width of approach road to avoid congestion and to have safe exit in emergencies.
21. Type of seismic zone.
22. Environmental Management Plan
23. Risk Assessment & Disaster Management Plan
 - i. Identification of hazards
 - ii. Consequence Analysis
 - iii. Preventive measures.
 - iv. Risk assessment should also include leakages during storage, handling, transportation and proposed measures for risk reduction.
 - v. Company shall ensure that the damage distance in case of any accident remains within boundary of the plot. If this study shows any change in layout or the quantity of the product to be stored this will have to be incorporated in the proposal.
 - vi. Fire and explosion hazard.

24. Risk Assessment should also include follow up/compliance to safety & hazardous material management facilities; possibility of fire and explosion accident; Risk assessment for accidents at site and its impact on adjoining area, risk mitigation measures, disaster management plan; on-site & off-site emergency plan.
25. Details of fire fighting facilities.
26. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.

27. Environmental Monitoring programme.

28. Corporate Environmental Responsibility

- (a) 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.
 - (b) Does the Environmental 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 report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / 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.
29. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
 30. 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.
 31. A tabular chart with index for point wise compliance of above TORs.

The following general points should be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included

It was decided that TORs prescribed by the Expert Appraisal Committee (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. The draft EIA/EMP report should be submitted to the Gujarat Pollution Control Board for public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP Report alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

14.5.25 Construction of new Storage Tanks Borkhedi POL Depot, NH-7 & Post-Borkhedi, District Nagpur, Maharashtra by **M/s BPCL– regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken. All isolated storage & handling of hazardous chemicals are listed at S.N. 6(b) under category 'B' and appraised at state level. However, non-constitution of SEAC-1, the project proposal is treated under category 'A' project.

M/s BPCL have proposed for Construction of new Storage Tanks Borkhedi POL Depot, NH-7 & Post-Borkhedi, District Nagpur, Maharashtra. Total project cost is Rs. 13.15 crore. Total plot area is 27.41 acres. Dongargon & Injoli RF are located at a distance of 3.6 km. Junapani RF is located at a distance of 4 km and Wargoan RF is located at a distance of 6.2 Km respectively. Augmentation of existing depot will be carried by following tank capacities:

ATF storage tanks-2 x 4241 KL=8482 KL

Underground Tanks-1 x 200 KL= 200 KL

MS storage tank -1 x 3064 KL

S.N.	Product	Tankages (in KL)	Tankages (in KL)
1	Class A	2960 KL	6024 KL
2	Class B	15077 KL	23759 KL
	Total	18037 KL	29783 KL

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
2. Executive summary of the project.
3. Project description and project benefits.
4. Land use details of the site based on satellite imagery.
5. Process details and design details of all the tanks.
6. A list of industries within 10 km radius of the project.
7. List of villages/residential colonies and population within 5 Km.

8. Layout plan with provision of trucks parking area. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
9. Details of the storage and technical specifications with safety aspects & standards
10. Site details including satellite imagery for 5 km around the site.
11. Land use along with maps & cropping pattern, vegetation, ecology, flora & fauna
12. Demography & socio-economics of the area.
13. Baseline data collection for air, water and soil for:
 - i. Ambient air quality monitoring for PM₁₀, SO₂ and NO_x.
 - ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.
 - iii. Soil sample analysis.
 - iv. Base line underground and surface water quality in the vicinity of project.
 - v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
 - vi. Measurement of noise levels
32. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal and measures for release of effluent in case of fire.
33. Storm water system should have provision to prevent any unintended oil in the drain to flow out with storm water and should take care of the highest rainfall care. Details of oil water separator.
34. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
35. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
36. Details of proposed preventive measures for leakages and accident.
37. Details of Vapour Recovery System for the storage tanks and lorries.
38. Adequate width of approach road to avoid congestion and to have safe exit in emergencies.
39. Type of seismic zone.
40. Environmental Management Plan
41. Risk Assessment & Disaster Management Plan
 - i. Identification of hazards
 - ii. Consequence Analysis
 - iii. Preventive measures.
 - iv. Risk assessment should also include leakages during storage, handling, transportation and proposed measures for risk reduction.
 - v. Company shall ensure that the damage distance in case of any accident remains within boundary of the plot. If this study shows any change in layout or the quantity of the product to be stored this will have to be incorporated in the proposal.
 - vi. Fire and explosion hazard.
42. Risk Assessment should also include follow up/compliance to safety & hazardous material management facilities; possibility of fire and explosion accident; Risk assessment for accidents at site and its impact on adjoining area, risk mitigation measures, disaster management plan; on-site & off-site emergency plan.
43. Details of fire fighting facilities.
44. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.

- v) What are onsite and offsite emergency plan during chemical disaster.
- vi) Liver function tests (LFT) during pre-placement and periodical examination.

45. Environmental Monitoring programme.

46. Corporate Environmental Responsibility

(a) 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.

(b) Does the Environmental 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 report.

(c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.

(d) Does the company have a system of reporting of non compliance / 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.

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.

48. 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.

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

The following general points should be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included

It was decided that TORs prescribed by the Expert Appraisal Committee (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. The draft EIA/EMP report should be submitted to the Maharashtra Pollution Control Board for public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP Report alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

14.5.26 Development Plan of Raniganj North CBM block in West Bengal by **M/s ONGCL-CIL Consortium– regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s ONGCL-CIL Consortium has proposed for Development Plan of Raniganj North CBM block in West Bengal. Total block area is 350 sq. km. Govt. of India awarded the block to ONGC-CIL (74:26) Consortium on 2nd January, 2002 on nomination basis. PEL application submitted on 27.08.2001. PEL grant received w.e.f. 09.06.2004. Four production hubs (mini GCS). Peak gas production of 0.37 MMSCMD. Peak water production during dewatering in the initial period about 1000 m³/day. major part of the produced water will be used for drilling of wells and during hydro-fracturing.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. Executive summary of the project.
2. Details of existing land use pattern within the proposed CBM block. (Cropping pattern, forest, agriculture land, wasteland etc, flora and fauna etc.)
3. Details of land acquisition w.r.t. private land, Govt. land, agriculture land, mode of compensation for land losers due to land acquisition and R & R etc.
4. Information regarding eco-sensitive area such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
5. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
6. Permission from the State Forest Department regarding the impact of the proposed drilling on the surrounding reserve forests, if applicable.
7. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the WBPCB.
8. Confirmation with documentary support indicating allocation of the Block solely to M/s ONGC.
9. Is the block allocated for mining also? If yes, name of the company.
10. Comprehensive proposal covering surface facilities, pipeline/gas collection system, utilities etc.
11. Design details of all the facilities including CGS, GGS, pipe network, utilities and technology to be used for CBM project.
12. Location of core holes outside the forest area. The well sites shall be selected at more than 1.5 km away from the habitation. Forest and revenue land shall be avoided as far as possible.

13. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of CBM Field as its centre covering the area of all proposed drilling wells. It includes;
 - (i) Topography of the project site.
 - (ii) Ambient Air Quality monitoring at 10 locations for PM₁₀, SO₂, NO_x, VOCs, Methane and non-methane HC.
 - (iii) Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
 - (iv) Ground and surface water quality in the vicinity of the proposed wells site.
 - (v) Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
 - (vi) Measurement of Noise levels (day and night both) within 1 km radius of the proposed wells.
 - (vii)Vegetation and land use; Animal resources
14. Action plan to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂, CO and NO_x as per GSR 826(E) dated 16th November, 2009.
15. Actual source and 'Permission' for the drawl of water from the concerned authority.
16. Action plan for management of produced water.
17. Details of wastewater treatment method should be included.
18. Reuse of produced water for drinking after treatment / pisciculture / ground water recharge / irrigation / coal washing/power generation etc.
19. Extent and duration of flaring of methane gas during exploration.
20. Analysis of gas w.r.t. H₂S.
21. Noise monitoring should be carried out at the nearest villages.
22. Measures to control noise pollution.
23. Assessment of generation of solid and hazardous waste and its characteristics from the operator.
24. Proposed measures for treatment and disposal of solid and hazardous waste.
25. Storage of chemicals at the site, proposed preventive measures for spillage and accidents.
26. Developing emergency response plan and disaster management plan.
27. Capping of core holes in case of emergency.
28. Statistical data of accident occurred so far during CBM exploration.
29. Identification of hazard prone operations and asses the damage.
30. The post project closures plan, if the project is not economically viable.

31. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
 32. Details of occupational health surveillance programme.
 33. Social impact assessment should be carried out.
 34. Action plan for post-project environmental monitoring.
- 35. Corporate Environmental Responsibility**
- (a) 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.
 - (b) Does the Environmental 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 report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non-compliance / 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.
36. 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.
 37. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

- (i). All documents should be properly indexed, page numbered.
- (ii). Period/date of data collection should be clearly indicated.
- (iii). Authenticated English translation of all material provided in Regional languages.
- (iv). The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- (v). A copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- (vi). The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report where the above issues have been incorporated.
- (vii). 'Certificate of Accreditation' issued by the QCI to the environmental consultant should be included.

These 'TORs' should be considered for the preparation of EIA / EMP report for development of Jharia CBM Block in Jharkhand by M/s ONGC Ltd. in addition to all the relevant information as per the 'General Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The EIA/EMP as per TORs should be submitted to the Chairman, Jharkhand State Pollution Control Board, (WBPCB) for public consultation in three districts.

The WBPCB shall conduct the public hearing/public consultation as per the provisions of EIA notification, 2006

14.6.0 Reconsideration

14.6.1 Molasses based Distillery (ENA/RS/AA, 70 KLPD) Unit alongwith Cogen Power Plant (2.5 MW) at Sy. No. 79/2, 79/4, 80/1, 80/4, 86/1 Village Kenganoor and Sy No. 84/2, Pattihal KB, Taluk Bailhongal, District Belgaum, Karnataka by M/s. Lorvin Industries Ltd.– EC reg.

Project proposal was considered in the 10th Expert Appraisal Committee (Industry-2) meeting held during 29th – 31st July, 2013 and the Committee desired following additional information:

- i. Clarify how the plant of same capacity can be installed on a smaller plot of 8 acres 10 gunthas land?
- ii. Submit layout map considering plot area of 8 acres 10 gunthas land.

Project proponent vide letter dated informed that location of main plant has been shifted to plot at Sy. No. 84/2. Additionally, they have also informed that raw water pond will be located on Sy. No. 84/1. Further, project proponent clarified during the EAC meeting that total area required for the main plant is only 5 acres, which will be installed at Sy. No. 84/2. The balance land 3 acres 10 guntas is proposed for future expansion. Hence the proposed plant has been planned for implementation in plot measuring 8 acres 10 guntas. Only residential colony will be developed in the plot at Sy. No. 79/2, 79/4, 80/1, 80/4, 86/1 Village Kenganoor.

After detailed deliberations, the Committee found the additional information satisfactory and recommended the project proposal for grant of environmental clearance subject to following additional conditions:

- i) Distillery unit shall be installed in the plot at Sy. No. 84/2.

14.6.2 Drilling of Exploratory Wells (17 Nos.) at Onshore Block AA-ONN-2009/1 in Churachandpur, Tamenglong and Imphal East, Jiribam, Districts, Manipur by M/s Jubilant Energy - regarding EC

Project proposal was considered in the 9th Expert Appraisal Committee (Industry-2) meeting held during 10th – 11th June, 2013 and the Committee desired following information:

- i) Map authenticated by wildlife warden indicating well locations and wildlife sanctuary.
- ii) Submit a copy of application for stage-1 forest clearance.
- iii) Revised water balance considering water requirement of 30 m³/day. No effluent shall be discharged.

Project proponent vide letter dated 3rd September, 2013 has submitted above information.

After detailed deliberations, the Committee found the EIA/EMP report and additional information satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. This EC is only for Exploratory Drilling. In case Development drilling is to be done in future, prior clearance must be obtained from the Ministry.
- ii. Ambient air quality should be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, methane & Non-methane HC etc.
- iii. Mercury should also be analyzed in air, water and drill cuttings twice during drilling period.
- iv. Approach road should be made pucca to minimize generation of suspended dust.
- v. The company should make the arrangement for control of noise from the drilling activity. Acoustic enclosure should be provided to DG sets and proper stack height should be provided as per CPCB guidelines.
- vi. Total water requirement should not exceed 30 m³/day and prior permission should be obtained from the concerned agency.
- vii. The company should construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system should be created for oil contaminated and non-oil contaminated. Effluent should be properly treated and treated wastewater should conform to CPCB standards.
- viii. Drilling wastewater including drill cuttings wash water should be collected in disposal pit lined with HDPE lining evaporated or treated and should comply with the notified standards for on-shore disposal. The membership of common TSDF should be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill should be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Shillong.
- ix. Good sanitation facility should be provided at the drilling site. Domestic sewage should be disposed off through septic tank/ soak pit.
- x. Oil spillage prevention scheme should be prepared. In case of oil spillage/contamination, action plan should be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil should be disposed of to the authorized recyclers.
- xi. The company should comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.

- xii. The Company should take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare should be explored. At the place of ground flaring, the overhead flaring stack with knockout drums should be installed to minimize gaseous emissions during operation.
- xiii. The company should develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xiv. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xv. Blow Out Preventer (BOP) system should be installed to prevent well blowouts during drilling operations. BOP measures during drilling should focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvi. Emergency Response Plan (ERP) should be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvii. The company should take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site should be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan should be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xviii. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xix. Occupational health surveillance of the workers should be carried out as per the prevailing Acts and Rules.
- xx. In case the commercial viability of the project is established, the Company should prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- xxi. Restoration of the project site should be carried out satisfactorily and report should be sent to the Ministry's Regional Office at Shillong.
- xxii. Oil content in the drill cuttings should be monitored by some Authorized agency and report should be sent to the Ministry's Regional Office at Shillong.
- xxiii. Under Enterprise Social Commitment (ESC), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxiv. An audit should be done to ensure that the Environment Management Plan is implemented in totality and report should be submitted to the Ministry's Regional Office.

- xxv. A social audit shall be carried out for the whole operation area with the help of reputed institute like Madras Institute of Social Science etc.
- xxvi. All personnel including those of contractors should be trained and made fully aware of the hazards, risks and controls in place.
- xxvii. Company should have own Environment Management Cell having qualified persons with proper background.
- xxviii. Company should prepare operating manual in respect of all activities. It should cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual should be made available at the drilling site/ project site. Awareness should be created at each level of the management. All the schedules and results of environmental monitoring should be available at the project site office.

14.6.3 Expansion of Kochi Refinery (from 9.5 MMTPA to 15.5 MMTPA) at Sy. No. 206, Village Puthencruz, Taluka Kunnathanadu, Ambalamugal, District Ernakulam, Kerala by **M/s Bharat Petroleum Corporation Limited – Amendment in Environmental clearance regarding.**

Project proposal was considered in the 12th Expert Appraisal Committee (Industry-2) meeting held during 30th September, 2013 to 1st October, 2013 and the Committee desired following information:

- i) Status of air emissions
- ii) Air quality modelling for the GLC.
- iii) Water consumption quantity.
- iv) Effluent generation and its treatment schemes.
- v) Generation of solid waste such as spent catalyst, spent resins, activated carbon, ETP sludge etc.
- vi) Any additional land requirement.
- vii) Any change in energy requirement.

Project proponent vide letter dated 8th November, 2013 has informed that:

- i) Air quality modeling exercise was earlier carried out during the EIA study for the GLC. Now there is an overall reduction in SO₂ and NO_x emissions due to the proposed changes. It is reported that after amendment, SO₂ emission will be reduced to 1518 kg/hr as compared to existing EC condition. Thus there is no adverse impact on the GLC's.
- ii) Water requirement will be increased by 50 m³/hr, which will be met from treated/recycled effluent.
- iii) No change in effluent generation and solid waste.
- iv) Energy requirement will be increased by 5 MW. LNG is used as fuel.

Project proponent has requested for amendment in EC for following modifications:

S.N.	Description	As per existing EC	Change required
1	Gas Turbine	2x33 MW	3 x 34.5
2	HRSG	2x110 TPH	3x110 TPH
3	Boiler	3x 230 TPH	2 x 250 TPH
4	STG	2 x 27	Nil
5	GT- Built Own Operate mode	-	20 MW
6	Hydrogen Generation Unit	90KTPA	Hydrogen -131.2 KTPA Syngas- 21,600 Nm ³ /hr. Nitrogen- 10,050 Nm ³ /hr. Oxygen-160 Nm ³ /hr.
7	Naptha Hydrotreater/Isomerization Unit	0.25 MMTPA	0.37 MMTPA

Modification in Irumpanam Installation :

S.N.	Description	As per existing EC	Change required
1	Irumpnam Installation	HSD Storage -4 x45000 KL MS2x25000 KL Total 230000 KL	HSD -4 x 30000 KL Naptha-2x 20000 KL ATF-1x5000 KL
2	Pipeline from Refinery to Irumpanam	No	1 no. 24" Naptha Line & 1 No. 18" HSD line length of pipeline around 2 Km
3	Irumpnam Installation – Wagon loading facility	LPG truck wagon loading facility	Instead of LPG wagon loading a new liquid product (POL siding (Single Spur automated BTPN loading siding) of 56 wagon rake for seven products (i.e. MS (E3 & E4), HSD (E3 & S4), SKO, ATF and LAN) is considered now.

After detailed deliberations, the Committee found the additional information adequate and recommended for the amendment in the EC for as referred above subject to the specific and general environmental conditions.

14.6.4 Modernization cum Expansion of Molasses based Distillery (from 30 KLPD to 60 KLPD), Cogeneration Power Plant (from 16 MW to 26 MW) and Sugar (2500 TCD to 5000 TCD) at Arvindnagar, Post Keshegaon, Taluka & District Osmanabad, Maharashtra by **M/s Dr. Baba Sahib Ambedkar Sahakari Sakhar Karkhana Ltd.** – regarding **Environment Clearance. (Internal Discussion)**

Project proposal was considered in the 12th Expert Appraisal Committee (Industry-2) meeting held during 30th September, 2013 to 1st October, 2013 and the Committee desired following information:

- 1 Water balance chart for existing and expansion project.

- 2 Fresh water requirement for the existing unit and after proposed expansion.
- 3 Stack monitoring report for SO₂.
- 4 Commitment to install Piezometers around the project area and compost yard.
- 5 Commitment to install rain water harvesting including design details.

Project proponent vide letter dated 13rd November, 2013 has submitted above information.

- (i) Water balance report submitted.
- (ii) During seasonal operation, fresh water requirement will be 20 m³/day. During off season, fresh water requirement will be 595 m³/day.
- (iii) Particulate emission is monitored to be 142.8 mg/Nm³ against standards .
- (iv) They have committed to install piezometers around the distillery and compost yard.
- (v) They have committed to install rain water harvesting.

After detailed deliberations, the Committee found the final EIA/EMP report and additional report satisfactory and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Bagfilter/ESP alongwith stack of adequate height should be provided to bagasse fired boilers to control particulate emissions within 50 mg/Nm³. At no time, the emission levels should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.
- ii. In plant, control measures for checking fugitive emissions from all the vulnerable sources should be provided. Fugitive emissions should be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi-cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system should be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored and records should be maintained.
- iii. Company shall follow good management practices viz. collection of waste yeast sludge from fermentation section in a closed system and proper disposal, reduced volume of effluent by adopting strategic approaches, closed drains carrying spent wash to the treatment units; minimization of fugitive emissions from anaerobic treatment; proper collection & handling of excess sludge generated from the anaerobic & aerobic treatment units; minimum retention of treated & untreated spent wash in the lagoons; effective composting of the spent wash by controlled effluent spraying through mechanical system to avoid spillages & over application, blending of sludge in correct proportion with press mud; and properly finished compost and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.
- iv. The gaseous emissions from DG set should be dispersed through adequate stack height as per CPCB guidelines. Acoustic enclosure should be provided to the DG sets to mitigate the noise pollution.
- v. Total fresh water requirement from Vadala Dam for distillery and sugar alongwith cogeneration should not exceed 595 m³/day. Prior permission for the drawl of 595 m³/day water should be obtained from the concerned authority.

- vi. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vii. The spent wash from molasses based distillery should be treated in bio-methanation followed by evaporation and bio-composting with press mud to achieve 'Zero' discharge. Multi-effect evaporator should be installed. No effluent should be discharged outside the premises and 'Zero' discharge should be maintained. Spent wash should be stored in impervious pucca lagoons with proper lining with HDPE and should be kept in proper condition to prevent ground water pollution. The storage of spent wash should not exceed 5 days capacity.
- viii. Adequate numbers of ground water quality monitoring stations should be set up by providing piezometers around the project area. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to MPCB and this Ministry.
- ix. Fire fighting system should be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting should be made to control fire from the alcohol storage tank.
- x. Risk Assessment should be carried to assess the fire and explosion risk due to storage of alcohol and report submitted to the Ministry and its Regional Office at Bhopal within six months.
- xi. Green belt should be developed in 2.65 acres out of 10.65 acres to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO.
- xii. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the medical records of each employee should be maintained separately.
- xiii. All the commitments made during the Public Hearing / Public Consultation meeting held on 26th April, 2013 should be satisfactorily implemented and adequate budget provision should be made accordingly.
- xiv. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details 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.

14.6.5 Sugar Factory (5000 TCD), Cogeneration Power Plant (34 MW) & Molasses based Distillery Plant (90 KLPD) at Almel Village, Sindagi Taluk, Bijapur District, Karnataka by M/s K.P.R. Sugar Mills Private Ltd.- **regarding EC**

Project proposal was considered in the 11th Expert Appraisal Committee (Industry-2) meeting held during 26th-27th August, 2013 and the Committee desired following information:

- 1 Revised Water balance chart. Prepare separate water balance chart for the Sugar, Cogeneration & Distillery Plants indicating water input, loss and effluent generation.
- 2 Plan to make water reservoir for water supply for 1 year.

- 3 Commitment to stop ferti-irrigation for the effluent generated from existing unit.
- 4 Odour management plan.
- 5 Detailed need based Enterprise Social Responsibility Plan for 5 % of project cost.
- 6 Compliance report of Environmental Clearance issued by the State Government.
- 7 Spent wash storage for 5 days and it should be closed type.
- 8 MoU with coal supplier indicating coal characteristics.
- 9 Ash management plan.
- 10 Area earmarked for greenbelt alongwith five year plantation plan.

Project proponent vide letter dated 11th November, 2013 has submitted above information.

After detailed deliberations, the Committee found the final EIA/EMP report and additional report satisfactory and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) Environment clearance accorded is for molasses based distillery unit (90 KLPD) only and no grain based distillery unit shall be operated without prior permission from the Ministry.
- ii) As proposed, ESP alongwith stack of adequate height shall be provided to coal & bagasse fired boiler (135 TPH) to control particulate emissions within 50 mg/Nm³. 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. Efficiency of pollution control device shall be monitored regularly.
- iii) In plant, control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored and records shall be maintained. The emissions shall conform to the limits prescribed by Rajasthan State Pollution Control Board.
- iv) Pucca approach road to project site shall be constructed prior to commencing construction activity of the main distillery so as to avoid fugitive emissions.
- v) The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB guidelines. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- vi) The company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the respective Regional office of MOEF, the respective Zonal office of CPCB and the KSPCB. The levels of PM₁₀, PM_{2.5}, SO₂, NO_x and HC (Methane) in ambient air shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.

- vii) Total fresh water requirement from River Bhima and Krishna River for distillery and sugar alongwith cogeneration shall not exceed 200 m³/day, 622 m³/day and 160 m³/day respectively. Prior permission for the drawl of 982 m³/day water shall be obtained from the Competent Authority.
- viii) Spent wash generation from molasses based distillery shall not exceed 8 Kl/Kl of alcohol. The spent wash from molasses based distillery shall be evaporated in Multi-effect evaporator followed by incinerated in a dedicated boiler to achieve 'Zero' discharge. Spent wash shall be stored in impervious pucca lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 5 days capacity.
- ix) As proposed, no effluent from distillery and co-generation power plant shall be discharged outside the premises and Zero discharge shall be adopted. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- x) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xi) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area and compost yard shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Lucknow and RSPCB.
- xii) Bagasse/biomass storage shall be done in such a way that it does not get air borne or fly around due to wind.
- xiii) Boiler ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided. Bagasse ash and coal ash shall be stored separately.
- xiv) Risk Assessment should be carried to assess the fire and explosion risk due to storage of alcohol and report submitted to the Ministry and its Regional Office at Bhopal within six months.
- xv) Green belt should be developed in 23.00 acres out of 171 acres to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO.
- xvi) Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the medical records of each employee should be maintained separately.
- xvii) All the commitments made during the Public Hearing / Public Consultation meeting held on 18th May, 2013 should be satisfactorily implemented and adequate budget provision should be made accordingly.

xviii) At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details 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.

14.6.6 Phenol Formaldehyde Resin, Melamine Formaldehyde Resin and other Synthetic Resin (1500 MTPM) at Block No. 418, Mouza Chiyada, Taluka Bavla, District Ahmedabad, Gujarat by **M/s Wonder Industries -regarding EC. (Internal Discussion)**

Project proposal was considered in the 9th Expert Appraisal Committee (Industry) meeting held during 10th-11th June, 2013 and the Committee desired following information:

- 1 Point-wise TOR compliance table.
- 2 At page 2.9 of EIA report, plot area is mentioned as 39559.75 m². Whereas during presentation, it was informed that total area is 18400 m². Please clarify the actual figure.
- 3 At page 8.1 of EIA report, cost of project is mentioned as Rs. 15.0 Crore. Whereas during presentation, project proponent informed that project cost is Rs. 80 Lacs.
- 4 Copy of valid consent to operate of the existing unit (laminated sheet).

Project proponent vide letter dated 30th November, 2013 has submitted above information.

After detailed deliberations, the Committee found the final EIA/EMP report and additional report satisfactory and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) Bagfilter alongwith stack of adequate height should be provided to white coal fired steam boiler/thermic fluid heater to control particulate emission to control particulate emission within 100 mg/Nm³.
- ii) Scrubber shall be provided to methanol formaldehyde dryer and Phenol formaldehyde dryer.
- iii) In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Adequate dust suppression systems with water spray shall be provided for storage yard, junction houses. Raw material loading and unloading area shall be covered and also provided with water spraying system. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored and records maintained.
- iv) Regular monitoring of Volatile Organic Compounds (VOCs) shall be carried out in the work zone area and ambient air.
- v) For further control of fugitive emissions, following steps shall be followed :
 - a. Closed handling system shall be provided for chemicals.
 - b. Reflux condenser shall be provided over reactor.
 - c. System of leak detection and repair of pump/pipeline based on preventive maintenance.

- d. The acids shall be taken from storage tanks to reactors through closed pipeline. Storage tanks shall be vented through trap receiver and condenser operated on chilled water.
- e. Cathodic protection shall be provided to the underground solvent storage tanks.
- vi) The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- vii) Total fresh water requirement from ground water source shall not exceed 52.7 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- viii) As proposed, Industrial effluent will be treated in ETP. Treated effluent should be reused/recycled within the factory premises. As proposed phenol shall be treated by Oxidation process (Photo Fenton Process). Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB. Water quality of treated effluent from ETP shall be monitored regularly. Domestic wastewater shall be disposed through septic tank and soak pit.
- ix) No effluent from the plant shall be discharged outside the factory premises and 'Zero' effluent discharge concept shall be adopted.
- x) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xi) All the commitment made regarding issues raised during the public hearing/consultation meeting held on 8th March, 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xii) 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 shall be ensured accordingly in a time bound manner.
- xiii) Green belt should be developed in 33% of total plant area. The selection of the plant species shall be as per CPCB guidelines in consultation with DFO.

14.6.7 Expansion of Nirma Chemical Complex at Sy No. 478/P, 447-453, 455-457, Village Kalatalav, Tehsil Bhavnagar, District Bhavnagar, Gujarat by M/s Nirma Limited--regarding EC

Project proposal was considered in the 12th Expert Appraisal Committee (Industry) meeting held during 30th September, 2013-1st October, 2013 and the Committee decided that M/s Nirma shall prepare time bound action plan to implement the aforesaid observations/suggestions/recommendations of the Sub-committee. Time bound action plan shall be discussed in the EAC meeting.

Project proponent vide letter dated 16th November, 2013 has submitted the time bound action plan.

After deliberations, the Committee desired detailed need based Enterprise Social Responsibility Plan for 5 % of project cost. The proposal is deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website. The Reply will be discussed internally without calling project proponent in the next forth coming meeting.

14.6.8 Resin manufacturing Unit (3250 MT/M) at Survey No.389, Village Nava Sadulka, TalukaMorbi, District Rajkot, Gujarat by **M/s Graffiti Laminates Pvt. Ltd.- regarding Change of Name.**

Earlier, project proponent has submitted the project proposal in the name of Graffiti Industries. The Committee recommended the proposal for TOR in its 10th EAC meeting held during 29th July, 2013 – 31st July, 2013. In the mean time, they have informed that the name of company is Graffiti Laminates Pvt. Ltd. instead of Graffiti Industries. MOEF has asked to submit revised form -1. Accordingly, they have submitted revised form-1.

After deliberations, the Committee prescribed the following TORs for the preparation of EIA/EMP report:

1. Executive summary of the project
2. Justification of the project.
3. Photographs of proposed plant site.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, PM2.5, SO₂, NO_x including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
20. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
21. Control methanol emission from drying section.
22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. An action plan to control and monitor secondary fugitive emissions from all the sources.
27. 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. Air quality modelling for proposed plant.
28. Permission for the drawl of 37.56 m³/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
29. Action plan for 'Zero' discharge of effluent shall be included.
30. Treatment of phenol in the effluent, if any.

31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
36. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
37. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
38. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
39. An action plan to develop green belt in 33 % area
40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
41. Details of occupational health programme.
 - i. To which chemicals, workers are exposed directly or indirectly.
 - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii. What measures company have taken to keep these chemicals within PEL/TLV.
 - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v. What are onsite and offsite emergency plan during chemical disaster.
 - vi. Liver function tests (LFT) during pre-placement and periodical examination.
42. Details of occupational health surveillance programme.
43. Socio-economic development activities shall be in place.
44. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
45. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
46. Corporate Environmental Responsibility
 - (a) Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental 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 report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company has a system of reporting of non compliance / 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.
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.
48. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
49. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.

- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC shall quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.
- vii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

The Committee prescribed the above TORs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Gujarat Pollution Control Board for conducting public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns raised along with the replies during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP report submitted to the Ministry for obtaining environmental clearance.

14.6.9 Expansion of Bulk Drug Unit (Active Pharmaceutical Ingredients (API; 737 TPA to 1063.5 TPA) at Village Toansa, P.O. Rail Majra, District Nawanshahar, Punjab by M/s Ranbaxy Laboratories Ltd. – Environmental Clearance reg.

1.0 M/s Ranbaxy Laboratories Ltd. has proposed for expansion of Bulk Drug Unit (Active Pharmaceutical Ingredients (from 737 TPA to 1063.5 TPA) at Village Toansa, P.O. Rail Majra, District Nawanshahar, Punjab.

2.0 TOR for preparation of EIA/EMP report was recommended in the 11th Meeting held on 9th June, 2010 (p. 67-71/c). Final EIA/EMP report was submitted on 5th May, 2011. The project was considered in the EAC (I-2) meetings held on 9th June, 2010 and 28th-30th July, 2011, 17th-18th November, 2011 and 11th-12th June, 2012 respectively.

3.0 There is a ground water contamination around the project site. "Program Management & Monitoring Group" constituted by the Punjab Pollution Control Board to look into issue of ground water contamination in the area that is caused by the neighbouring industries.

4.0 As per minutes of meeting of the Programme Management & Monitoring Group (PMMG), analysis report of ground water were found that parameters like BOD, COD, TDS, Arsenic & Lead have increased as compared to base data of year 2010.

5.0 Therefore, proposal was not recommended by the Competent Authority for environmental clearance and suggested to await further implementation of action plan and improvement in ground water.

6.0 Accordingly, Ministry vide letter dated 11th December, 2012 has informed to the project proponent that proposal shall be considered after implementation of action plan as suggested by the Programme Management & Monitoring Group (PMMG) and improvement in the ground water quality of Tonsa Village.

7.0 M/s Ranbaxy vide letter dated 31st August, 2013 submitted minutes of meeting of PMMG taken by the Chairman of the Board on 04.03.2013.

After deliberations, the Committee desired following additional information:

- 1 Latest ground water quality data for the affected area.

2 Recommendation of project proposal from State Pollution Control Board.

The proposal is deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website. The Reply will be discussed internally without calling project proponent.

14.6.10 Synthetic Organic Chemicals (chlorinated paraffin wax – 60 MTD capacity) at Village Sundram, Tehsil DeraBassi, District Mohali, Punjab by M/s Standard Chemicals.- EC reg.

Project proposal was placed before Reconstituted Expert Appraisal Committee (Industry) in its 10th meeting held during 29th July, 2013– 31st July, 2013, wherein the committee noted that they have started construction activities without obtaining prior environmental clearance as per EIA Notification, 2006 (F/X). Therefore, the committee recommended that the project proposal involves violation of the Environment (Protection) Act, 1986 or Environment Impact Assessment (EIA) Notification, 2006 will be considered as per Ministry's O. M no. J-11013/41/2006-IA II (I) dated 12th December, 2012 and 27th June, 2013.

Matter relates of violation. In pursuance of Ministry's directions following compliance reports have been received:

- i. Copy of resolution dated 3rd December, 2013 for not repetition of violation has been submitted.
- ii. Construction work at the project site has been stopped.
- iii. State Government vide letter no. 3/107/2013-STE (4)/1069 dated 6th December, 2013 has informed that complaint case has been filed against the project in the Hon'ble Court of Sub Divisional Judicial Magistrate, Der Bassi, District SA S Nagar, Punjab on 02.12.2013.

After detailed deliberations, the Committee found the final EIA/EMP report satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.
- ii) In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored.
- iii) Total fresh water requirement from ground water source shall not exceed 90 m³/day and prior permission shall be obtained from the competent Authorities.

- iv) Total industrial effluent generation shall not exceed 1.5 m³/day. Effluent shall be treated in ETP comprising Ultra Filtration and Reverse Osmosis.
- v) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from SPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire-fighting facilities in case of emergency.
- vi) Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.
- vii) Green belt should be developed in 3859 m² out of total plant area.
- viii) All the commitment made regarding issues raised during the public hearing/ consultation meeting held on 20th November, 2012 shall be satisfactorily implemented.
- ix) At least 5 % of the total cost of the project should be earmarked towards the Enterprise social responsibility 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.

14.7.0 Any Other Items

14.7.1 Drilling another 10 Wells at Dandewala&Bagitibba Mining Lease Block of 250 sq km are in Village Tanot, Tehsil Ramgarh, District Jaisalmer, Rajasthan by **M/s Oil India Limited -regarding Amendment in TORs for increasing of wells**

MoEF vide letter no. J-11011/116/2013-IA –II dated 14th August, 2013 has issued TOR for the above mentioned project.

Now, project proponent vide letter no. R/S& E/EC/537/2013 dated 29th October, 2013 has requested for amendment in TOR for increase in number of wells from 10 to 20.

After detailed deliberations, the committee recommended the proposal for amendment in TOR for the increased exploratory wells. Existing TOR points will remain the same. Public hearing shall be carried out district wise.

14.7.2 Exploratory Drilling (2 wells) in Purnea Basin, West Bengal Onshore Block PA-ONN-2005/2, West Bengal under NELP-VII by **M/s Oil & Natural Gas Corporation Ltd. (ONGCL) – regarding extension of Validity of ToR**

MoEF vide letter no. J-11011/394/2010-IA –II dated 4th November, 2011 has issued TOR for the above mentioned project.

Now, project proponent vide letter no. ONGC/CHSE/ENV/TOR/MBA Basin/2013-14 dated 7th October, 2013 has requested for extension of validity of EC for one more year. They have submitted draft EIA reports of two blocks to West Bengal Pollution Control

Committee. Considerable time is required for land acquisition and conducting public hearing in various districts.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 4.11.2013.

14.7.3 Exploratory Drilling (3 wells) in Bengal Onshore Block WB-ONN-2005/2, West Bengal under NELP-VII by **M/s Oil & Natural Gas Corporation Ltd. (ONGCL) – regarding extension of Validity of ToR.**

MoEF vide letter no. J-11011/394/2010-IA –II dated 4th November 2011 has issued TOR for the above mentioned project.

Now, project proponent vide letter dated 7th October, 2013 has requested for extension of validity of TOR for one more year as public hearing has to be conducted.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 4.11.2013.

14.7.4 Exploratory Drilling (6 wells) in Bengal Onshore Block WB-ONN-2005/4, West Bengal under NELP-VII by **M/s Oil & Natural Gas Corporation Ltd. (ONGCL) – Extension of Validity of TOR reg.**

MoEF vide letter no. J-11011/395/2010-IA –II dated 4th November 2011 has issued TOR for the above mentioned project.

Now, project proponent vide letter dated 7th October, 2013 has requested for extension of validity of TOR for one more year as public hearing has to be conducted.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 4.11.2013

14.7.5 Exploratory Drilling (3 wells) in Bengal Onshore Block WB-ONN-2005/3, West Bengal under NELP-VII by **M/s Oil & Natural Gas Corporation Ltd. (ONGCL) – Extension of Validity of TOR reg.**

MoEF vide letter no. J-11011/396/2011-IA –II dated 4th November 2011 has issued TOR for the above mentioned project.

Now, project proponent vide letter dated 7th October, 2013 has requested for extension of validity of TOR for one more year as public hearing has to be conducted.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 4.11.2013.

14.7.6 Opinion with respect to Categorization of Epoxy Hardener Manufacturing project proposed by **M/s Acorrphen Coating Pvt. Ltd.**

M/s Acorrphen Coating Pvt. Ltd have applied on 15.10.2012 for environmental clearance for setting up of a new unit for manufacturing of epoxy hardener at Sy. No. 267, 269, 272, Village Vadu, Taluka Padra, District Vadodara, Gujarat. The project was taken up in the meeting of the SEAC, Gujarat held on 18.12.2012 and 29.04.2013 and SEAC recommended the project for grant of environmental clearance. The project was discussed in the meeting of the SEIAA, Gujarat held on 01.07.2013. During the meeting held on 01.07.2013, the SEIAA, Gujarat felt that as the proposed unit is not going to manufacture paint, it should not be considered as Integrated paint industry. The SEIAA, Gujarat noted that in the Technical EIA guidance manual for integrated paint industry prepared by IL & FS for the MoEF, GOI, the integrated paint industry is defined as an industry, which is involved in not only formulation (Physical mixing of ingredients) of paints, but also in manufacturing of ingredient such as resins, lacquers, varnishes etc. SEIAA vide letter dated July, 2013 has sought opinion of MoEF with respect to categorization of Epoxy Hardener Manufacturing project proposed by M/s Acorrphen Coating Pvt. Ltd.

After detailed deliberations, the committee noted that manufacturing of raw materials used for manufacturing of paint cannot be categorized as paint industry. However, as per justification based on technical EIA guidance manual for integrated paint industry prepared by IL & FS, Epoxy Hardener Manufacturing may be considered as paint industry by exception. Since proposal is at advance stage of approval from SEIAA, proposal may be considered as a paint industry.

14.7.7 Development (2 nos.)/ Exploratory (3 Nos.) Wells, Group Gathering Station and pipeline laying from KSAC to Borholla GGS at Kasomarigaon, Assam Asset by M/s Oil and Natural Gas Corporation Ltd –Extension of Validity of TOR reg.

MoEF vide letter no. J-11011/563/2011-IA –II dated 28th May, 2012 has issued TOR for the above mentioned project.

Now, project proponent vide letter no. ONGC/CHSE/TOR/2013-14 dated 12th December, 2013 has requested for amendment in TOR for increase in number of development wells from 2 to 7 wells.

After detailed deliberations, the committee recommended the proposal for amendment in TOR for the increased exploratory wells. Existing TOR points will remain the same. Public hearing shall be carried out district wise.

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LIST OF PARTICIPANTS

Expert Appraisal Committee (Industry) :			
1.	Shri M. Raman	Chairman	P
2.	Shri R.K. Garg	Vice-Chairman	P
3.	Prof. R.C. Gupta	Member	A
4.	Dr. Prem Shankar Dubey	Member	P
5.	Dr. R.M. Mathur	Member	P
6.	Dr. S. K. Dave	Member	P
7.	Dr. B.Sengupta	Member	P
8.	Shri Rajat Roy Choudhary	Member	A
9.	Dr. S.D. Attri	Member	P
10.	Dr. Antony Gnanamuthu	Member	P
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjana Raghunath Raje	Member	P
MOEF Officials :			
13.	Dr. K.K.Garg	Member Secretary	
14.	Shri A.N. Singh	Scientist 'C' (20.12.2013)	
15.	Shri Sundar Ramanathan	Scientist 'C' (19.12.2013)	
