

MINUTES OF THE MEETING OF THE 6th RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY) HELD DURING 5th March, 2013 – 7th March, 2013

VENUE: Annexe 1 & 2, Scope Convention Centre, Scope Complex, Lodhi Road, New Delhi 110 003.

TIME 10.00 A.M.

6.0 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.

6.1 Confirmation of the Minutes of the 5th Reconstituted Expert Appraisal Committee (Industry) held during 31st January, 2013 – 1st February, 2013.

Minutes of the 5th Reconstituted Expert Appraisal Committee (Industry) held during 31st January, 2013 – 1st February, 2013 were confirmed by the Committee.

5th March, 2013

6.2.0 Consideration of the Projects:

6.2.1 Phenol Formaldehyde Resin, Melamine formaldehyde, Melamine Urea Formaldehyde Resin, Phenol Urea Formaldehyde Resin (60 MTPM) at Sy. No. 28, Dhameda-Solaiya Road, Village Anandpura (Solaiya), Post Solaiya, Taluka Mansa, District Gandhinagar, Gujarat by **M/s Perfect Laminate.- regarding EC.**

The project authorities and their consultant (Pragathi Labs & Consultants Pvt. 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 28th Meeting of the Expert Appraisal Committee (Industry) held during 20th-21st October, 2011 for preparation of EIA/EMP. All the Resin Plants located outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Perfect Laminate have proposed for the Phenol Formaldehyde Resin, Melamine Formaldehyde, Melamine Urea Formaldehyde Resin, Phenol Urea Formaldehyde Resin (60 MTPM) at Sy. No. 28, Dhameda-Solaiya Road, Village Anandpura (Solaiya), Post Solaiya, Taluka Mansa, District Gandhinagar, Gujarat. Total plant area is 4800 sq.m. No national park/wildlife sanctuary/reserve forest is located within 10 km distance. Total cost of the project is Rs. 80 Lakhs. Following will be manufactured:

S. N.	Name of products	Quantity
1	Phenol Formaldehyde Resin	60 MTPM
2	Melamine Formaldehyde Resin	
3	Melamine Urea Formaldehyde Resin	
4	Phenol Urea Formaldehyde Resin	

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 7 locations during October 2011 – December 2011 and submitted baseline data indicates that range of concentrations of PM_{2.5} (30.5 µg/m³ to 53 µg/m³), PM₁₀ (46.0 µg/m³ to 85 µg/m³), SO₂ (7.0 µg/m³ to 19.1 µg/m³) and NO_x (15.2 µg/m³ to 29 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 3.6 µg/m³ and 7.0 µg/m³ with respect to SPM and SO₂ respectively. Dust collector and stack height of 30m will be provided to coal fired boiler. Scrubber will be provided to dryer to control methanol emissions. Total fresh water requirement from ground water source will be 11.2 m³/d. Industrial effluent (0.539 m³/d) will be treated in ETP based on photo –Fenton process vessel for oxidation and the treated water will be evaporated through steam jacketed evaporator. No effluent will be discharged outside the plant premises. ETP Sludge will be sent to TSDF. Used oil will be sent to authorized recyclers/re-processors. Waste/residue will be incinerated at Common Hazardous Waste Disposal Facility. Greenbelt will be developed in 33 % of the plant area. Acoustic enclosure will be provided to control noise pollution. Total power requirement from GEB will be 75 hp. DG set (100 KVA) will be installed.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 18.10.2012. The issues raised were regarding greenbelt area, benefits from the proposed project, local employment, disposal of industrial wastewater, disposal of hazardous waste etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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

- i. Collect ambient air quality data for one month.
- ii. Quantity of total water requirement and its break up in respect of fresh water requirement and recycled water.
- iii. Action plan for disposal of fly ash.

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

6.2.2 Expansion of Sugar Unit (3500 to 5000 TCD) and installation of Co-generation Facilities (22 MW) at Sy. No. 168, 172,173 and 176 Village Sundarnagar, Tehsil Majalgaon, District Beed, Maharashtra **by M/s Majalagaon Sahakari Sakhar Karkhana Ltd. - regarding EC**

The project authorities and their consultant (M/s Ultra Tech., Environmental Consultant & Laboratory) 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 thermal power plants (biomass or non-hazardous municipal solid waste as fuel) are listed at S.N. 1(d) under category 'A' and appraised at Central level. Sugar unit ≥ 5000 TCD cane crushing is listed at 5 (J) under category 'B' and appraised at state level. Since project is integrated

and capacity of the CPP is >15 MW (22 MW), the proposal will be appraised at Central level.

M/s Majalagaon Sahakari Sakhar Karkhana Ltd. have proposed for expansion of Sugar Unit (3500 to 5000 TCD) and installation of Co-generation Facilities (22 MW) at Sy. No 168, 172, 173 and 176 Village Sundarnagar, Tehsil Majalgaon District Beed Maharashtra. Proposed expansion will be done in the existing sugar factory premises. There is no expansion of the existing molasses based distillery of 45 KLPD capacity. Total plant area is 4,83,100 m². No ecological sensitive area is located within 10 km distance. Co-generation will be operated for 160 days during season and 126 days during off season. Total cost of project is Rs. 136.97 Crore. Rs. 11.25 Crores and Rs. 98.64 Lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures. Sugar cane (5000 TCD) from surrounding sugar cane farms and Bagasse (47.35 TPH) from own sugar unit will be used as raw materials.

Ambient air quality monitoring was carried out at 5 locations during post monsoon season 2011 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (25 µg/m³ to 125 µg/m³), SO₂ (1.1 µg/m³ to 14 µg/m³) and NO_x (2.3 µg/m³ to 22 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 7.14 µg/m³ with respect to PM₁₀. ESP alongwith stack (76 m) will be provided to bagasse fired boiler to control particulate matter. Water requirement from Kundlika dam will be 3421 m³/day after expansion cum modernization. Effluent generation from sugar unit and cogen will be 520 m³/day and 180 m³/day respectively. Effluent will be treated in the effluent treatment plant of capacity 1200 m³/day. Fly ash (7 MTPD) will be generated and sold to brick manufactures and used as farm manure. ETP sludge will be used as manure. Bagasse (47.35 TPH) and Coal Indian /Imported (7.1 MTPH) will be used as fuel in boiler. HSD will be used as fuel in DG set (2 x 1000 KVA). Power requirement

MoEF vide letter no. J-11011/297/2008-IA II (I) dated 13th April, 2009 has accorded environmental clearance for the existing unit. The Committee deliberated upon the monitoring report by the Ministry's regional office, Bhopal. It is reported that unit has commissioned with latest technology of continuous fermentation and multipressure distillation. Spent wash after bio-methanation is composted. 18 acres of land has been allocated for bio-composting. Unit has not installed piezo-meter to monitor ground water quality. However, Project proponent has submitted undertaking to implement the condition within 30 days. Greenbelt development needs to be improved. Project proponent has committed to carry out rain water harvesting. Project proponent has responded satisfactorily to the observations made by the Regional Office.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 22nd February, 2012. The issues raised during public hearing were electricity generation, noise pollution, air emissions from boiler, fly ash generation etc. The Committee noted that the Sub Divisional Officer has supervised and presided over the entire public hearing. The Committee found EIA/EMP report adequate. However, the Committee desired following clarification to take final decision:

1. Confirmation needs to be obtained from the Maharashtra Pollution Control Board whether any of the District Magistrate/ District Collector/ Dy. Commissioner or his

or her representative not below the rank of Additional District Magistrate has supervise and presided over the entire public hearing process.

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

6.2.3 Grain based Distillery Unit (30 KLD) at Gat No 105/1/1B, Village Sadgaon, Taluka & District Dhule, Maharashtra by **M/s Megi Agro Chem Ltd. - regarding EC**

The project authorities and their consultant (Equinox Environments (I) Pvt. 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 23rd Meeting of the Expert Appraisal Committee (Industry) held during 30th-31st May, 2011 for preparation of EIA/EMP report. All cane juice/non-molasses based distillery (>30 KLD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s Megi Agro Chem Ltd. have proposed for grain based distillery unit (30 KLD) at Gat No 105/1/1B, Village Sadgaon, Taluka Dhule, District Dhule in Maharashtra. Total cost of project is Rs. 36.65 Crores. Rs. 2.85 Crore and Rs. 23 Lakhs are earmarked towards capital cost and recurring cost for implementation environment management plan. No forest land is involved. Total plant area is 26 ha. Distillery will be installed in 7.99 ha. of land. Distillery will be operated for 230 days. No eco-sensitive area such as national park/ wildlife sanctuary/ biosphere reserve will be located within 10 Km distance. Project proponent has confirmed that no cogeneration power plant will be installed. Following will be manufactured:

S.N.	Product	Quantity
1	Extra Neutral Alcohol (ENA)	900.00 KL/M
2	Rectified Spirit	952.00 KL/M
3	Impure Spirit	49.00 KL/M
By-Product		
1	Distiller's Dry Grains with soluble (DDGS)	900.00 KL/M
2	Fusel Oil	18.00 KL/M
3	Compressed CO ₂	726.00 KL/M

Corn/Sorghum will be used as raw materials.

Ambient air quality monitoring was carried out at 4 locations during October 2011 – December 2011 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (38.2 µg/m³ to 46.1 µg/m³), SO₂ (19.5 µg/m³ to 25.4 µg/m³) and NO_x (28.9 µg/m³ to 35.7 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 3.90 µg/m³ and 7.85 µg/m³ with respect to SPM, and SO₂ respectively. The resultant concentrations are within the NAAQS. Bagfilter alongwith stack height (30 m) will be provided to the coal fired boiler (12 TPH). Total water requirement from Dahyanedam will be 300 m³/day. Spent wash from grain based distillery will be treated in decanter and then concentrated in MEE to concentrate the solids to 30 % and then

taken to a dryer alongwith wet cake from decanter to concentrate the solids to form Distiller's Dry Grains with Soluble (DDGS). No effluent will be discharged outside the factory premises. Fly ash will be sent to brick manufacturers. Greenbelt will be developed in 6.9 ha. of land.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 2nd December, 2011. The issues raised during public hearing were monitoring of water drawl from Dam, construction activities started without obtaining environmental clearance, local employment, ETP scheme etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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

- i. Quantity of fusel oil generation to be corrected.
- ii. Quantity of spent wash generation and its treatment scheme to be submitted.
- iii. Coal characteristics in terms of coal ash, calorific value and sulphur content to be submitted. Action plan for disposal of fly ash.
- iv. Status of construction of the proposed project and layout plan for greenbelt to be submitted.

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

6.2.4 Proposed for Sponge Iron Plant (2x 100 TPD) along with Captive Power Plant (8 MW) at Village Maheshwera, Hemlet of Panihar, District Gwalior in Madhya Pradesh by **M/s Emerald Industries Ltd. - regarding EC**

The project authorities and their consultant (Pioneer 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 13th Meeting of the Expert Appraisal Committee (Industry) held during 26th-28th August, 2010 for preparation of EIA/EMP report. All the Primary metallurgical plants have been kept at S.N. 3(a) under primary metallurgical industry under category -A and appraised at Central level.

M/s. Emerald Industries Ltd have proposed for Sponge Iron Plant (2 x 100 TPD) along with Captive Power Plant (8 MW) at village Maheshwera, Hemlet of Panihar, Tehsil and District Gwalior in Madhya Pradesh. Total project area acquired is 31.2 acres. Out of which, greenbelt will be developed in 10 acres of land. Total cost of the project is Rs. 56 Crores. Rs. 5.1 Crore and Rs. 50 lakhs/annum are earmarked towards capital cost and recurring cost per annum for implementation of environment management plan. Santau RF, Aron RF & Raipur RF are located within 10 km distance. No national parks/wildlife sanctuaries are located within 10 Km distance. No forest land is involved. Following are the products along with manufacturing capacity:

Sl. No.	Units	Product	Plant Configuration	Production Capacity
1	DRI Kilns	Sponge Iron	2 x 100 TPD	60,000 TPA

2	Power	Power Generation	WHRB	4 MW	8 MW
			FBC	4 MW	

Iron ore (96000 TPA) from Maheshwara mines, Indian coal (78000 TPA) from Shadol/Imported coal (46000 TPA) from Indonesia & Others and Dolomite (3000 TPA) from local market will be used as raw materials for sponge iron plant. Dolochar (18000 TPA) from inplant generation and Indian coal (10,200 TPA) from Shadol/ imported coal from Indonesia & Others will be used as raw materials for power plant.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2010 to May, 2010 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (19.9 µg/m³ to 36.9 µg/m³), PM_{2.5} (12.7 µg/m³ to 22.1 µg/m³), SO₂ (6.0 µg/m³ to 8.1 µg/m³) and NO_x (6.4 µg/m³ to 9.2 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.1 µg/m³, 2.0 µg/m³ and 2.9 µg/m³ with respect to PM₁₀, SO₂ and NO_x. The resultant concentrations are within the NAAQS. The exhaust gas from the rotary kiln will be passed through a waste heat recovery boiler (WHRB) and after heat recovery the gases will pass through a high efficiency ESP to bring down the particulate matter. ESPs will be provided to DRI Kilns & FBC power plant. Dust extraction system with bagfilters will be provided at material points, crusher area, cooler discharge, product separation area, etc. to control dust emission. All the material handling systems will be connected with dedusting system. Water requirement from ground water source will be 878 m³/day. Industrial wastewater generation will be 205 m³/day. Closed circuit cooling system will be implemented in sponge iron plant. Boiler blowdown & DM plant generation wastewater will be treated in neutralization tanks and will be mixed in a central monitoring basin (CBM). Service water will be treated in oil separator and after treatment will be collected in CBM alongwith cooling tower blowdown. Treated water will be used for dust suppression /ash conditioning and horticulture purpose. No effluent will be discharged outside the plant premises. Dolochar will be utilized in FBC boiler as fuel. Accretion slag will be used for road construction /given to brick manufacturing. Wet scrapper sludge will be given to brick manufacturers. Bagfilter/ash from spong iron plant will be given to cement plant/brick manufacturers. Ash from power plant will be given to cement plants/brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the MP Pollution Control Board on 14th June, 2012. The issues raised included local employment, pollution control measures for dust emissions etc. and 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:

1. Measures shall be taken to reduce PM levels in the ambient air. Continuous stack monitoring facilities for all the stacks should be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. should be provided to keep the emission levels below 50 mg/Nm³ and installing energy efficient technology.

2. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 should be followed.
3. Vehicular pollution due to transportation of raw material and finished product should be controlled. Proper arrangements should also be made to control dust emissions during loading and unloading of the raw material and finished product.
4. Total fresh water requirement from ground water source shall not exceed 878 m³/day. Prior 'permission' for the drawl of 878 m³/day ground water from the Competent Authority shall be obtained. 'Zero' effluent discharge should be strictly followed and no wastewater should be discharged outside the premises.
5. 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.
6. Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent.
7. Proper handling, storage, utilization and disposal of all the solid waste should be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste should be submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB.
8. A time bound action plan should be submitted to reduce solid waste, its proper utilization and disposal.
9. A Risk and Disaster Management Plan (including Earth quake and Seismic hazard) shall be prepared and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.
10. As proposed, green belt should be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
11. All the commitments made to the public during public hearing/public consultation meeting held on 14th June, 2012 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
12. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on earlier Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.

13. 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.

6.2.5 Proposed Exploratory Drilling (11 Wells) in NELP VII Block (RJ-ONN-2005/2) in Jaisalmer District, Rajasthan by **M/s Oil India Ltd.- regarding EC**

The project authorities and their consultant (Kadam Environmental 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 7th Meeting of the Expert Appraisal Committee (Industry) held during 15th & 16th January, 2010 for preparation of EIA/EMP report. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s Oil India Limited have proposed for exploratory drilling (11 Wells) in NELP VII Block (RJ-ONN-2005/2) in Jaisalmer District of Rajasthan. Total block area is 1517 Km². The cost of project is Rs. 100 Crore. PSC was signed on 22nd December, 2008. PEL was signed on 13th July, 2009. No National Park/Wildlife Sanctuary/ protected forests/eco-sensitive areas are located within 10 Km distance from the drilling site. The area is part of the Thar Desert and having no vegetation and habitation. It is proposed to drill 11 wells upto the depth of 1100 – 2100m. Following is the coordinate of the proposed wells for exploratory drilling:

Well No.	Latitude (N)	Longitude (E)	Location Details (Nearest Village)
1	27°38'13"	70°21'20"	Ranao Village at ~7.53 Km in ENE (Ta – Jaisalmer)
2	27°33'41"	70°20'40"	Gamnewala Village at 10.55 Km in SW (Ta – Jaisalmer)
3	27°25'40"	70°23'00"	Bijrasar village at ~10.08 in SE (Ta – Jaisalmer)
4	27°25'37"	70°29'42"	Bijrasar Village at ~3.84 Km in SSE (Ta – Jaisalmer)
5	27°32'32"	70°28'00"	Girduwala Village at ~12.08 Km in NNW (Ta – Jaisalmer)
6	27°37'24"	70°25'56"	Girduwala Village at ~2.42 Km in N (Ta – Jaisalmer)
7	27°37'53"	70°32'40"	Girduwala Village at ~ 11.35 Km in WNW (Ta – Jaisalmer)
8	27°31'34"	70°35'16"	Sadhna Village at ~11.21 Km in ESE (Ta – Jaisalmer)
9	27°31'40"	70°41'16"	Sadhna Village at ~4.69 Km in S (Ta – Jaisalmer)

10	27°37'34"	70°40'40"	Sadhna Village at ~15.69 Km in S (Ta – Jaisalmer)
11	27°27'24"	70°45'00"	Siew Village at ~5.60 in S (Ta – Jaisalmer)

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during winter season, 2011 and submitted data indicates as PM10 (32–149 ug/m³), SO₂ (less than 8.0 ug/m³) and NO_x (10-27.4 ug/m³). Emissions will be generated from D.G. sets. Total water requirement will be 50 m³/day per well and sourced from tanker supply. Effluent generation will be 12.5 m³/day and stored in HDPE lined pit. 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. Water Based Mud (WBM) will be used. Drilling well will generate drill cutting (240 MT) and drilling mud (200 MT) and discharged in HDPE lined pit. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sold to authorized recyclers. Acoustic enclosures will be provided to D.G. sets to reduce noise levels. HSD (2500-3000 lpd) will be used in DG sets during drilling operation. Blow-out-preventer (BOP) will be provided to prevent fluid from the formation gas gushing to the surface. Fire fighting equipments and safety measures will be as per Oil Mines Regulation, 1984.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Rajasthan State Pollution Control Board on 24th November, 2011. The issues raised during public hearing were regarding source pollution, repairing of village tubewell, local employment, CSR and 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. Clearance from the Ministry of Defense/Home Affairs or any other department shall be obtained, as applicable.
- ii. Ambient air quality should be monitored at the nearest 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, CH₄, HC, Non-methane HC etc.
- iii. Mercury should be analyzed in air, water and drill cuttings twice during drilling period.
- iv. Approach road should be made pucca to mitigate 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 20 m³/day/well 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 Lucknow.
- 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. The Company should carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected should be submitted six monthly to the Ministry and its Regional Office at Lucknow.
- 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. Occupational health surveillance of the workers should be carried out as per the prevailing Acts and Rules.
- xix. 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.
- xx. Restoration of the project site should be carried out satisfactorily and report should be sent to the Ministry's Regional Office at Lucknow.
- xxi. 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 Lucknow.
- xxii. Under Corporate Social Responsibility (CSR), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxiii. Company should have own Environment Management Cell having qualified persons with proper background.
- xxiv. 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.

6.2.6 Expansion by Drilling of Infill Oil and Gas Development Wells (20) in existing Dholka field, District Kheda and Ahmadabad, Gujarat by M/s Joshi Technologies International, inc-India Projects. regarding EC.

The project authorities and their consultant (Kadam Environmental 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 33rd Meeting of the Expert Appraisal Committee (Industry) held during 21st-22nd March, 2012 for preparation of EIA/EMP report. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s Joshi Technologies International, Inc-India Projects have proposed for drilling of Infill Oil and Gas Development Wells (20) in the existing Dholka field, District Kheda and Ahmadabad, Gujarat. Out of which 6 wells are planned in Dholka Taluka of

Ahmedabad District and 14 wells in Kheda Taluka of Kheda District. Block area is 48 Km². No forest land is involved. Well will be drilled to 1750m-1800m. Production Sharing Contract (PSC) was signed between L&T and JTI, Inc. India projects and Govt. of India on 20th February, 1995. By October 1995, i.e. in around 27 years, about 0.22 million cubic metres (m³) of gas was produced. Daily rate of oil production was 35 m³/day from the 14 oil wells. Part of produced gas was utilized for internal purpose but bulk of solution gas was flared. 14 oil wells were flowing to 2 group gathering stations (GGS)-1 in the north and other is in south part of oil field. The total original oil in place (OOIP) was estimated to be 7.12 million m³. Sabarmati & Vatrak Rivers are passing through the block. No wildlife sanctuary/ national park is located within the block. No forest land is involved. Sabarmati River and Vatrak River are flowing within 10 Km distance. Cost of project is Rs. 185 Crore. Coordinates of proposed are as given below:

S.N.	Well No.	Latitude	Longitude	Location of well in Revenue Survey Limit of Village
1	NW A08	22°41'47.800"	72°32'01.200"	Rasikpura Village 0.3 km in NW from well site.
2	NWA18	22°41'54.910"	72°32'18.810"	Rasikpura Village at 1.31 Km in WNW direction from will site
3	NW A 65	22°41'47.800"	72°32'01.800"	Rasikpura Village at 0.96 km in NW from well site
4	NW B07	22°42'04.43"	72°31'35.13"	Rasikpura Village at 0.09 in NW direction from well site
5	NW B08	22°41'57.55"	72°31'39.37"	Rasikpura village at 0.33 km in NW direction from will site
6	NW B09	22°41'54.350"	72°31'40.14"	Rasikpura village at 0.61 km in NNW direction from will site
7	NW B27	22°42'34.15"	72°32'18.860"	Rasikpura village at 1.31 km in WNW direction from well site
8	NW B36	22°42'02.24"	72°32'36.45"	Pathapura village is at 3.05 km in North Direction
9	NW B37	22°41'54.42"	72°32'47.14"	Radhu Village at 3.4 km in East Direction
10	NW B48	22°41'59.91"	72°31'53.65"	Rasikpura village 0.67 km in NW direction form well site.
11	NW B51	22°41'47.800"	72°32'26.54"	Radhu village at 3.9 km in East direction
12	NW B52	22°40'33.22"	72°31'49.62"	Varsang village at 3.13 km in East direction from well.

13	NW B53	22°40'37.63"	72°32'03.54"	Varsang village at 2.7 km in ESE direction from well
14	NW B54	22°41'47.58"	72°32'02.75"	Varsang village at 2.8 km in SE direction from well
Ahmedabad District				
15	NW B17	22°41'34.90"	72°31'55.87"	Sahij village at 1.63 km in WNW direction from well site
16	NW B24	22°41'01.15"	72°32'07.87"	Sahij village at 2.31 km in NW direction from well site
17	NW B55	22°41'04.63"	72°32'14.35"	Sahij Village 2.41 km in NW direction from well site
18	NW A34	22°41'08.300"	72°32'00.420"	Sahij village at 2.0 km in NW direction from well site
19	NWA61A	22°40'59.530"	72°31'55.970"	Sahij village at 2.04 km in NW direction from well site
20	NW B05	22°41'39.444"	72°32'03.012"	Sahij village 1.84 km in West direction from well site

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during Summer Season, 2012 and submitted baseline data indicates range of PM₁₀ (35–97 ug/m³), SO₂ (8.0 – 12.9 ug/m³) and NO_x (10-16.9 ug/m³). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 0.06 µg/m³, 19.47 µg/m³ and 0.24 µg/m³ for SPM, SO₂ and NO_x respectively. The resultant GLCs are within the NAAQS.

Total water requirement will be 20 m³/day per well and sourced from ground water source. Effluent generation will be 5 m³/day and stored in HDPE lined pit. Service water will be passed through oil separator to remove oil content in the effluent. Total produced water generation from the existing and new wells has been estimated to be 105 m³/day. Produced water will be treated in the existing ETP of 200 m³/day. 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. Water Based Mud (WBM) will be used. Drilling well will generate drill cutting (240 MT) and drilling mud (200 MT) and discharged in HDPE lined pit. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30th August, 2005. Used oil will be sold to authorized recyclers. Acoustic enclosures will be provided to D.G. sets to reduce noise levels. HSD (2500-3000 lpd) will be used in DG sets during drilling operation. Blow-out-preventer (BOP) will be provided to prevent fluid from the formation gas gushing to the surface. Fire fighting equipments and safety measures will be as per Oil Mines Regulation, 1984.

The Committee deliberated upon the compliance status report of the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Regional Office on 14th January, 2013. It is reported that compensation for land acquisition to the land oustees have been paid as per the prevailing rules in the state. The surface facilities had been installed as per OISD standards & Oil Mines Rules, 1984. Drilling wastewater including drill cuttings wash water was collected in disposal pit lined with HDPE lining & evaporated. Project Proponent has already taken the membership of common TSDf situated at Odhav operated by Naroda Environ Projects. It was also noticed that waste oil was stored in covered storage yard and has not been disposed through authorized recyclers. In response project proponent informed that sludge from ETP has been disposed off monthly basis to TSDf. Only water based drilling mud was used for drilling. Proper acoustic enclosure has been provided to the DG set. As regard to CTO, Project proponent informed that unit has obtained consent no. AWH-52330, which is valid upto 05.10.2017. Project proponent confirmed that the GGS is in operation since 1974 (DGMS permission) by ONGC & is with JTI since 1995. The Unit has obtained consent to operate for GGS from GPCB. Project proponent committed to submit six monthly compliance report regularly and also uoload on the website. Stack height of DG set will be verified with the CPCB guidelines and informed to the Regional Office accordingly. Regarding show cause notice, project proponent informed that they have submitted the reply against the show cause notice vide their letter dated 19.01.2011. Thereafter, they have got renewal of the consent order no. 33099, 33097, 33102, 33101, 33098, 33100, which have been extended upto 17.03.2014. The Committee was satisfied with the response of the project proponent.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 30th October, 2012 for Kheda district. The issues raised were regarding land acquisition, passage to drain rain water, local employment, damage of land due to oil leakage etc. In response project proponent informed that present farmer are being paid rent as per ONGC rates. Project proponent committed that no damage will be occurred due to proposed project. Project proponent is ready to allow underground pipeline for water drainage.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 2nd November, 2012 for Ahmedabad district. The issues raised were regarding maintenance of road, land compensation, construction of road etc. Issues raised 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. Compliance to all the specific and general conditions mentioned in the existing environmental clearance letter no. J-11011/920/2007-IA.II (I) dated 15.11.2007 shall be ensured.
- ii. Ambient air quality should be monitored at the nearest 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, CH₄, HC, Non-methane HC etc.

- iii. Mercury should be analyzed in air, water and drill cuttings twice during drilling period.
- iv. Approach road should be made pucca to mitigate 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 20 m³/day/well 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 Bhopal.
- ix. Produced water (105 m³/day) shall be treated in ETP. Treated produced water shall be disposed off through injection well as per CPCB/MoEF guidelines.
- x. Good sanitation facility should be provided at the drilling site. Domestic sewage should be disposed off through septic tank/ soak pit.
- xi. 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.
- xii. 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.
- xiii. 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.

- xiv. 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.
- xv. The Company should carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected should be submitted six monthly to the Ministry and its Regional Office at Bhopal.
- xvi. 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.
- xvii. Emergency Response Plan (ERP) should be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xviii. 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.
- 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 Bhopal.
- 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 Bhopal.
- xxiii. All the commitments made to the public during public hearing/public consultation meeting held on 30th October, 2012 for Kheda district and 2nd November, 2012 for Ahmedabad district shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xxiv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

- xxv. Company should have own Environment Management Cell having qualified persons with proper background.
- xxvi. 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.

6.2.7 Expansion of Inorganic Chemical Unit by Installation of Bulk Drugs Unit (190.10 TPM), Sy. No. 9/1C & 1D, Village Kondaagudem, Gowripatnam, Mandal Devarapalle, District West Godavari, Andhra Pradesh by **M/s Talli Godavari Fine Chemicals Pvt. Ltd. - regarding EC**

The project authorities and their consultant (Rightsource Industrial Solution Pvt. Ltd., A.P) 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 25th Meeting of the Expert Appraisal Committee (Industry) held during 28th–30th July, 2011 for preparation of EIA/EMP. All the Bulk Drug Units located out the notified industrial plants are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Talli Godavari Fine Chemicals Pvt. Ltd. have proposed to setup bulk drugs Unit (190.10 TPM) in the existing unit at Sy. No. 9/1C & 1D, Village Kondaagudem, Gowripatnam, Mandal Devarapalle, District West Godavari, Andhra Pradesh. Total plant area is 3.23 acres. No reserve forests/wildlife sanctuary/national parks are located within 10 km radius. 'Consent to Operate' for the existing products is approved from Andhra Pradesh Pollution Control Board vide letter no. 3250/APPCB/ZO-VSP/Tech./2010-616 dated 4th June, 2010 alongwith pointwise compliance report is submitted. Existing Unit is a small scale unit and no EC was required as unit is engaged in the manufacturing of inorganic chemicals. Total cost of the project is Rs. 3.60 Crores. Details of exiting products and proposed products to be manufactured are as given below:

Existing products:

S.N.	Name of the Products	Quantity (TPD)
1	Aluminium Chloride	6.00
2	Monochloro Acetic Acid	4.00
3	Anhydrous Calcium Chloride	2.00
4	Sodium Hypo Chlorite	2.20
5	Hydrochloric Acid	5.12
Total		19.32

Proposed products:

S.N.	Name of the Products	Quantity (TPM)
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1	Abacavir Sulphate	1.00
2	Amlodipine Besylate	1.00
3	Atrovastatin Calcium	3.00
4	Candesartan	0.50
5	Clopidogrel Bisulphate	2.00
6	Duloxaitine	0.50
7	Effavirenz	0.85
8	Fexofenadine Hydrochloride	2.00
9	Gabapentene	15.00
10	Irbesartan	1.00
11	Lamavudine	1.00
12	Losartan Potassium	1.25
13	Nevirapine	1.00
14	Pregabalin	5.00
15	Setraline Hydrochloride	1.00
16	Topiramate	3.00
17	Valsartan	1.00
18	Isobuty1 Acetophenone	150.00
Total		190.10

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 7 locations during December, 2011 to February, 2012 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (22 µg/m³ to 39 µg/m³), PM_{2.5} (14 µg/m³ to 25 µg/m³), SO₂ (5 µg/m³ to 6.4 µg/m³) and NO_x (5.7 µg/m³ to 7.2 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.67 µg/m³, 2.797 µg/m³ and 3.907 µg/m³ with respect to PM₁₀, SO₂ and NO_x. The resultant concentrations are within the NAAQS.

Bagfilter alongwith stack of 30 m height will be provided to coal fired boiler. Adequate scrubbing system will be provided to the process vents to control process emissions viz. HCl and SO₂. Total fresh water requirement from ground water source will be 80.94 m³/day. Industrial wastewater generation will be 55.35 m³/day and segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) followed by RO. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Inorganic & evaporation salt and ETP sludge will be sent to Treatment Storage Disposal Facility (TSDF) for hazardous waste. Fly ash will be sold to brick manufacturers. Waste oil and used batteries will be sold to authorized recyclers/re-processors. Green belt will be developed in 5000 m² out of total plant area of 13081 m². Power (700 HP) will be sourced from APSEB. D.G. set (2 x 320 KVA) will be installed. HSD (100 l/day) will be used as fuel in D.G. sets. Coal (150 MTM) will be used in boiler (4 TPH).

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the A P Pollution Control Board on 23rd November, 2012. The issues raised during public hearing were regarding local employment, pollution control measures to be adopted, to construct rain water

harvesting, CSR funds etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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 coal fired boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/APPCB guidelines.
- ii) The levels of PM10, SO₂, NO_x, VOC, CO and HCl shall be monitored in ambient air.
- iii) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution should be provided to process vents to control SO₂. 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.
- 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 APPCB.
- v) Total fresh water requirement from ground water source shall not exceed 80.94 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- 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 effluent stream should be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.
- vii) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- viii) 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. The ash from boiler should be sold to brick manufacturers/cement industry.
- ix) 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 APPCB should be

obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire-fighting facilities in case of emergency.

- x) Fly ash should be stored separately as per CPCB guidelines so that it should 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 should be avoided.
- 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.
- xii) As proposed, green belt should be developed in 5000 m² out of total plant area of 13081 m².
- xiii) All the commitments made to the public during public hearing/public consultation meeting held on 23rd November, 2012 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiv) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xv) 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.

6.2.8 Expansion of Industrial Gas Manufacturing Plant (122 TPD to 207 TPD) at Khasra No. 190 to 196 and 201 to 209, Barotiwala Industrial Area, Village Kunjhal, Tehsil Barotiwala, District Solan, Himachal Pradesh by **M/s Inox Air Products Ltd.- regarding EC.**

The project authorities and their consultant (EQMS India Pvt. 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 35th Meeting of the Expert Appraisal Committee (Industry) held during 11th – 12th May, 2012 for preparation of EIA/EMP report. All the Isolated Storage & Handling of hazardous chemicals (as per threshold planning quantity indicated in column 3 of schedule 2 & 3 of MSIHC Rules 1989 amended 2000) activities is listed at 6(b) of the Schedule of EIA Notification, 2006 under category 'B' and appraised at Central level. However, due to applicability of General Condition, project is treated as category 'A' project. Interstate boundary of Haryana and Rajasthan is located within 10 Km.

M/s Inox Air Products Ltd. has proposed for expansion of Industrial Gas Manufacturing Plant (122 TPD to 207 TPD) at Khasra No.190 to 196 and 201 to 209, Barotiwala Industrial Area, Village Kunjhal, Tehsil Barotiwala, District Solan, Himachal Pradesh. Liquid Oxygen Storage Capacity is more than 200 tons and falls under the schedule of the under isolated storage category MSICH Rules 1989. Plant area is 24735 m². No national park/wild life sanctuary is located within 10 Km distance. Cost of the project is Rs. 90 Crore. The final product will be stored as per following storage norms:

S.N.	Product	Storage Tanks (MT)	Remarks
1	Liquid/Medical Oxygen	3 Tanks, 850	MAH (Rules, 1989) [Highly Reactive Substances] Threshold Quantity 200 MT (Rules-5, 7,9) & 2000 MT (Rules 10-12)
2	Liquid Nitrogen	2 Tanks, 390 MT	Not covered under MAH Rules
3	Liquid Argon	1 Tank, 65 MT	Not covered under MAH Rules

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during September, 2012 to December, 2012 and submitted data indicates as PM_{2.5} (33.6–58.0 ug/m³), PM₁₀ (53–110 ug/m³), SO₂ (6.8 – 13.5 ug/m³) and NO_x (8.9-25 ug/m³). Adequate stack height will be provided to the DG set. Water requirement from ground water source will be 430 m³/day. Effluent will be generated from cooling tower blow down, which has been estimated to be 137 m³/day. Blow down will be neutralized and used for gardening and cleaning purpose. No effluent will be discharged outside the plant premises. Sewage will be disposed off through septic tank followed by soak pit. Spent oil will be disposed off through authorized recyclers. Power requirement from Himachal Pradesh State Electricity Board will be 12.08 MW. DG set (220 KVA) will be installed. Greenbelt will be developed in 8385.6 m² out of total area 24735 m². Rain water harvesting will be installed.

Public hearing was exempted as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006.

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

- i. In-plant control and monitoring measures for checking fugitive emissions from all the vulnerable sources should be provided. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored and records maintained. The emissions should conform to the limits stipulated by the SPCB.
- ii. 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.
- iii. Total fresh water requirement from ground water source shall not exceed 430 m³/day and prior permission shall be obtained from the CGWA.
- iv. Industrial shall be treated in effluent treatment plant and treated effluent shall be used recycled/reused within factory premises.
- v. No effluent shall be discharged outside the factory premises and 'Zero' discharge concept shall be adopted.
- vi. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- vii. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.
- viii. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.
- ix. Green belt shall be developed in 33 % area to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO. Thick greenbelt with suitable plant species shall be developed around the proposed expansion.
- x. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.

6.2.9 Expansion of Organic Azo Pigments (15 TPM to 165 TPM) at Plot NO. 1704/A, 3rd Phase, GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat by M/s Anupam Colours Pvt. Ltd.- regarding EC

The project authorities and their consultant (Eco Chem Sales & Service, Surat) 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 28th Meeting of the Expert Appraisal Committee (Industry) held during 20th– 21st October, 2011 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 interstate boundary, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Anupam Colours Pvt. Ltd. have proposed for the expansion of Organic Azo Pigments (15 TPM to 165 TPM) at Plot No. 1704/A, 3rd Phase, GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat. River Damanganga is at located at a distance of 3 km. Total plant area is 5000 m². Greenbelt will be developed in 1000 m² of land. Consolidate Consent & Authorisation (CC&A) is accorded by the Gujarat Pollution Control Board vide Consent Order No.10576 dated 21st May, 2008 (p.91-95/c) for the existing products. A copy of plot transfer letter issued by GIDC vide letter No. GIDC/RM/VPI/PLT/FTO dated 24th May, 2000 is submitted. Project proponent has informed that existing unit was established in 2000 and exempted from EIA Notification, 1994. Total cost of the project after expansion is Rs. 1583.00 Lakhs. No national parks/wildlife sanctuaries, biosphere reserves are located 10 Km distance. Following products will be manufactured:

S.N.	Products	Capacity (TPM)		
		Existing	Proposed	After expansion
1	Organic Red Pigments	15.0	70.0	85.0
2	Organic Yellow Pigments	0	70.0	70.0
3	Organic Orange Pigments	0	10.0	10.0
	Total	15.0	150.0	165.0

Ambient air quality monitoring was carried out at 6 locations during October 2011 – December 2011 and submitted data indicates as PM₁₀ (54.56–86 ug/m³), SO₂ (16.52 – 37 ug/m³) and NO_x (12.50-26 ug/m³). Predicted value of ground level concentration due to proposed expansion is PM₁₀ (0.089 ug/m³), NO_x (0.068 ug/m³) and SO₂ (0.479 ug/m³). The resultant concentrations are within the NAAQS.

Stack (11 m) will be provided to gas fired Thermopak and boiler. Cyclone and bagfilter will be provided to pulveriser. Fresh water requirement from GIDC water supply will be increased from 150 m³/day to 373 m³/day after expansion. Industrial effluent generation will be increased from 115.5 m³/day to 355 m³/day after expansion and treated in ETP. Treated effluent will be discharged to CETP for final treatment and is finally disposed off to CETP inlet through GIDC underground drainage. ETP sludge will be sent to TSDF. Used oil will be sent to authorized recycler/re-processors. Process waste will be reused in the process.

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) Adequate stack height should be provided to gas fired boiler/thermopack.
- ii) The levels of PM₁₀, SO₂, NO_x, CO, NH₃, HCl, Cl₂and VOC should be monitored in ambient air.
- iii) Cyclone followed by bag filter shall be provided to pulveriser. At no time, the emission levels should go beyond the prescribed standards.

- 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 GIDC water supply should not exceed 373 m³/day and prior permission should be obtained from the concerned Authority. No ground water should be used.
- vi) Total effluent generation should not exceed 355 m³/day. Effluent should be should be treated in ETP. Treated effluent should be discharged to CETP after conforming to the standards prescribed for norms for the effluent discharge and obtaining permission from the GPCB regarding. No process effluent shall be discharged in and around the project site. Efforts shall be made to treat ammonical nitrogen in the effluent.
- vii) 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.
- viii) 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.
- ix) Green belt should be developed in in 1000 m² out of total plant area.
- x) All the recommendations made in the risk assessment report should be satisfactorily implemented.
- xi) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

6.2.10 Expansion of existing Ethyl Cellulose Unit (20 TPM) by installing Organic Chemical Plant (79.69 TPM) at Sy. No. 303/2 & 302/P, Village Abrama, Tehsil & District Valsad, Gujarat by **M/s Asha Cellulose (I) Pvt. Ltd.- regarding EC.**

The project authorities and their consultant (Precitech Laboratories) 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 28th Meeting of the Expert Appraisal Committee (Industry) held during 20th-21st October, 2011 for preparation of EIA/EMP report. All the Synthetic Organic plants outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Asha Cellulose (I) Pvt. Ltd have proposed for the expansion of existing Ethyl Cellulose Unit (20 TPM) by installing Organic Chemical Plant (79.69 TPM) at Sy. No.

303/2 & 302/P, Village Abrama, Tehsil & District Valsad, Gujarat by M/s Asha Cellulose (I) Pvt. Ltd. River Auranga and Arabian sea is at located at a distance of 0.5 km. & 12 km respectively. Total project area is 22,062 m². Expansion will be carried out in the existing campus only. No rehabilitation and resettlement is involved. Consolidate Consent & Authorization (CC&A) has been accorded by the Gujarat Pollution Control Board for the existing plant vide letter no. PC/VSD/CCA-152/31866 dated 16th November, 2007. Total cost of the project is Rs. 10.5 Crore for the proposed expansion. Rs. 1.68 Crore and Rs. 28.13 Lakh are earmarked towards capital cost and recurring cost for implementation of environmental management plan. No national park/wildlife sanctuary is located within 10 Km distance. Following will be manufactured:

S. N.	Name of the Products	Capacity (MTPM)			Remarks
		Existing	Proposed	Total after expansion	
1	Ethyl Cellulose (Aqua Process)	20	0	20	Product from both the processes shall be manufactured.
2	Ethyl Cellulose (Solvent Process)	0	79.69	79.69	
Total		20	79.69	99.69	

List of By-products

S. N.	Name of the Product	Capacity (MTPM)			Remarks
		Existing	Proposed	Total	
1	Spent Caustic (18-20%)	369.2	0	369.2	Sold to actual users

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during October, 2011 – December, 2011 and submitted data indicates PM₁₀ (52-102 ug/m³), PM_{2.5} (24-54 ug/m³), SO₂ (17-35 ug/m³) and NO_x (16-34 ug/m³). Incremental concentration due to proposed project was estimated to be PM (0.120 ug/m³), SO₂ (0.00928 ug/m³) and NO_x (1.61 ug/m³). Stack height of 30 m will be provided to the oil/gas fired boiler. Stack height of 20 m will be provided to the oil/gas fired air generator. Bagfilter will be provided to additional spin flash dryers. Water requirement will be increased from 52.7 m³/day to 287.5 m³/day after expansion. Fresh water requirement from ground water source will be met from 52.7 m³/day and balance water requirement will be met from recycled water. Industrial effluent generation will be increased from 38 m³/day to 240.5 m³/day after expansion. Effluent will be treated in the ETP comprising primary, secondary and tertiary treatment (RO). RO rejects will be evaporated in MEE and salt from MEE will be disposed off into TSDF. The RO permeates and MEE condensate will be recycled. No effluent will be discharged outside the plant premises.

ETP waste (220.47 TPA), process waste (2,816.4 TPA), distillation residue (47.19 TPA) etc. will be sent to TSDF. Spent caustic (4430.4 TPA) will be sold to actual users. Solid/hazardous effluent will be disposed into TSDF site of M/s VWEMCL, GIDC, Vapi, M/s GEPIL, Surat and M/s BEIL, Ankleshwar and membership is already obtained. Mixed solvent will be sold to authorized recyclers.

Out of 22,062 m², green belt will be developed in 6,325 m² after expansion. Acoustic enclosures will be provided to D.G. sets. Total power requirement will be 1500

KVA. After expansion, LDO (1.11 KLPD) or natural gas (1370 SCM/day) will be used as fuel. The Committee noted that part of the project area is in CRZ III.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 15th December, 2012. The issues raised during public hearing were regarding water requirement, consumption of solvent, treatment cost of ETP, local employment etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee desired following additional information:

- I. Monitoring report from GPCB regarding existing unit to be submitted.
- II. CRZ clearance/ recommendation from State Coastal Zone Management Authority.

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

6.2.11 Expansion of Single Super Phosphate Plant (100 TPD) by adding Triple super phosphate (300 TPD) at Plot No. 26 a & 27 A, 1DA Village Putlampali District Kodapa, Andhra Pradesh by M/s Agri Green Fertilizers & Chemicals (P) Ltd. - regarding EC.

The project authorities and their consultant (Team Labs and Consultants, Hyderabad) 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 fertilizer plant except single super phosphate plant is listed at S.N. 5(a) under category 'A' and appraised at Central level.

M/s Agri Green Fertilizers & Chemicals (P) Ltd have proposed for expansion of Single Super Phosphate Plant (100 TPD) by adding Triple super phosphate (300 TPD) at Plot NO. 26 A & 27A, 1DA village Putlampalli District Kodapa, Andhra Pradesh. Total project cost is Rs. 40 lakhs. Total plot area is 1.48 acres. Out of which greenbelt will be developed in 0.62 acre. Penneru River is flowing at a distance of 6 km. Karamalopalle RF is located at a distance of 2km. Palkonda & vangmella RF is located at a distance of 0.75 km. Following products will be manufactured:

S.N.	Products	Consented Capacity (TPD)	Proposed Capacity (TPD)	Total Capacity (TPD)
1	Single Super Phosphate	200*	--	100
2	Triple Super Phosphate	--	300	300
Total (Campaign Basis)				300

* Project proponent has informed that consent to operate is obtained for 100 TPD capacity and Consent for establishment is obtained for 200 TPD. The production will be on campaign basis, either SSP or TSP is manufactured on any given day.

Rock phosphate from Chennai Port, Sulphuric acid from Sri Rayalaseema Alkalies and Allied Chemicals Ltd., Kurnool and Phosphoric Acid from Sterlite India Pvt. Ltd., Tamil Nadu will be used as raw materials.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during March, 2012 – June 2012 and submitted data indicates PM_{10} (23- 39 $\mu\text{g}/\text{m}^3$), $PM_{2.5}$ (10-19 $\mu\text{g}/\text{m}^3$), SO_2 (9-14 $\mu\text{g}/\text{m}^3$) and NO_x (9- 15 $\mu\text{g}/\text{m}^3$). Incremental concentration due to proposed project was estimated to be PM_{10} (0.0025 $\mu\text{g}/\text{m}^3$), SO_2 (0.0143 $\mu\text{g}/\text{m}^3$) and NO_x (0.0183 $\mu\text{g}/\text{m}^3$). The emissions from mixing, granulation and den are sent to cyclone followed by 3 stage ventury scrubber to mitigate HF emissions. The scrubbing media will be sent to a settling tank and reused for dilution of acids in process. Solid from settling tank will be mixed with the product before granulation. Water requirement from APIIC water supply will be increased from 33 m^3/day to 37 m^3/day after expansion. Industrial effluent generation will be 30 m^3/day and used as dilution water for the dilution of sulphuric acid after settling tank. Waste oil/used batteries will be sent to the Authorized recyclers.

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:

1. As proposed, HF gases should be passed through three stage– ventury scrubber before discharging into atmosphere through adequate stack height to control fluorine content within 15 mg/m^3 . After three stages, if fluorine content in emission is meeting the prescribed norms then efficiency of scrubber should be improved by adding additional stage of scrubber.
2. Total ground water consumption from APIIC water supply should not exceed 37 m^3/day and prior permission should be obtained from competent authority.
3. As proposed, industrial effluent should be treated in effluent treatment plant (ETP) comprising primary treatment. Treated effluent shall be used for dilution of sulfuric acid. Gypsum storage tank should be provided with acid resistant lining.
4. No treated process effluent should be discharged outside the premises and 'Zero' discharge should be ensured.
5. As proposed, green belt should be developed in 33%. as per the CPCB guidelines to mitigate the effect of fugitive emissions.
6. Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
7. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such

program shall be ensured accordingly in a time bound manner.

8. 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.

6.2.12 Propylene Derivatives Petrochemical Project (PDPP) at Village Puthencruz/Thiruvankulam, Tehsil Kunnathanadu, District Ernakulam, Kerala by Joint Venture of M/s BPCL-Kochi Refinery and LG Chem, South Korea-regarding TOR

The project authorities and their consultant (Engineers India Ltd.) 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 petro-chemical complexes are listed at S.N. 5(c) under category 'A' and appraised at Central level.

Joint Venture of M/s BPCL-Kochi Refinery and LG Chem, South Korea have of proposed for setting up of Propylene Derivatives Petrochemical Project (PDPP) at Village Puthencruz/Thiruvankulam, Tehsil Kunnathanadu, District Ernakulam, Kerala. Total cost of the project is Rs. 4500 Crore. Plant area is 113 acres. Polymer grade propylene (273 TMT) will be supplied by the BPCL-Kochi Refinery after implementation of the integrated refinery expansion project (IREP) at Kochi, Kerala. Chitrapuza River (1.0 Km), Panar (1.6 Km) and Kaitapuzha Koyal (5.7 Km) are located within 10 Km distance. No national park/wildlife sanctuary/reserve/protected forests are located within 10 km. Following products will be manufactured:

S.N.	Product	Quantity (TPA)
1	Glacial Acrylic Acid (GAA)	26000
2	Super Absorbent Polymer (SAP)	80000
3	Butyl Acrylate	90000
4	2-Ethyl Hexyl Acrylate	40000
5	N-Butanol	65000
6	2 Ethyl-Hexanol	60000
7	Iso-Butanol	25000
	Total	386000

Water requirement will be 5000 m³/day, which will be met from the already allocated quantity of water to BPCL-KR by Government of Kerala. Wastewater generation will be 50 m³/hr and treated in a new wastewater treatment plant, which is under development as part of BPCL-KR's IREP Project. Metal based catalyst will be sent to authorized recyclers/re-processors. Metal based proprietary catalyst will be sent to LG Chem, S Korea for recovery of metals. Greenbelt will be developed in 48 acres out of 113 acres of land. R & R plan as approved by District Collector will be strictly adhered and compensation will be provided.

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, Consent to Operate and Authorization accorded by the KSPCB.
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 of raw material and products.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. 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.
22. 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, VOCs including HC (methane and non-methane) 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.
23. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.

25. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
28. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
29. 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.
30. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
31. Attempt to be made for reduction for usage of water.
32. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
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. Action plan for the disposal of fly ash generated from boiler shall be included.
36. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
37. 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.
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. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
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. 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.
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. 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) 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 Kerala State 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 report. The final EIA/EMP alongwith public hearing should be submitted to the Ministry for obtaining environmental clearance.

6.2.13 Gold Ore Processing Plant (2000 TPD) at Village Ganajur, Taluq and District Haveri in Karnataka by M/s Deccan Exploration Services Pvt. Ltd. - regarding TORs.

The project authorities and their consultant (B.S. Envi.-Tech Pvt. Ltd.) 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. The Ore Processing 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.

M/s Deccan Exploration Services Pvt. Ltd. have proposed for setting up of Gold Ore Processing Plant (2000 TPD) at Village Ganajur, Taluq and District Haveri in Karnataka. Total plant area is 38.4 ha. Total cost of project is Rs. 180 Crore. Ore will be sourced from Gold ore mine located at a distance of 1.5 Km and transported through conveyor. For mining activities, application for award of TOR has been filed in SEIAA, Karnataka. Varada River is flowing at a distance of 5 Km. Karajgi RF is located at a distance of 1.3 Km. ton control fugitive emissions, covered sheds for ore storage will be provided and closed bins. Dry fog dust suppression system (based on sprinkling of water mixed with compressed air) will be installed at Crushers, transfer point of all conveyors for ore handling. Gold ore, Sodium Cyanide, lime, hot caustic cyanide, HNO₃, activated carbon, Cynokil and steel wool will be used as raw materials. Water requirement from Kolar- Kalaur Barrage build across Varda River will be 3000 m³/day. Effluent in the form of spent pulp will be sent to ETP for treatment of cyanide. Thickened and treated tailing will be pumped to tailing dump area. Impervious lining alongwith leachate pits will be provided to tailing dump. Power requirement will be 6 MW and sourced from HESCOM. DG sets will be installed as emergency power back up.

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

1. Executive summary of the project.
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP.
4. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
5. 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.

6. 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.
7. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing landuse/landcover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
8. A list of industries within 10 km radius of the plant area.
9. Details and classification of total land (identified and acquired) should be included.
10. Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. 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".
12. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included. Sulphide management plan should be included. Plan for taking up R & D project on solid waste minimisation and management to be submitted.
13. Mass balance for the raw material and products should be included.
14. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
15. 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.
16. 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.
17. 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.
18. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
19. Air Quality Impact Prediction Modelling based on ISCST-3 or the latest models.
20. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.

21. 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.

22. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.

23. 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.

24. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.

25. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.

26. A note on the impact of drawl of water on the nearby River during lean season.

27. Action plan for rainwater harvesting measures.

28. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.

29. 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.

30. Pre-treatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.

31. 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.

32. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly tailing from all the sources should also be included.

33. Identification and details of land to be used for all type of tailing disposal in the secured land fill as per CPCB guidelines should be included.

34. 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 tailing.

35. Provision of Toxic Chemical Leachability Potential (TCLP) test for the tailing and its end use should be included.

36. Action plan for the green belt development plan in 33 % area should be included.

37. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.

38. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.

39. 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 preplacement 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.

40. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing proceedings and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.

41. Total capital cost and recurring cost/annum for environmental pollution control measures should also be included.

42. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.

43. 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. 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 alongwith 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 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 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 raised alongwith the replies 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.

6.2.14 Expansion of Synthetic Organic Chemicals (1067 MTPM to 4350 MTPM) at Block No. 133, Sy. NO. 133 (Parte), 129,130,131, 134, 136, 137, 138, 140, 141, 201, 202, 204, 206, 207, 208, Village Samlaya, Taluka Savli, District Vadodara, Gujarat by **M/s Jubilant Life Science Ltd. regarding EC.**

The project authorities and their consultant (Kadam Environmental Consultants) 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 26th Meeting of the Expert Appraisal Committee (Industry) held during 17th-18th August, 2011 for preparation of EIA/EMP report. All the Synthetic Organic Chemicals located outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Jubilant Life Science Ltd. has proposed for expansion of synthetic organic chemicals (i.e. Animal Nutrition, Premix and Feed Additives) (1067 MTPM to 4350 MTPM) at Village Samlaya, Tehsil Savli, District Vadodara, Gujarat. No forest Land is involved. Total plant area is 3,62,500 m². Out of which, greenbelt will be developed in 49261 m² of land. Total project cost is Rs. 60.00 Crore. Rs. 114 lakhs and Rs 41.77 Lakh are earmarked toward capital cost and recurring cost per annum for implementation of environment management plan. Mini River is flowing at a distance of 0.76 km. No national park/wildlife sanctuary/tiger reserve/elephant reserve is located within 10 km. Following products will be manufactured:-

S. N.	Product falling under one group (Proposed common group)	Name of the Products	Existing Products (MTPM)	Proposed Products (MTPM)	Final Products (MTPM)
EC Product					
1	Ethoxylate of Nonyl Phenol, fatty Acid Fatty Alcohol, DEG & Castor Oil, Choline chloride (Liquid Choline Chloride 75%,	Ethoxylate of Nonyl phenol, fatty Acid Fatty Alcohol, DEG & Castor Oil	200.00	0.00	3400.00
2	Oil, Choline chloride (Liquid Choline Chloride 75%,	Liquid Choline Chloride 75%	667.00	1333.00	
3	Acidifier Liquid,	Acidifier Liquid	40.00	460.00	
4	Acidifier Liquid, Chloromequate Chloride (Choline dichloride)	Chloromequate Chloride (Choline dichloride) 50% to 67.5%	150.00	450.00	

5	50% to 67.5%,	Ethoxylates PCI3 (Triss)	10.00	40.00	
6	Ethoxylate PCL3 (Triss) etc.	Choline Chloride Crystals	0	50	
7	Betaine	Betaine	0	500	500.00
8	2 – Vinyl Pyridine	2 – Vinyl Pyridine	0	500	500.00
		Total	1067	3333	4400
Non EC Product					
8	Choline chloride Dry, (Dry Choline chloride, Acidifier Dry etc.	Dry Choline Chloride	833	1167	2500
9		Acidifier (Dry Base)	50	450	
10	Premix (Animal Feed – Premix, Feed Emulsifier of Castor oil, Liquid formulation and tonics etc.	Animal Feed – Premix	416	834	3550
11		Feed Emulsifier ethoxylates of Castor oil	0	400	
12		Feed Emulsifier lysolecithin	0	400	
13		Chelated minerals for feed and food applications	0	500	
14		Liquid Formulations and tonics	0	500	
15	Encapsulated products for livestock, poultry and swine	0	500		
16	Carrier	Corn Cob Carrier	333	517	850
17	EOCO2 (Ethylene Oxide & Carbon Dioxide)	EOCO2 (Ethylene Oxide & Carbon Dioxide)	150	150	300
18	Oil Field Chemicals	Oil Field Chemicals	120	0	120
19	Choline Chloride Crystals	Choline Chloride Crystals	0	50	50
20	Silica 50%	Silica 50%	0	500	500
		Sub total	1902	5968	7870
Grand Total			2969	9251	12220

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during October-December, 2011 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (44 µg/m³ to 91 µg/m³), SO₂ (8.0 µg/m³ to 9.5 µg/m³) and NO_x (10.0 µg/m³ to 14.3 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 10 µg/m³, 7.2 µg/m³ and 3.8 µg/m³ with respect to PM₁₀, SO₂ and NO_x. The resultant concentrations are within the NAAQS. Cyclone separator and water scrubber and stack height of 30 m will be provided to saw dust/agro waste fired steam boiler and hot air generator. Cyclone separator/bagfilter and open type dust collector will be attached to the stack connected to blower. Cyclone separator/bagfilter will be provided to universal grinder-1 (Premix Plant). Multicyclone separator will be provided to dry exhaust plant. Emergency scrubber will be provided to vent to control CDC emissions. Total water requirement from ground water source will be increased from 197.7 m³/day to 355.2 m³/day after expansion. Industrial effluent generation will be increased from 59.9 m³/day to 80.0 m³/day after expansion. Industrial effluent will be treated in ETP and treated effluent will be sent to CETP for further treatment. ETP sludge and process waste will be sent to TSDF. Used oil will be sold to authorized

recyclers/re-processors. Green belt will be developed in 49, 261 m² out of plant area of 1,22,221 m².

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 16th May, 2012. The issues raised during public hearing were regarding CSR being carried out, impact of proposed plant on land, local employment etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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

1. Bag filter alongwith stack of adequate height should be provided to saw dust/agro waste fired boiler.
2. 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. The emissions should conform to the limits imposed by GPCB.
3. Total fresh water requirement from ground water source should not exceed 355.2 m³/day and prior permission shall be obtained from the CGWA.
4. Industrial effluent shall not exceed 80.0 m³/day. Industrial effluent will be treated in ETP and treated effluent should be discharged to CETP after conforming to the standards prescribed for norms for the effluent discharge and obtaining permission from the GPCB regarding. No process effluent shall be discharged in and around the project site. Water quality of treated effluent from ETP shall be monitored regularly.
5. Treated effluent shall be passed through guard pond. Online pH meter, flow meter and TOC analyzer shall be installed.
6. Solvent management should be as follows :
 - i. Reactor should be connected to chilled brine condenser system
 - ii. Reactor and solvent handling pump should have mechanical seals to prevent leakages.
 - iii. The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - iv. Solvents should be stored in a separate space specified with all safety measures.
 - v. Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
 - vi. Entire plant should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

7. Hazardous chemicals should be stored in tanks in tank farms, drums, carboys etc. Flame arresters should be provided on tank farm. Solvent transfer should be by pumps.
8. The company shall 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 shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire fighting facilities in case of emergency.
9. The company shall comply with the recommendations made in the EIA/EMP/Risk assessment report. Risk assessment shall be included in the safety Manual.
10. 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.
11. All the commitments made to the public during public hearing/public consultation meeting held on 16th May, 2012 should be satisfactorily implemented and adequate budget provision should be made accordingly.
12. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on earlier Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
13. 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.

6.2.15 Expansion of Integrated Sugar Complex at Village Hullati & Alloli, Taluk Haliyal, District Uttara Kannada, Karnataka by **M/s Parrays Sugar Industries 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 molasses based distillery and cane juice/non-molasses based distillery (>30 KLD) are listed at S.N. 5(g) (i) (ii) under category 'A' and appraised at Central level.

M/s Parrays Sugar Industries Ltd. have proposed for Expansion of Integrated Sugar Complex at Village Hullati & Alloli, Taluk Haliyal, District Uttaru Kannada, Karnataka. Total area of the existing plant is 226 acres and proposed expansion will be taken up in the existing plant premises only. Total project cost is Rs. 125 Crore. No national parks/wild life sanctuaries are located within 10 km distance. A few reserve forests are located within 10 km distance. Tattihala River is flowing at a distance of 2.2 Km. Following are the details of the existing and proposed unit:

S.N.	Unit	Capacity		
		Existing	Expansion	Total
1	Sugar	4800 TCD	1200 TCD	6000 TCD
2	Co-generation Power Plant	24 MW	10 MW	34 MW
3	Distillery	45 KLPD	45 KLPD	90 KLPD
4	Power from Incineration Boiler	---	3 MW	3 MW

Power plant will be operated based on bagasse during on season and imported coal will be used during off season. Bagfilter alongwith stack of 30m will be provided to the incineration boiler to bring down the particular matter within 50 mg/Nm³. ESP alongwith stack of adequate height will be provided to boiler (50 TPH). Total water requirement will be 4316 m³/day after expansion. Permission for drawl of water from Kali River is upto 3600 m³/day. Effluent generation from sugar unit will be 100 litre perper ton of cane crushed. Effluent will be treated in ETP. Spent wash from distillery will be concentrated in multiple effect evaporators (MEE) to 60 % solids and then concentrated spent wash will be incinerated alongwith 25 TPH incineration boiler. No effluent will be discharged outside the plant premises. The Committee noted that environmental clearance was obtained vide MoEF letter no. J-11011/47/2007-IA II (I) dated 18th October, 2007 for the existing unit.

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

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. Detailed breakup of the land area alongwith latest photograph of the area.
4. Present land use based on satellite imagery.
5. Details of site alongwith photographs and information related to environmental setting within 10 km radius of the project site.
6. Regulatory framework.
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. Information regarding eco-sensitive area such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
9. List of existing distillery units in the area alongwith their capacity.
10. Number of working days of the distillery unit, cogeneration plant and sugar unit.
11. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.

12. Details of raw material and source of raw material including cereal grains. Availability of molasses and calculation for the molasses requirement in the proposed manufacturing unit.
13. Manufacturing process details of sugar plant, distillery plant and CPP alongwith process flow chart.
14. Sources and quantity of fuel for the boiler. Management of bagasse during the lean season. Details of bagasse storage facility.
15. 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.
16. 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 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.
17. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
18. An action plan to control and monitor secondary fugitive emissions from all the sources.
19. Details of the use of steam from the boiler.
20. Ground water quality around proposed spent wash storage lagoon and the project area. HDPE-lined lagoon should not have more than 30 days storage capacity.
21. Details of water requirement, wastewater generation, water balance chart for sugar, distillery and co-generation plant. Measures for water conservation by recycling and reuse to minimize the fresh water requirement.
22. Source of water supply and 'Permission' from concerned Department/Authority for the drawl of water. Impact of drawl of water on other user should be assessed and included.
23. Measures for conservation and reuse of water should be maximized so as to keep net water consumption to a minimum. Recycle & reuse treated water in cooling tower
24. Hydro-geological study of the area for availability of ground water.
25. Proposed effluent treatment system for sugar, distillery and co-generation plant. Scheme for achieving 'zero' discharge for distillery effluent and 100 m³/Ton of sugar regarding water discharge.
26. Details of solid waste management including management plan of disposal of boiler ash.
27. Sufficient land should be earmarked for bio-composting activity and details of bio-composting lining as per CPCB guidelines.
28. Odour management plan should be prepared to control odour from molasses based distillery.
29. Green belt development as per the CPCB guidelines. Layout of greenbelt plant to be submitted.
30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. 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.
33. 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.

34. Details of TOC analyzer to be installed to monitor TOC in the treated effluent.
35. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
36. Alcohol storage and handling area with fire fighting facility as per norms.
37. Provision of foam system for fire fighting to control fire from the alcohol storage tank.
38. 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.
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 should 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 should be provided.
43. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
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. Action plan for post-project environmental monitoring.
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 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 alongwith 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. 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.

The Committee decided that the project proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Karnataka 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 report should be submitted to the Ministry for obtaining environmental clearance.

6.2.16 Clinker Production, Cement Plant Along With Captive Mine And Waste Heat Recovery Power Generation at Village Ras, District Pali, Rajasthan by M/s Shree Cement Ltd.- regarding TORs.

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

6.2.17 Bulk Drugs, Intermediates and Synthetic Organic Chemical Manufacturing Unit at Village Thippayapalli, District Kurnool, Andhra Pradesh by M/s CSRmed Pharmaceuticals Pvt. Ltd. - regarding TORs

The project authorities and their consultant (Team Labs and Consultants) 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 Synthetic Organic Chemicals Industry (bulk drugs and 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 CSRmed Pharmaceuticals Pvt. Ltd. have proposed for setting up of Bulk Drugs, Intermediates and Synthetic Organic Chemical Manufacturing Unit at Village Thippayapalli, District Kurnool, Andhra Pradesh. Total plant area is 11.96 acres. Out of which greenbelt will developed in 4.0 acres. Cost of project is Rs. 9.5 Crore. Water

bodies namely Kommu cheruvu (3.9 Km), Thippayapalli Cheruvu (1.0 Km) and Brahamanapalle Cheruvu (2.4 Km) are located within 10 km distance. Following products will be manufactured :

S.N.	Product	Quantity (TPM)	Product category
Bulk Drugs			
1	Losatran Potassium	3.0	Bulk Drug
2	Pregabalin	3.45	Bulk Drug
3	Fluconozole	3.0	Bulk Drug
4	Ketorolac tromethamine	3.0	Bulk Drug
5	Ondensetron Hydrochloride di Hydrate	1.5	Bulk Drug
6	Astrovastatin Cacium	3.0	Bulk Drug
7	Olanzapine	2.1	Bulk Drug
8	Linezolid	1.8	Bulk Drug
9	Sumatriptan	0.6	Bulk Drug
10	Quetiapine Fumarate	3.0	Bulk Drug
11	Dromedrone HCL	0.9	Bulk Drug
	Total Bulk Drugs	25.35	
Drug intermediates			
1	CIS + Hydroxy Lactum	15.0	Drug intermediate
2	Pramipexole Hydro Chloride Intermediate	1.80	Drug intermediate
	Total Drug Intermediates	16.8	
Multipurpose chemicals			
1	Sodium Methoxide	90.0	Chemical
	Total Multipurpose chemicals	90.0	
Custom Synthesis products & R&D products			
1	Drugs and Intermediates in Pilot Scale	0.05	

Cyclone separator alongwith bagfilter will be coal/husk fired boilers. Scrubbers will be provided to control process emissions viz. HBr and SO₂. Total water requirement will 115 m³/day. Out which, fresh water requirement (56.5 m³/day) will be met from ground water source. Industrial effluent generation will be 71 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Ash from boiler will be sold to brick manufacturers. Evaporator salts, inorganic residue and ETP sludge will be sent to TSDF. Solvent will be sent to recycler. Waste oil and used batteries will be sent to authorized recyclers.

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

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.

5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
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.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. 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.
18. 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 including HC and VOCs 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.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. 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.
26. Source and permission for the drawl of 56.5 m³/day water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged.
27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. 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.

30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. 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.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
38. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
39. 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.
40. 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.
41. Socio-economic development activities should be in place.
42. Note on compliance to the recommendations mentioned in the CREP guidelines.
43. 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.
44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
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 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.
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 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. 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 submitted to the Ministry for obtaining environmental clearance.

6.2.18 Expansion of Molasses based Distillery Unit (from 60 KLPD to 150 KLPD) at Village Udaikulam, District Sivaganga, Tamil Nadu by M/s E.I.D-Parry (India) 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 molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s E.I.D-Parry (India) Ltd. have proposed for the expansion of molasses based Distillery Unit (from 60 KLPD to 150 KLPD) at Village Udaikulam, District Sivaganga, Tamil Nadu. Total plant area is 26 acres. Out of which greenbelt will be developed in 7.5 acres of land. The cost of project is Rs. 90 Crore. No forest land is involved. No court case/litigation is pending against the project. Vaigai River is flowing at a distance of 14 Km. Following products will be manufactured:

S.N.	Product	Existing Production Capacity	Production capacity after expansion
1	Rectified spirit from cane molasses (or)	1860 KLPM	4650 KLPM
2	Extra Neutral Alcohol from Molasses /RS (or)	1860 KLPM	4650 KLPM
3	Absolute Alcohol from RS	1860 KLPM	4650 KLPM

Bagfilter alongwith stack height of 60 m will be provided to boiler (60 TPH). Spent wash will be evaporated in MEE and concentrated spent wash will be incinerated in incineration boiler to achieve zero discharge. Bagasse ash will be used as manure.

Yeast sludge will be burnt in boiler alongwith spent wash. Used oil will be sent to authorized recycler.

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. Detailed breakup of the land area alongwith latest photograph of the area.
4. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. A copy of lease deed or allotment letter, if land is already acquired.
7. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the TNPCB.
8. 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.
9. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
10. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
11. Details of proposed products along with manufacturing capacity.
12. Number of working days of the distillery unit.
13. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures. Capital cost shall be reviewed as seems to be very high.
14. Details of raw materials, its source with availability of all raw materials including cereal grains requirement.
15. Sources and quantity of fuel (rice husk/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.
16. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
17. 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.
18. 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.
19. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
20. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
21. Details of the use of steam from the boiler.

22. Ground water quality around proposed spent wash storage lagoon and the project area.
23. Details of water requirement, water balance chart for molasses based Distillery. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
24. Source of water supply and permission of withdrawal of water from Competent Authority.
25. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) as well as domestic sewage and scheme for achieving zero discharge.
26. Spent wash generation should not exceed 8 KL/KL of alcohol production. Details of the spent wash treatment for molasses based distillery based distillery.
27. Capacity for spent wash holding tank and action plan to control ground water pollution.
28. Layout for storage of bagasse/biomass/coal.
29. Details of solid waste management including management of boiler ash.
30. Green belt development as per the CPCB guidelines.
31. List of flora and fauna in the study area.
32. Noise levels monitoring at five locations within the study area.
33. 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.
34. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
35. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
36. Alcohol storage and handling area fire fighting facility as per norms.
37. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
38. 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.
39. Details of occupational health surveillance programme.
40. Details of socio-economic welfare activities.
41. 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.
42. Action plan for post-project environmental monitoring.
43. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
44. 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.
45. 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 alongwith 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 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 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 rose along with the replies 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.

6.2.19 Drug Manufacturing Unit at RIICO Industrial Area, Jaipur, Rajasthan by M/s Otsuka Chemical (India) Ltd. – **Validity extension of Environmental Clearance.**

Project proponent has informed that environmental clearance was granted by the Ministry vide their letter no. J-11011/520/2007-IA.II (I) dated 14th January, 2008 for Drug Manufacturing Unit at RIICO Industrial Area, Jaipur, Rajasthan by M/s Otsuka Chemical (India) Ltd.

Now project proponent has informed that the existing environmental clearance was valid upto 13th January, 2013 and requested for extend the validity for another 5 years. Project proponent informed that delay in the implementation of the proposed project was due to unforeseen delay in grant of CTE. Now, construction of civil unit is in progress. Expected commencement of the production will be from April, 2014.

The Committee recommended the project proposal to extend the validity of environmental clearance for another 5 years subject to following additional specific condition

6.2.20 Expansion of Cement Grinding Unit at Village Akabarpur oud, District Haridwar, Uttarakhand by **M/s Shree Cement Ltd.-regarding TORs**

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

6.2.21 Proposed Beneficiation and Pelletization Plant at Village Mellikere, Tehsil & District Koppal, Karnataka by M/s Rajvardhan Industries Pvt. Ltd. **regarding TORs**

The project authorities and their consultant (Metamorphosis) 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. The primary metallurgical industry is listed at S. No. 3(a) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Rajvardhan Industries Pvt. Ltd. have proposed for setting up of Beneficiation (1.6 MTPA) and Pelletization Plant (1.2 MTPA) at Village Mellikere, District Koppal, Karnataka. Total plot area is 34.46 acres. Tungabhadra back water is flowing at a distance of 2 km. Total project cost is Rs. 225 Crore. No forest land is involved. No court case/litigation is pending against the project. Iron ore (4040 TPD), coal (160 TPD) and Bentonite (28 TPD) will be used as raw materials. Raw material will be procured from mines operated by RIPL, which are located in Bellary District. Water requirement from ground water source will be 1200 m³/day. Power requirement will be 11755 KVA and sourced from State Electricity Board.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP.
4. Iron ore and Coal linkage documents.
5. A copy of the mutual agreement for land acquisition signed with land oustees.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
7. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
9. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
10. Revised project area and layout plan shall be submitted after exclusion of the project area on one side of the nalah/drainage passing through the project site and maintaining 33% of green belt.
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. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.

13. Details and classification of total land (identified and acquired) 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 from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
16. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
17. A list of industries containing name and type in 25 km radius should be incorporated.
18. Residential colony should be located in upwind direction.
19. 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".
20. 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.
21. Action plan for excavation and muck disposal during construction phase.
22. 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.
23. Manufacturing process details for all the plants should be included.
24. Mass balance for the raw material and products should be included.
25. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
26. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
27. 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.
28. 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.
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 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.
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 modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
 - i) Emissions (g/second) with and without the air pollution control measures
 - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
 - iii) Model input options for terrain, plume rise, deposition etc.
 - iv) Print-out of model input and output on hourly and daily average basis
 - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
 - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
 - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
 - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
 - ix) Graphs of monthly average daily concentration with down-wind distance
 - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
 - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
35. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
36. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
37. One season data for gaseous emissions other than monsoon season is necessary.
38. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
39. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
40. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
41. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
42. Ground water modeling showing the pathways of the pollutants should be included
43. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
44. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the

ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.

45. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
46. A note on the impact of drawl of water on the nearby River during lean season.
47. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
48. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
49. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
50. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
51. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
52. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
53. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
54. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
55. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
56. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
57. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.
58. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
59. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
60. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.

61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
63. Occupational health:
 - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - c) Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
 - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
64. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
65. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
66. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
67. 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.
68. 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.
69. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

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

6.2.22 Bulk Drug Manufacturing Unit at Village Tukkapuram, Mandal Bhongir, District Nalgonda, AP by **M/s Denisco Chemicals Pvt. Ltd. Unit II -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 Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A'. and appraised at Central level.

M/s Denisco Chemicals Pvt. Ltd. Unit II have proposed for setting up of Bulk Drug Manufacturing Unit at Village Tukkapuram, Mandal Bhongir, District Nalgonda, AP. Plant area will be 6.19 ha. out of which greenbelt will be developed in 2.22 ha. Cost of the project is Rs. 16.2 Crores. Rs. 2.55 Crore and Rs. 0.26 Crore are earmarked towards capital cost and recurring cost per annum for pollution control measures. Chinnaeru River is flowing at a distance of 5.7 Km. Following products will be manufactured:

S.N.	Description	Quantity (TPA)	Therapeutic Category
Proposed Bulk Drugs			
1	Montelukast Sodium	48	Antiasthmatic
2	Venlafaxine Hydrochloride	60	Antidepressant
3	Donepexil Hydrochloride	60	Nootropic
4	Sertraline Hydrochloride	60	Antifungal
5	Terbinafine Hydrochloride	60	Antidepressant
Proposed Bulk Drug Intermediates			Name of the Bulk Drug
6	Phenyl Boronic Acid	12	Simvastatin
7	2-Bromo-4-cyano Acetophenone	6	Ravuconazole
8	3-Amino Phenyl Acetylene	6	Erlotiniv
9	2-Bromo Ethyl Amine Hydrobromide	6	Altanserin
10	Phenylchloro thiono Formate	6	Cladribine
11	Pyrrole-2-Carboxaldehyde		Lixivaptan
12	5-Amino Isoquinoline	6	Taprizosin
13	Lepidine (4-Methyl Quinoline)	6	Fine Chemical
14	Pyridine- 2, 4-Dicarboxylic Acid	6	Fine Chemical
15	a-Bromo thiophene -2- Carboxylic Acid	6	Spizofurone
16	5-Bromo thiophene-2- Carboxylic Acid	6	Fine Chemical
17	2-Bromo-5Benzyloxy-4-Methoxy Benzoic Acid	6	Galanthamine

Maximum on Campaign basis (4 products at a time)	240 TPA	
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S.N.	By-Product	Quantity (TPA)	By-Product From
1	Alpha Pinene	44.2	Montelukast Sodium
2	Methoxy Ethanol	40.8	Donepezil Hydrochloride
3	Alluminum Hydroxide gel	270.3 (222.6 + 47.7)	Donepezil Hydrochloride & 5-Bromothiophene-2- carboxylic acid
Total by Product		355.3	

Multicyclone separator followed by bagfilter will be provided to coal fired boiler (5 TPH). Scrubbers will be provided to control process emissions. Water requirement from ground water source will be 113 m³/day. Industrial effluent generation will be 37.5 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Inorganic waste & evaporation salts and ETP sludge will be sent to TSDF.

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

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
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.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.

17. 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.
18. 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 including HC and VOCs 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.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, if any along with control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. 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.
26. Source and permission for the drawl of 113 m³/day water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged.
27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. 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.
30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. Risk assessment for storage for chemicals/solvents.
36. Material safety data sheet of chemicals to be submitted.
37. An action plan to develop green belt in 33 % area.
38. 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.
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 should 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 should be provided.
 43. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
 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 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.
 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 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. 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 submitted to the Ministry for obtaining environmental clearance.

6.2.23 Molasses based Distillery (45 KLPD) at Village Nimbal (BK), Tehsil Indi, District Bijapur, Karnataka by **M/s M. S Patil Sugars 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 molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s M. S Patil Sugars Ltd. have proposed for setting up of molasses based Distillery (45 KLPD) at Village Nimbal (BK), Tehsil Indi, District Bijapur, Karnataka. Distillery unit is proposed in the existing premises of sugar (5000 TCD) and cogen power plant (19 MW). Environment clearance for sugar plant of 5000 TCD and Cogen plant (19 MW) has been obtained from SEIAA, Karnataka. Distillery plant will be operated for 270 days. Molasses will be sourced from the existing sugar unit and procured from outside during off season. Nearest water body is Hasur Halla, which is located at a distance of 4 Km. Total area of plot is 304260 m². Cost of project is Rs. 50 Crore. Rs. 6 Crore is earmarked towards capital cost for pollution control measure. Mulitcyclone followed by bafilter will be provided to bio gas/biomass fired boiler. Water requirement will be 450 m³/day and sourced from River Bhima. Spent wash generation will be 8 KL per KI of alcohol produced. Spent wash will be treated in biomethanisation unit and concentrated in MEE. Concentrated spent wash will be burned in the incineration boiler. Yeast sludge will be bio-composted.

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

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. Detailed breakup of the land area alongwith latest photograph of the area.
4. Present land use based on satellite imagery.
5. Details of site alongwith photographs and information related to environmental setting within 10 km radius of the project site.
6. Regulatory framework.

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. Information regarding eco-sensitive area such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
9. List of existing distillery units in the area alongwith their capacity.
10. Number of working days of the distillery unit.
11. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
12. Details of raw material and source of raw material including cereal grains. Availability of molasses and calculation for the molasses requirement in the proposed manufacturing unit.
13. Manufacturing process details of distillery plant and CPP alongwith process flow chart.
14. Sources and quantity of fuel for the boiler. Management of bagasse during the lean season. Details of bagasse storage facility.
15. 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.
16. 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 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.
17. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
18. An action plan to control and monitor secondary fugitive emissions from all the sources.
19. Details of the use of steam from the boiler.
20. Ground water quality around proposed spent wash storage lagoon and the project area. HDPE-lined lagoon should not have more than 30 days storage capacity.
21. Details of water requirement, wastewater generation, water balance chart for sugar, distillery and co-generation plant. Measures for water conservation by recycling and reuse to minimize the fresh water requirement.
22. Source of water supply and 'Permission' from concerned Department/Authority for the drawl of water. Impact of drawl of water on other user should be assessed and included.
23. Measures for conservation and reuse of water should be maximized so as to keep net water consumption to a minimum. Recycle & reuse treated water in cooling tower
24. Hydro-geological study of the area for availability of ground water.
25. Proposed effluent treatment system for sugar, distillery and co-generation plant. Scheme for achieving 'zero' discharge for distillery effluent and 100 m³/Ton of sugar regarding water discharge.
26. Details of solid waste management including management plan of disposal of boiler ash.
27. Sufficient land should be earmarked for bio-composting activity and details of bio-composting lining as per CPCB guidelines.
28. Odour management plan should be prepared to control odour from molasses based distillery.
29. Green belt development as per the CPCB guidelines. Layout of greenbelt plant to be submitted.

30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. 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.
33. 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.
34. Details of TOC analyzer to be installed to monitor TOC in the treated effluent.
35. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
36. Alcohol storage and handling area with fire fighting facility as per norms.
37. Provision of foam system for fire fighting to control fire from the alcohol storage tank.
38. 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.
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 should 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 should be provided.
43. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
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. Action plan for post-project environmental monitoring.

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 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 alongwith 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. 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.

The Committee decided that the project proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Karnataka 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 report should be submitted to the Ministry for obtaining environmental clearance.

6.2.24 Expansion by adding Grain based Distillery (50 KLPD) alongwith CPP (3 MW) at Village Tumkur, Taluk Shahapur, District Yadgir, Karnataka by M/s Core Green Sugar & Fuels 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 grain based Distillery Units (more than 30 KLPD) are listed at S.N. 5(g) under Category 'A'.

M/s Core Green Sugar & Fuels Pvt. Ltd. have proposed for expansion of distillery by adding Grain based Distillery (50 KLPD) alongwith CPP (3 MW) at Village Tumkur, Taluk Shahapur, District Yadgir, Karnataka. Existing unit is engaged in manufacturing of sugar unit (5000 TCD), distillery unit (50 KLPD) alongwith Cogeneration power plant (24 MW). Environment clearance was obtained vide MoEF's letter no. J-11011/233/2007-IA

II (I) dated 18th July, 2008 for the existing unit. Total plant area is 370.28 acre of land. No additional land is required for expansion. Project cost is Rs. 50 Crore. No national park/wildlife sanctuaries/bird sanctuaries are located within 10 Km distance. Following is the plant configuration after expansion :

S.N.	Unit	Product	Existing	Proposed	Total after expansion
1	Sugar	Sugar	5000 TCD	--	5000 TCD
2	Co-generation plant	Power	24 MW	3 MW	27 MW
3	Distillery	RS/ENA/Ethanol	Molasses based 50 KLPD	Grain based 50 KLPD	Molasses based (50 KLPD) and Grain based (50 KLPD) with total capacity 100 KLPD

Biomass (180 TPD)/imported coal will be used in boiler. Bag filter will be provided to coal/biomass fired boiler. Total fresh water requirement from Krishna River will be 620 m³/day for grain based distillery. Spent wash will be centrifuge followed by MEE and dryers to form DDGS to achieve zero discharge. Spent/used oil will be sold to authorized recyclers. Fly ash from biomass will be used as manure. Fly ash from coal will be sent to cement plant.

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. Detailed break-up of the land area alongwith latest photograph of the area.
4. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. A copy of lease deed or allotment letter, if land is already acquired.
7. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
8. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
9. Details of proposed products alongwith manufacturing capacity.
10. Number of working days of the distillery unit.
11. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
12. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
13. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. Stack height should be based on maximum sulphur content

- in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
14. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
 15. 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.
 16. 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 predominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
 17. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
 18. An action plan to control and monitor secondary fugitive emissions from all the sources.
 19. Details of the use of steam from the boiler.
 20. Ground water quality around proposed spent wash storage lagoon and the project area.
 21. Details of water requirement, water balance chart for grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
 22. Fresh water requirement should be restricted upto 10 Kl/Kl of alcohol for grain based distillery
 23. Source and permission of drawl of water from Competent Authority.
 24. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.
 25. Spent wash generation should not exceed 6 KL/KL of alcohol production. Details of the spent wash treatment for grain based distillery based distillery.
 26. Capacity for spent wash holding tank and action plan to control ground water pollution.
 27. Dryer shall be installed to dry DWGS.
 28. Layout for storage of rice husk/biomass.
 29. Details of solid waste management including management of boiler ash.
 30. Green belt development as per the CPCB guidelines.
 31. List of flora and fauna in the study area.
 32. Noise levels monitoring at five locations within the study area.
 33. 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.
 34. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
 35. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
 36. Alcohol storage and handling area fire fighting facility as per norms.
 37. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.

38. 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.
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. Details of socio-economic welfare activities.
41. 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.
42. Action plan for post-project environmental monitoring.
43. 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.
44. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
45. 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.
46. 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 alongwith 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 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 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 raised alongwith the replies 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.

6.2.25 Resin Manufacturing Unit at Bhachau, Tehsil & District Kutch, Gujarat by M/s ARCL Petrochemicals 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 Synthetic Organic Chemical Units located outside industrial area/estate are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s ARCL Petrochemicals Ltd. have proposed for setting up of Resin Manufacturing Unit at Bhachau, Tehsil & District Kutch, Gujarat. Total plant area is 11 acres. No forest land is involved. No court case/litigation is pending against the project proposal. Following products will be manufactured:

S.N.	Product	Capacity (MTPA
1	Formaldehyde	80000
2	Para Formaldehyde	5000
3	Liquid *UF/MUF/PF) Resins	100000
4	PF Powder Resins	5000
5	Amino (UF) Powder Resin	5000
6	Polycarboxylates	5000
7	MF Impregnated Paper	21450 sq.m
8	PF Impregnated Paper	36036 sq.m

Cleaning of the tail/vent gases will be done by passing through catalytic incinerator. The liquid effluent stream from the plant will be partially recycled and partially evaporated and incinerated with the tail gas in catalytic incinerator.

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

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, if any, from the State Forest Department
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, 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. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.

27. An action plan to control and monitor secondary fugitive emissions from all the sources.
28. 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.
29. Source and permission for the draw of water from competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged.
30. Action plan for 'Zero' discharge of effluent shall be included.
31. Treatment of phenol in the effluent, if any.
32. 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).
33. 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.
34. Explore the possibility to use fuel other than wood.
35. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
38. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
39. A write up on "Treatment of workers affected by accidental spillage of methanol/phenol".
40. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
41. An action plan to develop green belt in 33 % area
42. 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.
43. 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.
44. Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
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. 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.
49. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
50. 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.
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. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. 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.

6.2.26 Expansion of Steel Plant to 1.5 MTPA alongwith Waste Gas based CPP (17 MW) at Village Barbadi, District Wardha, Maharashtra by M/s Uttam Galva Metallies Ltd. -regarding TORs

The project authorities and their consultant (Eco-Chem Sales & Services) 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. 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.

M/s Uttam Galva Metallies Ltd. have proposed for expansion of Steel Plant to 1.5 MTPA alongwith Waste Gas based CPP (17 MW) at Village Barbadi, District Wardha, Maharashtra. No forest land is involved. No court case/litigation is pending against the project proposal. Total plot area is 140 hectare and no additional land is required. Proposed expansion will be done in existing spare land of 80 hectare. No national park, wildlife sanctuary, tiger reserve or biosphere reserve is located within 10 Km distance. Dham River and Vena River are flowing at a distance of 15 Km and 35 Km respectively. Total project cost is Rs. 1200 Crore. Capacity of power plant after expansion will be 34 MW. MoEF vide letter no J-11011/77/2005- IA II (I) dated 4.10.2010 has accorded environmental clearance for the existing unit. Following is the configuration of existing and proposed expansion unit:

No.	Name of Product	Production Capacity		
		Existing	Proposed	
a.	Sinter Plant	0.76 MTPA	0.76 MTPA	1.52 MTPA
b.	Blast Furnace along with 0.4 MTPA pellet plant	0.47 MTPA	0.55 MTPA	1.02 MTPA
c.	Coke Oven	0.20 MTPA	0.60 MTPA	0.80 MTPA
d.	Coke oven gas based DRI (Surplus gas based) along with 0.4 MTPA pellet plant		0.40 MTPA	0.40 MTPA
e.	Captive Power Plant (Surplus gas & kinetic energy based)	17 MW	17 MW	34 MW
f.	Converter/EAF (Steel making)		60 Tones/ Heat	60 Tones/ Heat
g.	Caster & Mill for production of long products / blooms / billets		0.5 MTPA	0.5 MTPA
By – Product				
	Coal Tar	8400TPA	25000 TPA	33400 TPA

Iron ore fines (2254000 TPA) from Odisha/Jabalpur through Rakes/Road; Classified Lump Ore (269000) from Odisha through Rakes; Limestone & Dolomite (95250 TPA) from Rajasthan /MP through Road and Coking coal for coke oven plant (1095000 TPA) from import through rakes will be used as raw materials. ESP, Bagfilter and Cyclone dust collector will be provided. Water requirement will be increased from 3234 m³/day to 11466 m³/day after expansion. Effluent generation will be increased from 1800 m³/day to 3050 m³/day after expansion. Effluent will be treated in ETP. Flue dust from silter, coke oven, pellet fines, DRI etc will reused in sinter plant. BF granulated slag/ SMS slag will be sent to cement plants. Fly ash will be sent to brick manufacturing unit.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Iron ore and coal linkage documents.
5. 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.
6. 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.
7. 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.
8. 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.
- 9. A certified 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.**
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
12. Details and classification of total land (identified and acquired) should be included.
13. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
14. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
15. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
16. A list of industries containing name and type in 25 km radius should be incorporated.
17. Residential colony should be located in upwind direction.
18. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
19. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital

- Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (VI) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included..
20. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
 21. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
 22. Action plan for excavation and muck disposal during construction phase.
 23. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
 24. Manufacturing process details for all the plants should be included.
 25. Mass balance for the raw material and products should be included.
 26. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
 27. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
 28. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
 29. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
 30. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
 31. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
 32. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
 33. Air quality modeling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm³.
 34. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
 35. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
 - i) Emissions (g/second) with and without the air pollution control measures

- ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height 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. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
 37. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
 38. One season data for gaseous emissions other than monsoon season is necessary.
 39. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
 40. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 41. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
 42. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 43. Ground water modeling showing the pathways of the pollutants should be included
 44. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
 45. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local

Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.

46. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
47. A note on the impact of drawl of water on the nearby River during lean season.
48. Provision to be made for storage of water for 3 months.
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. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
55. 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.
56. 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.
57. 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.
58. 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.
59. 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.
60. 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.
61. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
62. 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.
63. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.

64. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
65. Occupational health:
 - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - c) Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
 - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
 - e) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
66. 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.
67. 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.
68. 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.
69. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
70. 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.
71. 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.
72. A note on identification and implementation of Carbon Credit project should be included.
73. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

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

6.2.27 Expansion of Synthetic Organic Chemicals Manufacturing Unit at Village Ukharal, Tehsil Ghogha, District Bhavnagar, Gujarat by M/s Medinex Speciality Chemicals 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 report. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A'. and appraised at Central level.

M/s Medinex Speciality Chemicals Pvt. Ltd have proposed for expansion of Synthetic Organic Chemicals Manufacturing Unit at Village Ukharal, Tehsil Ghogha, District Bhavnagar, Gujarat. No forest land is involved. No court case/litigation is pending against the project. No national park or wildlife sanctuary is located within 10 Km. total plant area is 3857 m². The cost of project is Rs. 4 Lakh. Following will be products will be manufactured:

S.N.	Name of the Product	Existing Quantity (kg/Month)	Expansion Quantity (kg/Month)	Quantity of Additional new product (kg/Month)	Total quantity After Expansion /Addition (kg/Month)
Existing					
1	DL-Adrenaline	21	100	--	121
2	DL- Noradrenaline	21	100	--	121
3	Semicarbazide Hydrochloride	75	1000	--	1075
4	Thiosemicarbazide	67	1000	--	1067
5	Hydrazine Sulphate	291	1000	--	1291
New					
6	Acetone Semicarbazone	--	--	1000	1000
7	Acetone Thiosemicarbazone	--	--	1000	1000
8	Dihydrazine Sulphate	--	--	1000	1000
9	8-Chloro Theophylline	--	--	500	500
10	L-Glutamic Acid	--	--	1000	1000
Product 1 or 2 will be produced at a time. Product from 3 to 10 will be produced at same time.					

Stack height of 12 m will be provided to oil fired boiler. Water requirement from ground water source will be increased from 3.325 m³/day to 4.915 m³/day after expansion. Industrial effluent will be increased from 0.385 m³/day to 1.590 m³/day after expansion. Industrial effluent will be treated in ETP. ETP sludge and Hyflow powder will be sent to TSDF. Used oil will be sent to authorized recyclers/re-processors.

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. 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 of raw material and products.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. 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.
22. 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 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.
23. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.

25. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
28. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
29. 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.
30. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
31. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
32. Zero discharge effluent concepts to be adopted.
33. 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).
34. 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.
35. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
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. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
38. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
39. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
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. Note on compliance to the recommendations mentioned in the CREP guidelines.

45. 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.
46. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
47. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 48. 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.
49. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
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.

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. 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 submitted to the Ministry for obtaining environmental clearance.

6.2.28 Expansion of Single Super Phosphate Fertilizer Unit at Topatoli, District Kamrup, Assam by M/s Prograsive Fertichem (P) 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 single super phosphate manufacturing plant is listed at S.N. 5(a) under category 'B' Category 'B' as per para 3(b) of the Schedule of the EIA notification 2006, but due to absence of SEIAA/SEAC for Assam, the proposal has been appraised at the Central level.

M/s Prograsive Fertichem (P) Ltd have proposed for expansion of Single Super Phosphate Fertilizer Unit at Topatoli, District Kamrup, Assam. Total plant area is 30000 m². MoEF vide their letter no. J-11011/113/2007-IA (II) dated 7.05.2008 has accorded environmental clearance for the existing SSP unit. Project proponent has informed that Ministry of Chemicals & Fertilizer make it mandatory to sale SSP only on granulated from w.e.f. 13.05.2013 instead of powder form. Following products will be manufactured:

S.N.	Products	Present Capacity	Proposed Capacity
1	SSP	150 TPD (Powder)	250 TPD (granulated)
2	Sulphuric Acid	50 TPD	80 TPD
3	Zinc Sulphate	10 TPD	20 TPD
4	Rock Phosphate Grinding	--	150 TPD

Plant will be designed on the basis of the Double Catalytic Double Absorption (DCDA) system. The plant is having 5 pass convertor system instead of 4 pass convertor system to optimize the conversion of the SO₂ gas to SO₃ gas. High efficiency mist eliminator will be installed. Alkali scrubber system is designed to scrub SO₂ gas coming out of final absorption tower of sulphuric acid plant.

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. 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.

11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities and list of solvents and its recovery plan.
14. Detailed list of raw materials required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart of each products.
16. Action plan for the transportation of raw materials and products.
17. Ambient air quality monitoring at 6 locations within the study area of 10 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
18. 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, NH₃, Fluoride, Benzene including VOCs 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 surface and ground water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits. Control of fluorine emissions at source.
20. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO_x emission and method to control NO_x.
21. Details of water and air pollution and its mitigation plan.
22. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
23. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
24. Details of water requirement for the proposed project. Water balance chart including water intake, effluent generated, recycled and reused and discharged is to be provided.
25. Reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
26. 'Permission' for the drawl of proposed water from the Competent authority.
27. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber etc.).
28. Action plan for Zero Discharge of effluent as proposed should be included.
29. Ground water monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
30. Baseline data for fluoride levels in surface water, ground water, soil in and around plant site.
31. 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 should be included.

32. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
33. Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
34. Action plan for regular monitoring of worker and population for fluoride in the working area and population within 1 Km.
35. Details of captive landfill alongwith design details as per CPCB guidelines. Location of secured land fill/TSDF.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. An action plan to develop green belt in 33 % area
38. 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.
39. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Thresh 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.
40. Details of occupational health surveillance programme.
41. Socio-economic development activities should be in place.
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 should be provided.
43. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 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.
45. 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.
46. 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 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. 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. In this regard circular no. J -11013/77/2004-IA II(I) dated 2nd December, 2009 posted on the Ministry's website <http://www.moef.nic.in> may be referred.
- ix. 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 Assam 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 alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

6.2.29 Proposed Offshore LNG Floating Storage and Regasification Terminal in the offshore region of Digha, West Bengal by M/s H-Energy East Coast Pvt. Ltd. - regarding TORs

M/s H-Energy East Coast Pvt. Ltd. have proposed for setting up of Offshore LNG Floating Storage and Regasification Terminal in the offshore region of Digha, West Bengal. Project proponent informed that they are planning to build FSRU with minimum capacity 8 MMTPA in the offshore region of Digha, West Bengal, which is located 100 km away from seashore. R-LNG will be transported from FSRU to the onshore receiving facility through sub sea pipeline, which attracts CRZ clearance. Project proponent

confirmed that pipeline is not passing through eco-sensitive area. Therefore pipeline does not attract environment clearance. The Committee noted that proposal may be transferred to CRZ sector.

6.2.30 Expansion of Integrated Sugar Complex and installation of Molasses based Distillery Unit (60 KLPD) at Village Nagri & Naingali, Taluk & District Bagalkot, Karnataka by M/s Sadashiva Sugars 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. All sugar industries (> 5000 TCD cane crushing) are listed at S.N. 5(j) under category 'B' and appraised at state level. All molasses based distilleries are listed at S.N. 5(g) (i). All Co-generation Plant based on biomass (\geq 20 MW) are listed at S.N. 5(j) under category 'A' and project proposal is treated as category 'A' project.

M/s Sadashiva Sugars Ltd have proposed for expansion of Integrated Sugar Complex and installation of Molasses based Distillery Unit (60 KLPD) at Village Nagri & Naingali, Taluk & District Bagalkot, Karnataka. No forest land is involved. No court case/litigation is pending against the project proposal. 177.2 acres of land is in possession of the management & proposed expansion will be taken up in the vacant space available in the plant premises. The cost of project is Rs. 351 Crores. No national parks/wildlife sanctuaries are located within 10 Km distance. Krishna River is flowing at a distance of 2.7 Km. Karnataka State Pollution Control Board vide Consent order no. PCB/141/HPI/2010/945 dated 7th December, 2012 has issued consent to operate. Following is the plant configuration & production capacity:

Unit	Capacity		
	Existing	Expansion	Total
Sugar	3500 TDC	4000 TCD	7500 TCD
Co-gen Power plant	15 MW	19 MW	34 MW
Distillery	--	60 KLPD	60 KLPD
Power from incineration boiler	--	3 MW	3 MW

Sugar cane (7500 TPD) from Bagalkot and Bagasse (2127 TPD) from sugar plant and imported coal (890 TPD) will be used as fuel. Bagfilter will be provided to the distillery's plant boiler. ESP will be provided to boiler (110 TPH). Total water requirement from Krishna River will be increased from 400 m³/day to 1910 m³/day. Effluent from sugar unit will be treated in ETP. Spent wash will be concentrated in MEE and concentrate will be incinerated alongwith bagass in boiler (25 TPH). No effluent will be discharged outside the plant premises. Greenbelt will be developed in 33 % of plant area. Spent oil will be sold to authorized recyclers. Ash from cogeneration power plant will be sold to brick manufacturers. Yeast sludge generated will be incinerated in boiler.

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 KSPCB.
10. List of existing distillery units in the study area alongwith their capacity.
11. Number of working days of the 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 and CPP alongwith process flow chart.
14. Details of raw materials and source of raw material 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.

6.2.31 Expansion of Bulk Drugs Manufacturing Unit at Sy. No. 238 & 239, Village Dhotigudem, Mandal Pochampally, District Nalgonda, AP by M/s Chemic Life Sciences (P) Ltd. -regarding TORs

The project authorities and their consultant (Team Labs and 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 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 Chemic Life Sciences (P) Ltd. have proposed for expansion of Bulk Drugs Manufacturing Unit at Sy. No. 238 & 239, Village Dhotigudem, Mandal Pochampally, District Nalgonda, AP. Total land requirement is 11.73 acres and greenbelt will be developed in 4.1 acres. Total project cost for expansion is Rs. 17.0 Crore. Chinna Musi River is flowing at a distance of 6.7 Km. Malkapurm Reserve Forest and Hafizapura RF are located within 10 Km distance. No national park and wildlife sanctuary are located within 10 Km distance. Following products will be manufactured:

S.No.	Existing Product	Capacity	
		Kg/Month	TPA

1	4 – O – Methyl-3, 5 Dimethyl – 1 – Chloromethyl pyridine (Intermediate of Omerprazole upto Step – V only)	4368	52.146
2	2 – Methyl – 4 – 10H thieno (2-3-6) (1, 5) benzodiazepine (Intermediate of Olanzepine)	576	7

Manufacturing Capacity - After Expansion

S.No.	Name of the Product	Quantify TPM	Quantity Kgs/Day
		I. Bulk Drugs	
1	Irbesartan	10	333.3
2	Levetiracetam	5	166.7
3	Levodopa	5	166.7
4	Nateglinide	0.5	16.7
5	Olmesartan	10	333.3
6	Pregabline	5	166.7
7	Sertraline HCl	10	333.3
8	Simvastatin	5	166.7
9	Sitagliptin	5	166.7
10	Telmisartan	2	66.7
11	Tamsulosin HCl	0.2	6.77
12	Valasartan	5	166.7
	Total – I – Worst Case (Any 3 products on campaign basis)	30	1000
II. Intermediates			
13	BFI (2-butyl-1H-imidazole-5-carbaldehyde)	6	200.0
14	Bromo benzoate	10	333.3
	Total - II	16	533.3
Grant Total (I + II) – 5 Products are manufactured at any given time		46	1533.3

Additional coal fired boiler (4.5 TPH) and DG set (125 KVA) will be installed. Water requirement from ground water source will be increased from 18.4 m³/day to 176.3 m³/day. Industrial effluent generation will be increased from 4.6 m³/day to 87.3 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and ATFD. Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) based biological treatment process followed by RO. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Fly ash will be sold to brick manufacturer. ETP sludge, evaporation salts, solvent residue and spent carbon will be sent to TSDF. Waste oil and used batteries will be sent to authorized recyclers.

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 APPCB.
 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 of raw material and products.
 20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
 21. 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.
 22. 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 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.
 23. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
 24. Name of all the solvents to be used in the process and details of solvent recovery system.
 25. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
 26. Details of water and air pollution and its mitigation plan.
 27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.

28. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
29. 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.
30. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
31. Attempt to be made for reduction for usage of water.
32. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
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. Action plan for the disposal of fly ash generated from boiler shall be included.
36. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
37. 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.
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. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
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.
 - vii) Details of occupational health surveillance programme including minor leakage of chemicals reporting and management plan.
43. Socio-economic development activities shall be in place.
44. Note on compliance to the recommendations mentioned in the CREP guidelines.
45. 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.

46. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
47. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 48. 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.
49. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
50. 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.
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) 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 public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

6.2.32 Resin Manufacturing Unit at Sy. No. 312/1, Village Nani Chiri, Tehsil Bhachau, District Kutch, Gujarat by M/s Kachchh Veneeres 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 report. All the Resin Units located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Kachchh Veneeres Pvt. Ltd. have proposed for setting up resin Manufacturing Unit at Sy. No. 312/1, Village Nani Chiri, Tehsil Bhachau, District Kutch, Gujarat. No forest land will be involved . No court case/litigation is pending against the project proposal. Total plant area is 14506 m². Total project cost for expansion is Rs. 15.0 Lakhs. No national park/wildlife sanctuary is located within 10 Km distance. Following products will be manufactured:

S.N.	Product	Quantity (MTPM)
1	Phenol Formaldehyde	500
2	Melamine Urea Formaldehyde	
3	Urea Formaldehyde	
4	Melamine Formaldehyde	

Multicyclone dust collector alongwith stack height of 11 m will be installed in Thermic Fluid heater. Water requirement from ground water source will be increased from 3.25 m³/day to 11.25 m³/day. Industrial wastewater generation will be 5.8 m³/day after expansion. Industrial effluent will be treated in ETP. Treated effluent will be evaporated in thermic fluid evaporator. ETP sludge will be sent to TSDF. Spent oil will be sent to authorized recycler/re-processors.

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.
1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework
5. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
6. 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.
7. A map indicating location of the project and distance from severely polluted area
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, if any, from the State Forest Department
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 materials required and source, mode of storage and transportation.
18. Manufacturing process details alongwith the chemical reactions and process flow chart.
19. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
20. 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.
21. 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 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.
22. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
23. Control methanol emission from drying section.
24. Details of VOC monitoring system in the working zone environment, if any.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, 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 NAAQES Standards notified by the Ministry on 16th September, 2009.
29. An action plan 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 for the drawl of 11.25 m³/day ground water from CGWA/competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged.
32. Action plan for 'Zero' discharge of effluent shall be included.
33. Treatment of phenol in the effluent, if any.
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. Action plan for the disposal of fly ash generated from boiler shall be included.
36. Explore the possibility to use fuel other than wood.
37. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
39. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
40. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
41. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
42. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
43. An action plan to develop green belt in 33 % area
44. 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.
45. 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.
46. Details of occupational health surveillance programme.
47. Socio-economic development activities shall be in place.
48. 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.
49. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 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 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.
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

6.2.33 Establishment of New Installation for Receiving Oil & Gas from wells for further processing and dispatch of Liquid to SANAND GGS-I at Village Unali, Post Godhavi, Taluk Kalol, District Gandhinagar, Gujarat by M/s ONGC 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 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 Ltd. have proposed for establishment of New Installation for Receiving Oil & Gas from wells for further processing and dispatch of Liquid to Sanand GGS-I at Village Unali, Post Godhavi, Taluk Kalol, District Gandhinagar, Gujarat. 100 MTD crude oil and gas 10000 standard m³/day will be handled. Plot area of Sananad EPS is 5368 m². No forest land is involved. No court case/litigation is pending against the project. Sanand EPS will be connected to 20 nos. of well. 3 Nos. of Injection wells will be drilled. DG set (1x 125 KVA) will be installed.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of 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. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely/ critically polluted area.
7. Project location and plant layout.
8. Current status of construction activities.
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.
13. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
14. Details of the total land and break-up of the land use for green belt and other uses.
15. List of products alongwith the production capacities.
16. Detailed list of raw material required and source, mode of storage and transportation.
17. Oil separation process details alongwith the chemical reactions and process flow chart.
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 including HC and VOCs 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.
21. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
22. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
23. Details of water and air pollution and its mitigation plan
24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. 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.

26. Permission for drawl of water from concerned authority. Water balance chart including quantity of effluent generated recycled and reused and discharged.
27. Action plan for 'zero' discharge of effluent should be included. Treatment & disposal of produced water.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. 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.
30. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
31. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
32. An action plan to develop green belt in 33 % area
33. 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.
34. 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.
35. Details of occupational health surveillance programme.
36. Socio-economic development activities should be in place.
37. Note on compliance to the recommendations mentioned in the CREP guidelines.
38. 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.

39. 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.

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. 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.
42. 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) 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.

6.2.34 Expansion of Submerged Arc Furnace in Existing Plant Premises Village Golladi, Mandal Badangi, District Vizianagaram, Andhra Pradesh by M/s Impex Metal & Ferro Alloys 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. 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.

M/s Impex Metal & Ferro Alloys Ltd. have proposed for expansion of Submerged Arc Furnace in existing plant premises Village Golladi, Mandal Badangi, District Vizianagaram, Andhra Pradesh. Total plant area is 34 acres. Total cost of project is Rs. 131.11 Crore. MoEF vide letter no. J-11011/220/2009-IA II (I) dated 25th March, 2010 has accorded environmental clearance for the existing ferro alloy plant. No national parks/ sanctuaries/tiger reserve are located within 10 Km distance. Vegavati River (non perennial) is flowing at a distance of 1.6 Km. Following is the configuration of existing and proposed expansion:

S.N.	Unit	Production Capacity
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		Existing	Proposed	After Expansion
1	Submerged Electric Arc Furnaces	2x18 mVA	1x 18 mVA	3 x 18 mVA
a	Ferro Silicon	23175 TPA	11587 TPA	34762 TPA
		or	or	or
b	Silico Manganese	46900 TPA	23450 TPA	70350 TPA
c	Ferro Manganese	70355 TPA	35177 TPA	105532 TPA
2	Sinter Plant	--	300 TPD	300 TPD

Fume extraction system with bag house will be provided to submerged electric arc furnace and sinter plant to control particulate emissions. Water requirement from ground water source will be increased from 110 m³/day to 190 m³/day after expansion. Closed circuit cooling system will be implemented. Zero effluent discharge will be implemented. Greenbelt will be developed in 12.0 acres of land.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Coal linkage documents
5. A 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.
6. 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.
7. 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.
8. 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.
9. A certified 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.
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
12. Details and classification of total land (identified and acquired) should be included.

13. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
14. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
15. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
16. A list of industries containing name and type in 25 km radius should be incorporated.
17. Residential colony should be located in upwind direction.
18. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
19. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per 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.), if applicable, should also be included..
20. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
21. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
22. Action plan for excavation and muck disposal during construction phase.
23. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
24. Manufacturing process details for all the plants should be included.
25. Mass balance for the raw material and products should be included.
26. Energy balance data for all the components of steel plant including proposed power plant should be incorporated. Sensitive heat inventory and utilization potential to be included in the energy inventory.
27. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
28. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
29. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
30. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.

31. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
32. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
33. Air quality modeling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm³.
34. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
35. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
 - i) Emissions (g/second) with and without the air pollution control measures
 - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height 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. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
37. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
38. One season data for gaseous emissions other than monsoon season is necessary.
39. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
40. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
41. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to

- be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
42. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 43. Ground water modeling showing the pathways of the pollutants should be included
 44. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
 45. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
 46. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
 47. A note on the impact of drawl of water on the nearby River during lean season.
 48. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 49. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
 50. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
 51. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
 52. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
 53. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
 54. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, 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 particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
 57. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
 58. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal

- should be included. Details of secured land fill as per CPCB guidelines should also be included.
59. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
 60. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
 61. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
 62. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
 63. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
 64. Occupational health:
 - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - c) Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
 - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
 - e) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
 65. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
 66. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
 67. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
 68. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
 69. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.

70. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
71. A note on identification and implementation of Carbon Credit project should be included.
72. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

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

6.2.35 Bulk Drugs and Fine Chemicals Manufacturing Unit (7 MTPA) at Khasra No. 259, Village Sukhliya, Tehsil Sanwer, District Indore in Madhya Pradesh by M/s Horster Biotek Pvt. Ltd. -regarding TORs

The project authorities and their consultant (En-Vision Enviro Engineers Pvt. Ltd.) 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 Horster Biotek Pvt. Ltd have proposed for setting up of Bulk Drugs and Fine Chemicals Manufacturing Unit at Khasra No. 259, Village Sukhliya, Tehsil Sanwer, District Indore in Madhya Pradesh. No forest land is involved. No court case/litigation is pending against the project. Total land requirement is 1118.02 m². Ral Mandel Sanctuary and Rala Mandel Fort are located at a distance of 13.0 Km. The Committee noted that no wildlife sanctuary is located within 10 Km distance. River Khan is located at a distance of 0.20 Km. Following products will be manufactured:

S.N.	PRODUCTS	QUANTITY
1	Betamethasone Valerate	7 MTPA
2	Betamethasone dipropionate	
3	Clobetasol propionate	
4	Clobetasone Butyrate	
5	Betamethasone sodium phosphate	
6	Beclomethasone dipropionate	
7	Dexamethasone sodium phosphate	
8	Fluticasone propionate	
9	Hydrocortisone hemi succinate	
10	Hydrocortisone Acetate	
11	Mometasone Furoate	
12	Prednisolone Sodium Phosphate	
13	Prednisolone Acetate	

14	Dexamethasone acetate	
15	Betamethasone acetate	
16	Methylprednisolone hemi succinate	
17	Methylprednisolone acetate	
18	Halobetasol propionate	
19	Deflazacort	
20	Flucinolone acetonide	
21	Triamcinoloe acetonide	
22	Budesontde	
23	Desoximetasone	

Alkali scrubber will be provided to control process emissions namely HCl. Stack of 12 m height will be provided to oil fired boiler. Water requirement from ground water source will be 4.815 m³/day. Industrial effluent will be treated in ETP. Electricity consumption will be 140 KVA (150 HP) and sourced from Madhya Pradesh State Electricity Board. HSD will be used as fuel in boiler.

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. Permission from CGWA/SGWA for the drawl of 4.815 m³/day ground 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.

6.2.36 Expansion of Steel Manufacturing Unit (from 29000 MTPA to 84000 MTPA) at Plot No. B-57 A, Focal Point, Phase VII, Ludhiana, Punjab by M/s Jyoti Industries. -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. 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.

M/s Jyoti Industries have proposed for expansion of Steel Manufacturing Unit (from 29000 MTPA to 84000 MTPA) at Plot No. B-57 A, Focal Point, Phase VII, Ludhiana, Punjab. No forest land is involved. No court case/litigation is pending against the project proposal. Total plant area is 8331 sq. yard. Following will be manufactured:

S.N.	Product	Existing	Proposed	Total
1	Steel Ingots/Billets	29,000 MTA	55,000 MTA	84,000 MTA

Bagfilter & cyclone will be provide to arrest SPM frm flue gas. Water requirement will be increased from 12 m3/day to 20 m3/day. Slag from furnace will be sent to cement plant. Used oil from DG set will be sold to recycler.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Coal linkage documents
5. A 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.
6. 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.
7. 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.
8. 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.

9. A certified 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.
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
12. Details and classification of total land (identified and acquired) should be included.
13. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
14. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
15. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
16. A list of industries containing name and type in 25 km radius should be incorporated.
17. Residential colony should be located in upwind direction.
18. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
19. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (VI) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included..
20. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO₂, Al₂O₃, MgO, MnO, K₂O, CaO, FeO, Fe₂O₃, P₂O₅, H₂O, CO₂.
21. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
22. Action plan for excavation and muck disposal during construction phase.
23. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
24. Manufacturing process details for all the plants should be included.
25. Mass balance for the raw material and products should be included.
26. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.

27. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
28. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
29. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
30. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
31. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
32. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
33. Air quality modeling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm³.
34. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
35. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
 - i) Emissions (g/second) with and without the air pollution control measures
 - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height 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. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.

37. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
38. One season data for gaseous emissions other than monsoon season is necessary.
39. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
40. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
41. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
42. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
43. Ground water modeling showing the pathways of the pollutants should be included
44. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
45. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
46. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
47. A note on the impact of drawl of water on the nearby River during lean season.
48. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
49. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
50. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
51. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
52. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
53. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.

54. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, 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 particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
57. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
58. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.
59. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
60. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
61. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
62. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
63. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
64. Occupational health:
 - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - c) Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
 - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
 - e) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
65. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

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

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

6.2.37 Proposed Establishment of Pellet Plant within the existing premises of Integrated Mini Steel Plant at Village Hanumanahalli, District Bellary, Karnataka by M/s S.S.C. Steels Pvt. Ltd. -regarding TORs

The project authorities and their consultant (KRS Enterprises, Bangalore) 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. The primary metallurgical industry is listed at S. No. 3(a) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s S.S.C. Steels Pvt. Ltd. have proposed for establishment of Pellet Plant within the existing premises of Integrated Mini Steel Plant at Village Hanumanahalli, District Bellary, Karnataka. No forest land is involved. No court case/litigation is pending against the project proposal. MoEF vide letter no J-11011/205/2010-IA II (I) dated 7th February, 2012 has issued environmental clearance for the existing mini integrated steel plant. Total land acquired is 280.98 acres and converted for industrial land is 170.55 acres. Out of which greenbelt will be developed in 70 acres of land. Cost of the project for pelletization plant is Rs. 87.86 Crore. Bandravi State Forest (1 Km), Metriki RF (2.05 Km

E), Hirehal RF (3.5 Km) and Krishnarajpur state forest (2.5 Km) are located within 10 Km distance.

S.N.	Feature	Particulars
1	EC Obtained for Dated 7 th February, 2012 F. No J-11011/205/2010-IA II (I)	<ul style="list-style-type: none"> • Beneficiation Plant: 1.2 Million TPA /9400 TPH) • Sponge Iron Plant: 1,20, 000 TPA (4X 100 TPD) • Captive Power Plant: 12 MW (8 MW WHRB: 4 MW FBC) • Steel Melting and billet Casting : 1,96,000 TPA (2x8 Ts IF, 1X15 LF & 6X11 CCM) • Rolling Mill: 60,000 TPA (200 TPD) & • Thermal Power Plant : 70 MW
2	Proposed establishment	Pellet Plant of 0.6 MTPA

No Construction activities are started for approved integrated Steel Plant.

ESP/bagfilter will be provided to control particulate emissions. Water requirement from ground water source will be 10.5 m³/hr. Dust will be recycled in the process. Broken pellet will be recycled through grinding. Accretion will be reused through grinding. power requirement will be 8 MVA. The Committee noted that Iron ore is upgraded to a higher iron content through pelletization.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Iron ore and Coal linkage documents
5. A copy of the mutual agreement for land acquisition signed with land oustees.
6. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
7. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
9. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.

10. Revised project area and layout plan shall be submitted after exclusion of the project area on one side of the nalah/drainage passing through the project site and maintaining 33% of green belt.
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. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
13. Details and classification of total land (identified and acquired) 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 from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
16. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
17. A list of industries containing name and type in 25 km radius should be incorporated.
18. Residential colony should be located in upwind direction.
19. 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".
20. 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.
21. Action plan for excavation and muck disposal during construction phase.
22. 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.
23. Manufacturing process details for all the plants should be included.
24. Mass balance for the raw material and products should be included.
25. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
26. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
27. 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.
28. 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.
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 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.
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 modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
 - i) Emissions (g/second) with and without the air pollution control measures
 - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
 - iii) Model input options for terrain, plume rise, deposition etc.
 - iv) Print-out of model input and output on hourly and daily average basis
 - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
 - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
 - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
 - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
 - ix) Graphs of monthly average daily concentration with down-wind distance
 - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
 - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
35. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
36. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
37. One season data for gaseous emissions other than monsoon season is necessary.
38. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
39. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
40. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.

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

58. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
59. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
60. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
63. Occupational health:
 - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - c) Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
 - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
64. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
65. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
66. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
67. 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.
68. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (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 was conducted on 30.06.2011 as per EIA Notification, 2006 for mini integrated steel plant. No Construction activities are started for approved integrated Steel Plant. Therefore, the Committee exempted public hearing under 7 (ii) of the EIA Notification 2006. The final EIA/EMP report for obtaining environmental clearance be accordingly be submitted.

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

6.2.38 Synthetic Organic Chemicals Unit at Shed No. C1/6020/1, 4th Phase, GIDC, Vapi, District Valsad, Gujarat by M/s Rathore Pigments Pvt. Ltd. -regarding TORs.

The project authorities and their consultant (Eco-Chem Sales & Services) 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 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 and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s Rathore Pigments Pvt. Ltd have proposed for setting up of Synthetic Organic Chemicals Unit at Shed No. C1/6020/1, 4th Phase, GIDC, Vapi, District Valsad, Gujarat. No forest land is involved. No court case/litigation is pending against the project. Total plot area is 1508 m² and greenbelt will be developed in 350 m². Total project cost is Rs. 2.11 Crore. Following product will be manufactured:

S.N.	Product	Capacity (MTPM)
1	Copper Phthalo Cyanine Green (Pigment Green 7)	50

Stack (11m) will be provided to gas fired Thermopak. Two stage water in series & caustic scrubber will be provided to control process emissions e.g. HCl & Cl₂. Water requirement from GIDC water supply will be 146.7 m³/day. Industrial effluent will be treated in ETP and treated effluent will be discharged into CETP. ETP sludge will be sent to TSDF. Used oil will be sent to registered recyclers/re-processors. Total power requirement will be 200 HP and sourced from DGVCL. HSD and gas 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:

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area
7. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
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 photographs of the project site and 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.
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 material 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, SO₂, NO_x including HC and VOCs 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.
20. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
21. Name of all the solvents to be used in the process and details of solvent recovery system.
22. Design details of ETP, incinerator, if any along with control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
23. Details of water and air pollution and its mitigation plan
24. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
25. An action plan to control and monitor secondary fugitive emissions from all the sources.
26. 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.
27. Permission for the drawl of 146.7 m³/day water from the concerned agency. Water balance chart including quantity of effluent generated recycled and reused and discharged.
28. Action plan for 'Zero' discharge of effluent should be included.
29. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
30. 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.

31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. Risk assessment for storage for chemicals/solvents.
36. Material safety data sheet of chemicals to be submitted.
37. An action plan to develop green belt in 33 % area.
38. 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.
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 should 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 should be provided.
43. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
44. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
45. 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.

6.2.39 Bulk Drugs Manufacturing Unit at SP-4-4, RIICO Industrial Area Keshwana, Tehsil Kotputli, District Jaipur, Rajasthan by M/s Dhanuka Laboratories 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 Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

M/s Dhanuka Laboratories Ltd. have proposed for setting up of Bulk Drugs Manufacturing Unit at SP-4-4, RIICO Industrial Area Keshwana, Tehsil Kotputli, District Jaipur, Rajasthan. Total plant area is 32800 m². Total project cost is Rs. 70.00 Crore. No forest land is involved. Interstate boundary of Haryana is located within a 10 Km distance. No court case/ litigation is pending against the project proposal. Following products will be manufactured:

S.N	Products	Capacity (kg/month)
1	7 -ACCA	3000
2	Cefaclor	3000
3	Cefixime	13000
4	Cefdinir	1000
5	Cefuroxime Axetil	4000
6	Cefprozil	1000
7	Cefpodoxime Proxetil	5000
8	Cefditoren Pivoxil	1000
9	Cefcapene Pivoxil Hydrochloride	225
10	Ceftibuten	200
11	Pregabaline	4000
12	Sertraline Hydrochloride	2000
13	Ondansetron	2000
14	Clopidogrel Bisulphate	6000

15	Gabapentin	5000
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Scrubber will be provided to control process emissions. Water requirement from ground water source will be 150 m³/day. Industrial effluent generation will be 114 m³/day and segregated into high TDS/COD and Low TDS/COD effluent streams. high TDS/COD effluent stream will be evaporated in MEE. Low TDS/COD effluent will be treated in ETP. Incinerator ash, ETP sludge and MEE salt will be sent to TSDF. Power requirement will be 3000 KVA and sourced from Japur Vidyut Vitran Nigam Ltd. DG sets (6 x 500 KVA) will be installed.

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. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.

22. Name of all the solvents to be used in the process and details of solvent recovery system.
23. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
24. Details of water and air pollution and its mitigation plan.
25. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
26. 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.
27. Permission from CGWA/SGWA for the drawl of ground water. Water balance chart for the proposed project including quantity of effluent generated recycled and reused and effluent discharge.
28. Attempt to be made for reduction for usage of water.
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. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
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 Thresh 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. 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.

6.2.40 Proposed LPG Pipeline from Kochi Refinery to Coimbatore at District Ernakulam, Kerala by M/s BPCL. -regarding TORs

M/s BPCL have proposed for laying of LPG pipeline from Kochi Kochi Refinery to Coimbatore. Length of 12" pipeline is 229 Km. Pipeline will pass through Ernakulam, Thrissur, Palakkad districts of Kerala and Coimbatore of Tamil Nadu. Pipeline will have state of the art SCADA, Telcom and leak detection system for efficient monitoring, control and safe operation of the pipeline. Pipeline is crossing creeks, Railway lines, National & State highways, Rivers, Canals. Pipeline is also passing through 1.47 km reserved forest. Pipeline is not passing through national parks/sanctuaries/coral reefs/ecologically sensitive areas. However, pipeline is located within 10 Km distance from Peechi Vazhani Wildlife Sanctuary.

After deliberations, the Committee noted that since proposed project is not located in National Park, Sanctuaries/eco-sensitive areas including LNG terminal as confirmed by the PAs, proposed pipeline project does not attract the provisions of EIA Notification, 2006. However, other statutory clearances under the Wildlife (Protection) Act, 1972, Air and Water Act and CRZ Notification as may be required in this case shall be obtained. All the necessary safety precautions shall be adopted during laying of the pipeline.

6.2.41 Proposed Shohdol-Phulpur Pipeline Project in Madhya Pradesh and Utter Pradesh by M/s Reliance Gas Pipeline 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 oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/sanctuaries/coral reefs/ecologically sensitive areas including LNG Terminal are listed at S.N.6 (a) under category 'A' and appraised at Central level.

M/s Reliance Gas Pipeline Ltd. have proposed for laying of Shohdol-Phulpur Pipeline Project in Madhya Pradesh and Utter Pradesh. Reliance Industries Limited (RIL) have been awarded Coal Bed Methane (CBM) blocks in Sohagpur East and Sohagpur West located in Shahdol District, MP by the Government of India. CBM blocks are under development and gas production is likely to commence in 2014. The pipeline is from shahdol in MP to hook up point with GAIL's existing HVJ pipeline at Phulpur in UP. This pipeline will enable supply of CBM gas to the customers along the pipeline route and on HVJ pipeline. The length of 18" pipeline will be 312 Km with capacity 6 MMSCMD. Total project cost is Rs. 1770 Crore. Total land requirement is 34 ha for setting up of facilities. Forest land is involved, which is around 25.2847 ha. Pipeline passes through Songhariyal wild life sanctuary (0.9 Km). Pipeline passes through 3 nos. of major river, 15 nos. of major highways, 4 nos. of district and 2 states. Total water requirement during operation phase will be 247 KLD.

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

1. Executive summary of the project, Feasibility study report and pipeline route survey report.
2. Project description and project Benefits.
3. Land use details of the site based on satellite imagery.
4. Details of land to be acquired. Details of rehabilitation and resettlement involved, if any.
5. Process details with animated model.
6. Animated Computer Model for prospective years regarding safety and risk point of view.
7. Proposal for safety buffer zone around the proposed site with map.
8. A list of industries within 10 km radius of the project.
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. Present land use based on satellite imagery for the study area of 10 km radius.
12. Location of National Park/Wild life sanctuary/Reserve Forests within 10 km radius of the project. A copy of map indicating wildlife sanctuary and authenticated by the Wildlife Department.
13. Copy of the application submitted for the clearance from the National Board of Wildlife regarding Sanghariyal sanctuary.
14. Forest clearance for the forest land involved in the project alongwith details of the compensatory afforestation.
15. A note on possibility of avoiding forest land and sanctuary.
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:
19. Ambient air quality monitoring for PM₁₀, SO₂, NO_x, CO.
20. Background levels of hydrocarbons (methane & non-methane).
21. Soil sample analysis.
22. Base line underground and surface water quality in the vicinity of project.
23. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
24. Measurement of noise levels within 1 Km.
25. 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.
26. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
27. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
28. Details of proposed preventive measures for leakages and accident.
29. Noise monitoring within one km.
30. Type of seismic zone.
31. Environmental Management Plan for construction and operational phase.
32. Action plant for proper restoration of laying the pipeline.
33. Risk Assessment & Disaster Management Plan
 - a. Identification of hazards
 - b. Consequence Analysis
 - c. Risk assessment should also include leakages and proposed measures for risk reduction.
 - d. Corrosion management of pipe line.

34. Details of proposed Occupational Health Surveillance program for the employees and other labour.
35. Details of proper restoration of land after laying the pipelines.
36. Environmental Monitoring programme.
37. Total capital cost and recurring cost/annum for environmental pollution control measures.
38. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
39. A tabular chart indicating point-wise compliance of the TOR.
40. A tabular chart indicating point-wise clarifications to the issues raised during public hearing/consultation.

The Committee decided that the proponent should prepare EIA/EMP report based on the above TORs and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

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) 'Certificate of Accreditation' issued by the QCI

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Rajasthan Pollution Control Board for conducting public hearing / consultation in *4 districts through which proposed pipeline is passing*. 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 Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP alongwith 'Certificate of Accreditation' issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

6.2.42 Expansion of Synthetic Organic Chemicals Manufacturing Unit at Village Dothigudem, Mandal Pochampally, District Nalgonda, Andhra Pradesh by M/s SVR Laboratories Pvt. Ltd. -regarding TORs

The project authorities and their consultant (Team Labs and Consultants) 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 and 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 SVR Laboratories Pvt. Ltd. have proposed for expansion of Synthetic Organic Chemicals Manufacturing Unit at Village Dothigudem, Mandal Pochampally, District Nalgonda, Andhra Pradesh. The total land of the project after expansion is 6.0 acres in which 2.0 acres of the project area will be developed as green belt. Malkapuram Reserve Forest is in SW Direction at a Distance of 3.5 Km. Hafizapura RF in SW Direction at a Distance of 6.5 Km. There are no ecologically sensitive areas like national parks, sanctuaries within 10 km radius of the site. The capital cost of the expansion project will be Rs. 9 Crores. Following is the details of existing and proposed products:

Name of the Product (Existing)	Capacity (Kg/day)
4 hydroxy carbonole (Intermediate for stage -1 intermediate of carvidilol)	16.67
2(2,4 Difluorophenyl)-1-(1H-1,2,4)-Trrizole-1-YL)-2,3 epoxy-propane methane) sulfonate(state 2 intermediate of Fluconazole)	16.67
Total	33.34

Production Capacity - Proposed

S.No	Name of the Product	Capacity	
		Kg/Day	Kg/Month
I.Bulk drugs			
1	Acyclovir	130	3900
2	Atorvatatin Calcium	150	4500
3	Capecitabine	50	1500
4	CBZ-L-Valine	100	3000
5	Cevimeline Hydrochloride	70	2100
6	Clofarabine	40	1200
7	Eprsartan mesylate	50	1500
8	Felbamate	160	4800
9	Gemcitabine Hydrochloride	100	3000
10	Levofloxacin	60	1800
11	Lopinavir	125	3750
12	Losartan Potassium	300	9000
13	Methyl 1,2,4-tri-O-catyl-3-O-benzyl-L-idopyranuronate	40	1200
14	Methyl 2,3-di-O-benzyl-4-O-chloro acetyl- b-D-glucopyranuronate	50	1500
15	Methyl 6- O-acetyl-3-O-benzyl-2-(benzyl oxyarbonyl)amino - 2-deoxy-a - D-glucopyranoside	180	5400
16	Moxifloxacin Hydrochloride	70	2100
17	Pantoprazole Sodium	333.33	10000
18	Pregabalin	300	9000
19	Ritonavir	100	3000
20	Rizatriptan	70	2100
21	Rosuvastatin Clacium	100	3000
22	Saxagliptin monohydrate	70	2100
23	Tenofovir Disoproxil	100	3000
24	Valacyclovir Hydrochloride	180	5400
25	Valsartan	130	3900
26	Zileuton	100	3000
27	1,6-anhydro-2-azido-2-deoxy-b-D-gloucopyranuronate	50	1500
28	3-O-acetyl-1,6-anhydro-2-azido-2-deoxy-D-gloucopyranuronate	60	1800
Total- I - Worst Case (Any 8 products on campaign basis.)		1733.33	52000
II.Intermediates			

1	()-3-(Carbamoylmethyl)-5-methyl hexanoic acid	100	3000
2	2- chloromethyl-3,4-dimethoxy pyridine Hydrochloride(Pantoprazole Chloro compound)	333.33	10000
Total - II		433.33	13000
Grand Total (I + II)		2167.66	65000

Additional coal fired boilers (1x4 TPH + 1x 5 TPH) and DG sets (2 x 1000 KVA) will be installed. Water requirement from ground water source will be increased from 7.5 m³/day to 110 m³/day. Industrial effluent generation will be increased from 4.1 m³/day to 33.4 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and ATFD. Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) based biological treatment process followed by RO. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Fly ash will be sold to brick manufacturer. ETP sludge, evaporation salts, solvent residue and spent carbon will be sent to TSDF. Waste oil and used batteries will be sent to authorized recyclers.

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 APPCB.
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 of raw material and products.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. 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.
22. 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 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.
23. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.
25. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
28. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
29. 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.
30. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
31. Attempt to be made for reduction for usage of water.
32. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
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. Action plan for the disposal of fly ash generated from boiler shall be included.
36. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
37. 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.
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. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.

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. 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.
52. 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) 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 public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

6.2.43 Expansion of Bulk Drug Intermediate Manufacturing Unit at Sy. No. 698 & 699, Village Thangadapally, District Nalgonda, Andhra Pradesh by M/s Discovery Intermediates Pvt. Ltd.- Extension of Validity of EC.

Project proponent has informed that environmental clearance was granted by the Ministry vide their letter no. J-11011/607/2007-IA.II (I) dated 12th March, 2008 for Expansion of Bulk Drug Intermediate Manufacturing Unit at Sy. No. 698 & 699, Village Thangadapally, District Nalgonda, Andhra Pradesh by M/s Discovery Intermediates Pvt. Ltd.

Consent to establish was obtained from APPCB vide letter no. APCB/RCP/NLG/CFO/HO/2012/782 dated 21st May, 2012. Meanwhile APPCB imposed a moratorium on Nalgonda District, Andhra Pradesh for new Industries. As per the Hon'ble Court orders SPCB is issuing the CFE.

Now project proponent has informed that the existing environmental clearance was valid upto 11th March, 2013 and requested for extend the validity for another 5 years.

The Committee recommended the project proposal to extend the validity of environmental clearance for another 5 years subject to following additional specific condition:

- i. Products and production capacity shall remain same.
- ii. Bag-filter shall be provided to the boiler.

- iii. No effluent shall be discharged outside the factory premises and Zero effluent discharge concept shall be adopted.
- iv. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water shall be recycled/reused within factory premises.
- v. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

6.2.44 Bulk Drugs Manufacturing Unit at Sy. Nos. 657 & 658, Village & Mandal Kohir, District Medak, Andhra Pradesh by M/s Venshree Laboratories Pvt. Ltd.- extension of the Validity of EC

Project proponent has informed that environmental clearance was granted by the Ministry vide their letter no. J-11011/688/2007-IA.II (I) dated 3rd March, 2008 for Bulk Drugs Manufacturing Unit at Sy. Nos. 657 & 658, Village & Mandal Kohir, District Medak, Andhra Pradesh by **M/s Venshree Laboratories Pvt. Ltd.**

Consent to establish was obtained from APPCB vide letter no. 365/PCB/CFE/RO-SRD/HO/2007 dated 13th December, 2007. Meanwhile APPCB imposed a moratorium on Nalgonda District, Andhra Pradesh for new Industries.

Now project proponent has informed that the existing environmental clearance was valid upto 2nd March, 2008 and requested for extend the validity for another 5 years.

The Committee recommended the project proposal to extend the validity of environmental clearance for another 5 years subject to following additional specific condition:

- i. Products and production capacity shall remain same.
- ii. Bag-filter shall be provided to the boiler.
- iii. No effluent shall be discharged outside the factory premises and Zero discharge concept shall be adopted.
- iv. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water shall be recycled/reused within factory premises.
- v. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

6.2.45 Expansion of Synthetic Organic Chemicals Manufacturing Unit at Village Dhotigudem, Mandal Pochampally, District Nalgonda, Andhra Pradesh by M/s Venalr (P) Ltd. -regarding TORs

The project authorities and their consultant (Team Labs and 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 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 Venalr (P) Ltd. have proposed for **expansion of Synthetic Organic Chemicals Manufacturing Unit** at Village Dhotigudem, Mandal Pochampally, District Nalgonda, Andhra Pradesh. Total land requirement is 8.325 acres and greenbelt will be developed in 2.75 acres. Total project cost for expansion is Rs. 12.0 Crore. Chinna Musi River is flowing at a distance of 6.7 Km. Malkapurm Reserve Forest and Hafizapura RF are located within 10 Km distance. No national park and wildlife sanctuary are located within 10 Km distance. Following products will be manufactured:

Name of the Product	Capacity	
	Kg/day	TPA
Group A*		
a-Amino compound	100	30
Pyrazole	100	30
Total	200	60
Group B*		
Bromophthalide	100	30
Cyanodio HBr	150	45
Cyanophtalide	100	30
Total	350	105

Manufacturing capacity after expansion

S.N.	Name of the Product	Capacity	
		Kg/Month	Kg/Day
I. Bulk drugs			
1	Es-Citalopram Oxalate	2000	66.7
2	Citalopram HBr	4000	133.3
3	Sildenafil Citrate	15000	500
4	Gabapentin	15000	500
5	Olanzapine	1000	33.3
6	Rousvastatin Calcium	1000	33.3
7	Linzolid	2000	66.7
8	Atorvastatin	1000	33.3
9	Sitagliptin	8500	283.3
10	Imatinib Methanesulfonate	8500	283.3
II. Intermediates			
11	5-Cynophtalide	10000	333.3
12	Cynodiol HBr	120000	400
Total		80000	2666.7

Additional coal fired boiler (6 TPH) and DG sets (2x500 KVA + 1 x 1000 KVA) will be installed. Water requirement from ground water source will be increased from 13.76 m³/day to 145.7 m³/day. Industrial effluent generation will be increased from 14.02 m³/day to 53.1 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and ATFD. Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) based biological treatment process followed by RO. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Fly ash will be sold to brick manufacturer. ETP sludge, evaporation salts, solvent residue and spent carbon will be sent to TSDF. Waste oil and used batteries will be sent to authorized recyclers.

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 APPCB.
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 of raw material and products.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.

21. 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.
22. 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 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.
23. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.
25. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
28. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
29. 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.
30. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
31. Attempt to be made for reduction for usage of water.
32. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
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. Action plan for the disposal of fly ash generated from boiler shall be included.
36. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
37. 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.
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. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
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. 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.
52. 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) 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 public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

6.2.46 Bulk Drug Manufacturing Unit at Plot No. 126 to 129, Raichur Growth Centre, Village Chiksugaur, District Raichur, Karnataka by M/s Raichur Laboratories 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 report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within 10 km of interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

M/s Raichur Laboratories Pvt. Ltd. have proposed for setting up of Bulk Drug Manufacturing Unit at Plot No. 126 to 129, Raichur growth centre, Village Chiksugaur, District Raichur, Karnataka. Total plot area is 16193 m². Out of which greenbelt will be developed in 7402.85 m². Cost of project is Rs. 10.63 crore. No forest land is involved. No court case/litigation is pending against the project. Following products will be manufactured:

S.N.	Product	Application	Production (Kg/Month)
1	Meropenem	Anti-Biotic	1000.00
2	Biapenem	Anti-Biotic	300.00
3	Feropenem	Anti-Biotic	1000.00
4	Imipenem	Anti-Biotic	1000.00
5	Dorepenem	Anti-Biotic	1000.00
6	Candesartan	Anti hypertension	500.00
7	Celecoxib	Anti –inflammatory	5000.00
8	Clopidogrel Bisulfate	Anti platelet	3000.00
9	Ketaconazole	Anti fungal	2000.00
10	Levo cetirizine dihydrochloride	Anti histamine	500.00
11	Levetiracetam	Anti Convulsant	3000.00
12	Pantoprazole Magnesium	Proton Pump Inhibitor	1000.00
13	Phenylephrine Hydrochloride	Anti tussive-	3000.00

		Decongestant	
14	Prasugrel Hydrochloride	Anti platelet	500.00
15	Quetiapine Hemifumatrate	Anti psychotic	1000.00
16	Rabeprazole Sodium	Anti-ulcerative	1000.00
17	Solifenacin Succinate	Anti cholinergic	500.00
18	Tamsulosin Hydrochloride	Anti-adrenergic	1000.00
19	Telmisartan	Anti hypertensive	2000.00
20	Bortezomib	Anti neoplastic	50.00
21	Trimebutine Maleate	Anti spasmodic	500.00
22	Cabergoline	Dopamine receptor agonist	500.00
23	Mycophenolate Mofetil	Immuno Suppressant	500.00
24	Raloxifene Hydrochloride	Selective estrogen receptor modulator	1000.00
25	Febuxostat	Xanthine Oxidase Inhibitor	500.00
Note: we manufacture any 10 products at a point of Time and Maximum Production Capacity is 22 MT/month			

Adequate scrubbing system will be provided to the process vents to control process emissions viz. HCl, SO₂ and NH₃. Total fresh water requirement from KIDB water supply will be 121.75 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Inorganic & evaporation salt and ETP sludge will be sent to Treatment Storage Disposal Facility (TSD) for hazardous waste.

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 copy of Gazette Notification issued by the Govt. of Karnataka indicating location of the project in notified Raichur Growth Centre should be included necessarily.
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 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. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
22. Name of all the solvents to be used in the process and details of solvent recovery system.
23. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
24. Details of water and air pollution and its mitigation plan.
25. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
26. An action plan prepared by SPCB 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 from competent Authority for the drawl of water. Water balance chart for the proposed project including quantity of effluent generated recycled and reused and effluent discharge.
29. Attempt to be made for reduction for usage of water.
30. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
31. Zero discharge effluent concepts to be adopted.
32. 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).
33. 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.
34. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
35. 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.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.

37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
38. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
39. 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.
40. 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.
41. Socio-economic development activities shall be in place.
42. Note on compliance to the recommendations mentioned in the CREP guidelines.
43. 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.
44. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
45. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 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. 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.

6.2.47 Bulk Drugs Manufacturing Unit at Sy. No. 406, Village Veleminedu, Mandal Chityal, District Nalgonda, Andhra Pradesh by M/s VSK Laboratories Pvt. Ltd. – Extension of Validity of EC.

Project proponent has informed that environmental clearance was granted by the Ministry vide their letter no. J-11011/589/2007-IA.II (I) dated 21st February, 2008 for Bulk Drugs Manufacturing Unit at Sy. No. 406, Village Veleminedu, Mandal Chityal, District Nalgonda, Andhra Pradesh by **M/s VSK Laboratories Pvt. Ltd.**

Consent to establish was obtained from APPCB vide letter no. 264/PCB/CFE/RO-NLG/HO/2011-2268 dated 24th October, 2011. Meanwhile APPCB imposed a moratorium on Nalgonda District, Andhra Pradesh for new Industries.

Now project proponent has informed that the existing environmental clearance was valid upto 20th February, 2013 and requested for extend the validity for another 5 years.

The Committee recommended the project proposal to extend the validity of environmental clearance for another 5 years subject to following additional specific condition:

- vi. Products and production capacity shall remain same.
- vii. Bag-filter shall be provided to the boiler.
- viii. No effluent shall be discharged outside the factory premises and Zero discharge concept shall be adopted.

- ix. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water shall be recycled/reused within factory premises.
- x. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

6.2.48 Proposed Installing of a new 600 TPD Cement Grinding Unit at Village Jhoom Basti (Debendra Nagar), Tehsil Badarpurghat, District Karimgani, Assam by M/s Cement International 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. The stand alone cement grinding units are covered under Category 'B' as per para 3(b) of the Schedule of the EIA notification 2006, but due to absence of SEIAA/SEAC for Assam, the proposal has been appraised at the Central level.

M/s Cement International Ltd. have proposed for setting up of a new 600 TPD Cement Grinding Unit at Village Jhoom Basti (Debendra Nagar), Tehsil Badarpurghat, District Karimgani, Assam. Total land requirement is 5.36 acres. Acres of land. Out of which, greenbelt will be developed in 1.7 Project cost is Rs. 40.5 Crore. Rs. 360 lakhs and Rs. 40 lakhs are earmarked towards capital cost and recurring cost per annum. Barak River is flowing at a distance of 1.5 Km. No wildlife sanctuaries/national parks are located within 10 Km distance. Clinker from CMCL/MCL Lumshnong, fly ash from Kehalgaon, Gypsum from Bhutan will be used as raw materials. Bag filter will be provided to control particulate emissions. Water requirement from River Barak will be 100 m³/day. Power requirement will be 2 MW.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
5. 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.
6. 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.

7. 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.
8. 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.
9. Details and classification of total land (identified and acquired) should be included.
10. Proposal should be submitted to the SEIAA, Assam for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
11. A list of industries containing name and type in 10 km radius shall be incorporated.
12. 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".
13. Manufacturing process details for the cement grinding ball mill should be included.
14. Mass balance for the raw material and products should be included.
15. Energy balance data for all the components should be incorporated.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
17. 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.
18. 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.
19. Vehicular pollution control and its management plan should be submitted.
20. 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.
21. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
22. Air quality modeling for all the plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included.
23. 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.
24. Ambient air quality monitoring 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
 - 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.
- 25. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
- 26. One season data for gaseous emissions other than monsoon season is necessary.
- 27. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
- 28. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used 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.
- 29. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
- 30. 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.
- 31. 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.
- 32. A note on the impact of drawl of water on the nearby River during lean season.
- 33. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
- 34. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
- 35. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
- 36. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.

37. 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.
38. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
39. 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.
40. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
41. 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.
42. 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.
43. 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.
44. Total capital cost and recurring cost/annum for environmental pollution control measures.
45. 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.
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.

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 Assam 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 State Level Impact Assessment Authority, Assam 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.

6.2.49 Drilling of Exploratory/Appraisal Wells (300) at RJ-ON-90/1 Block at District Barmer & Jalore, Rajasthan by M/s Cairn India 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 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 Cairn India Ltd. have proposed for Drilling of Exploratory/Appraisal Wells (300) at RJ-ON-90/1 Block at District Barmer & Jalore, Rajasthan. Rajasthan block was awarded in 1995 is a joint venture of Cairn India Ltd. and ONGC with CIL as operator. The block area is 3111 Km². More than 160 wells have been drilled so far and have yielded 25 discoveries out of which six have been developed/under development. Total project cost is Rs. USD 1418 million. No forest land is involved. The project area does not fall under notified forest area, national park/sanctuary and CRZ. No court case /litigation is pending against the project. Adequate height of stack will be provided to DG set. A flaring pit of adequate burner will be provided.

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

1. A certified 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, project objectives and project benefits.
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.
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 considering the impact of the proposed plant 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.
7. Distance from nearby critically/severely polluted area as per Notification dated 13th January, 2010, if applicable.
8. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
9. 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.
10. Detailed break up of project cost including recurring cost.
11. Environmental considerations adopted in the selection of the drilling locations for which environmental clearance is being sought. Any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
12. Details of all the facilities including CGS, GGS, OCS, EPS, produced water treatment etc to be installed. If existing facilities, give details.
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. It includes;
 - (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 (day and night both) 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, recycling and its final discharge.
 17. Noise control and measures to minimize disturbance due to light and visual intrusions in case coastally located areas.
 18. Treatment and disposal of wastewater.
 19. Details of generation, treatment and management of solid waste.
 20. Management of spent oil and loose material.
 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, generation, storage accounting and disposal.
 25. Disposal of packaging waste from site.
 26. Oil spill control and emergency plans in respect of recovery/ reclamation.
 27. H₂S emissions control.
 28. Flare gas recovery system to be developed.
 29. Produced oil handling and storage.
 30. Details of scheme for oil collection system alongwith process flow diagram and its capacity.
 31. Details of control of air, water and noise pollution in oil collection system.

32. Disposal of produced/formation water.
33. Whether any burn pits being utilized for well test operations.
34. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.
35. Measures to protect ground water and shallow aquifers from contamination along with its monitoring plan. Action Plan should also include storm water runoff during rainy season and measures to prevent runoff which may be contaminated with oil.
36. Risk assessment and mitigation measures along with disaster management plan and prevention of blow out.
37. Safety plan to be included for the Tea worker in the nearby areas.
38. Environmental management plan.
39. Documentary proof of membership of common disposal facilities, if any.
40. 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 environment. Risk mitigation measures should cover for all phases of the site activity including for developing road access, drilling of wells, operation and maintenance, waste management, decommissioning etc.
41. Total capital and recurring cost for environmental control measures.
42. A copy of Corporate Environment Policy of the 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.
43. 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.
44. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
45. 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.
- (vii) 'Certificate of Accreditation' issued by the QCI to the environmental consultant should be included.

It was decided that TORs together with Public Hearing 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 Rajasthan State Pollution Control Board for public hearing to be conducted in two districts. The issues emerged and response to the issues raised during public hearing should be incorporated in the EIA report.

6.2.50 Pigment Manufacturing Unit at Sy. No 71/2, Village Shikarpur, Taluka Bhachau, District Kutchh, Gujarat by M/s Green Sea Industries 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 report. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Green Sea Industries Pvt. Ltd. have proposed for setting up of Pigment Manufacturing Unit at Sy. No 71/2, Village Shikarpur, Taluka Bhachau, District Kutchh, Gujarat. Total plant area is 17907 m². Total project cost is Rs. 5 Crore. Out of which Rs. 1 Crore is earmark towards capital cost for pollution control measures. No wildlife sanctuary /reserve forests are located within 10 Km distance. Following product will be manufactured:

S.N.	Product	Quantity (MTPM)
1	CPC Green-7	50

Cyclone and bagfilter will be provided to coal fired boiler & thermic fluid heater. Three stage scrubber system will be provided to control process emissions. Total water requirement will be 114 m³/day. out of which, fresh water requirement will be 38 m³/day and balance will be sourced from recycled water. Effluent generation will be 79.6 m³/day and treated in ETP followed by RO and evaporator. ETP sludge will be sent to TSDF. Used oil will be sent authorized recycler/re-processors.

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 materials required and source, mode of storage.
16. Explore the possibility to use the cleaner technology developed by the CPCB for pigment manufacturing.
17. Manufacturing process details alongwith the chemical reactions and process flow chart.
18. Action plan for the transportation of raw material and products.
19. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
20. 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.
21. 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, HCl, 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.
22. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan
26. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
27. An action plan to control and monitor secondary fugitive emissions from all the sources.

28. 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.
29. Permission from Competent Authority for the drawl of 38 m³/day water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
30. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent.
31. Action plan for implementation of zero effluent discharge.
32. 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).
33. 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.
34. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
35. Material Safety Data Sheet for all the Chemicals are being used/will be used.
36. A copy of the 'Memorandum of Understanding' signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated and iron sludge.
37. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
38. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
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 Thresh 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. Socio-economic development activities shall be in place.
43. Note on compliance to the recommendations mentioned in the CREP guidelines.
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 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. Total capital cost and recurring cost/annum for environmental pollution control measures.
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. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
50. 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 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 raised alongwith the replies 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.

6.2.51 Expansion of Pesticides Manufacturing Unit at D-18, MIDC, Village Kurkumbh, Taluka Daund, District Pune, Maharashtra by M/s Shogun Organics 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 units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Shogun Organics Ltd. have proposed for expansion of Synthetic Organic Chemicals Manufacturing Unit at D-18, MIDC, Village Kurkumbh, Taluka Daund, District Pune, Maharashtra. Existing unit was established in 0.9.1993. Total plot area is 31,952,72 m². Total project cost is Rs. 14.3115 Crore. Greenbelt will be developed in 7447 m². Following products will be manufactured:

S.N	Product (Existing)	Quantity (MTPM)
1	d-trans Allethrin Tech	2.5
2	Prallethrin Tech	1
3	Allethrin Tech.	1
4	Transfluthrin Tech.	1.2
By -Products		
1	Hydrochloric Acid	445
2	Sodium Sulphite	780

S.N	Product Description	Quantity (MTPM)
1	Chrysanthemic Acid Chloride	2.25 MT
2	Allethlone Alcohol	10 MT
3	Prallethrolone Alcohol	10 MT

S.N	Product (Additional)	Quantity (MTPM)
1	Imidacloprid Tech	2.5
2	Fipronil Tech.	2.5
3	Permethrin Tech	1.2
4	Cypermethrin Tech	1.5
5	Deltamethrin Tech	2.0
6	Bifenthrin Tech	1.5
7	DEET Tech	1.5

Formulations

S.N	Product Description	Quantity per Month
1	LV with 0.88 % Transfluthrin	2 Lacs bottles of 35 ml/45 ml
2	LV with 1.6 % Transfluthrin	2 Lacs bottles of 35 ml/45 ml
3	Imidacloprid 2.15% Gel	50, 000 tubes
4	Imidacloprid 17.8% SL	50, 000 tubes
5	Imidacloprid 30.5% SC	50, 000 tubes
6	Fipronil 5% Gel	50, 000 tubes
7	Transfluthrin 1% for Export	75000 sachets

Scrubber will be provided to control process emissions. Water requirement will be increased from 13.36 m³/day to 25.81 m³/day after expansion. Industrial effluent generation will be increased from 5.2 m³/day to 7.75 m³/day. No effluent will be discharged outside the plant premises. Hazardous waste will be sent to TSDF.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of 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. Justification of the project.
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. A copy of Gazette Notification issued by the Govt. of Maharashtra indicating location of the project in notified MIDC should be included necessarily.
9. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
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. Infrastructure facilities including power sources.
12. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
13. Project site location alongwith photographs and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
14. Present land use based on satellite imagery for the study area of 10 km radius.
15. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities.
18. Detailed list of raw material required and source, mode of storage and transportation.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. 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.
22. 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, HCl including HC and VOCs 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.
23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.

25. Design details of ETP, incinerator, if any alongwith control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan
27. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
28. An action plan to control and monitor secondary fugitive emissions from all the sources.
29. 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.
30. Permission from Competent Authority for the drawl of 25.81 54 m³/day water from the MIDC water supply. Water balance chart including quantity of effluent generated recycled and reused and discharged.
31. Action plan for 'Zero' discharge of effluent should be included.
32. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
33. 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 management of fly ash generated from boiler should be included.
34. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
35. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
36. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal.
37. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
38. Risk assessment for storage for chemicals/solvents.
39. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
40. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
41. 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.
42. Details of occupational health programme.
 - viii) To which chemicals, workers are exposed directly or indirectly.
 - ix) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - x) What measures company have taken to keep these chemicals within PEL/TLV.
 - xi) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - xii) What are onsite and offsite emergency plan during chemical disaster.
 - xiii) 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) 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 Committee noted that no public hearing / consultation is required due to project being located in notified RIICO as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006 subject to submission of documents in support of industrial area. The final EIA/EMP report should be submitted to the Ministry for obtaining environmental clearance.

6.2.52 Proposed Multi Products Pipeline (2.823 MTPA; 294 Km) from Irugur (Coimbatore) to Bangalore (Devanagonth) by **M/s BPCL. -regarding TORs**

M/s BPCL have proposed for Multi Products Pipeline (2.823 MTPA; 294 Km) from Irugur (Coimbatore) to Bangalore (Devanagonth). Pipeline passes through Tamil Nadu (270 Km) and Karnataka (24 Km). Total project cost is Rs. 677.96 Crore. Pipeline will pass through 6 railway crossing, 3 nos. of national highway crossing, forest, 2 majoe rivers and state higways crossing.

Pipline is also passing through 2.5 km reserved forest. Pipeline is not passing through national parks/sanctuaries/coral reefs/ecologically sensitive areas.

After deliberations, the Committee noted that since proposed project is not located in National Park, Sanctuaries/eco-sensitive areas including LNG terminal as confirmed by the PAs, proposed pipeline project does not attract the provisions of EIA Notification, 2006. However, other statutory clearances under the Wildlife (Protection) Act, 1972, Air and Water Act and CRZ Notification as may be required in this case shall be obtained. All the necessary safety precautions shall be adopted during laying of the pipeline.

6.2.53 Expansion of Sugar Cane Crushing Capacity(from 10000 TCD to 15000 TCD), Molasses based Distillery (from 60 KLPD to 120 KLPD) alongwith Cogeneration Power Plant (from 45 MW to 80 MW) at Village Beerangaddi & Hunshyal, Taluk Gokak, District Belagavi, Karnataka by **M/s Satish Sugar 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 sugar industries (> 5000 TCD cane crushing) are listed at S.N. 5(j) under category 'B' and appraised at state level. All molasses based distilleries are listed at S.N. 5(g) (i). All Co-generation Plant based on biomass (\geq 20 MW) are listed at S.N. 5(j) under category 'A' and project proposal is treated as category 'A' project.

M/s Satish Sugar Ltd. have proposed for expansion of Sugar Cane Crushing Capacity(from 10000 TCD to 15000 TCD), Molasses based Distillery (from 60 KLPD to 120 KLPD) alongwith Cogeneration Power Plant (from 45 MW to 80 MW) at Village Beerangaddi & Hunshyal, Taluk Gokak, District Belagavi, Karnataka. Power generation (4 MW) from proposed spent wash will be incinerated in incineration boiler. Existing land acquired is 159.30 acres and no additional land is required. Out of which, greenbelt is developed in 49.90 acres of land. Ghataprabha River is flowing at a distance of 3.45 Km. Total project cost is Rs. 266 Crore. Rs. 45 Crore is earmarked towards capital cost for implementing environmental management plan. ESP will be provided to bagasse/coal fired boiler (100 TPH x 2 Nos.). Cyclone dust collector will be provided to incineration boiler (20 TPH). Fresh water requirement from River Ghataprabha for sugar unit will be increased from 927 m³/day to 1476 m³/day. Fresh water requirement from River Ghataprabha for distillery unit will be increased from 983 m³/day to 1966 m³/day. Spent wash will be evaporated in MEE followed by incineration. No effluent will be discharged out side the plant premises. Bagasse will be used as fuel for captive power generation. Press mud will be converted into manure. ETP sludge will be used as manure. Power requirement will be 22 MW, which will be met from CPP.

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. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the KSPCB.
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. List of existing distillery units in the study area alongwith their capacity.
10. Number of working days of the distillery unit and CPP.
11. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
12. Manufacturing process details of sugar plant and CPP alongwith process flow chart.
13. Details of raw materials and source of raw material molasses, bagasse etc.
14. 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.
15. 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.
16. 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.
17. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
18. An action plan to control and monitor secondary fugitive emissions from all the sources.
19. Details of boiler and its capacity. Details of the use of steam from the boiler.
20. Ground water quality around existing spent wash storage lagoon and the project area.
21. Details of water requirement, water balance chart for Sugar and Co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
22. Prior 'permission' from Competent Authority for the drawl of total fresh water. Details of source of water supply.
23. Hydro-geological study of the area for availability of ground water.

24. Proposed effluent treatment system for sugar unit as well as CPP and scheme for achieving 'zero' discharge.
25. Lagoon capacity for sugar unit and spent wash as well measures to be taken to control ground water contamination.
26. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
27. Green belt development as per the CPCB guidelines.
28. List of flora and fauna in the study area.
29. Noise levels monitoring at five locations within the study area.
30. 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.
31. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
32. Details of bagasse storage. Details of press mud requirement.
33. 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.
34. Details of occupational health programme.
 - ix) To which chemicals, workers are exposed directly or indirectly.
 - x) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - xi) What measures company have taken to keep these chemicals within PEL/TLV.
 - xii) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - xiii) What are onsite and offsite emergency plan during chemical disaster.
 - xiv) Liver function tests (LFT) during pre-placement and periodical examination.
 - xv) Details of occupational health surveillance programme.
35. 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:

- viii. All documents should be properly indexed, page numbered.
- ix. Period/date of data collection should be clearly indicated.
- x. Authenticated English translation of all material provided in Regional languages.
- xi. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- xii. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- xiii. 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.
- xiv. '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.

6.3.0 Reconsideration

6.3.1 Proposed Greenfield Cement plant for production of Clinker- 2.00 MTPA, Cement 3.23 MTPA and Captive power plant Coal based -50 MW at Kirni Village, Gulbarga Taluq & District Karnataka by **M/s Gulbarga Cement Limited– Reg. Environmental Clearance**

Project proposal was considered in the 3rd Reconstituted *Expert Appraisal Committee (Industry) meeting held during 3rd – 5th December, 2012 and the Committee desired following information:*

1. Coal linkage showing the coal quantity parameters alongwith supporting documents to be submitted.
2. Layout plan showing the greenbelt.
3. R & R plan for small and medium farmers to be submitted.
4. Hydrogeological study of the area to be carried out and report submitted.
5. Plan of water management vis-à-vis drinking water to the villagers as well as fluoride management plan for drinking water in the fluoride affected area.

Project proponent vide letter dated 21st January, 2013 submitted following additional information.

1. They will buy coal through E-auction or use imported coal.
2. The total plant area is 135 ha. out of which greenbelt will be developed in 45 ha.
3. Compensation for the land acquisition will be paid as per the price fixed by the District Administration.
4. The studies carried out on techno feasibility study for drawal of water from Bhima River is submitted.
5. A total of ten deflouridation units will be installed, which will serve 10000 persons every day.

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

- i. Particulate emissions shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system viz. Bag filters and stacks of adequate height etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Bangalore, Karnataka State Pollution Control Board (WBPCB) and CPCB regularly.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.
- iii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB should be followed.
- iv. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. All the raw material stock piles should be covered. A closed clinker stockpile system shall be provided. All conveyers should be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling.
- v. Asphaltting/concreting of roads and water spray all around the stockyard and loading/unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading

and unloading points, transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.

- vi. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and should not be overloaded. Vehicular emissions should be regularly monitored.
- vii. Total water requirement from River Bhima for the cement plant, power plant including colony shall not exceed 4500 m³/day and necessary permission for the drawl shall be obtained. All the treated wastewater should be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.
- viii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- ix. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process used for cement manufacturing. Spent oil and batteries should be sold to authorized recyclers / reprocessors only.
- x. Green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.
- xi. All the commitments made to the public during public hearing/public consultation meeting held on 25th July, 2012 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on earlier Public Hearing Issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiii. 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.

6.3.2 Phenol Formaldehyde Resin (750 MTM), Urea Formaldehyde Resin (100 MTM), Melamine Formaldehyde Resin (250 MTM) & Laminated sheets (2.5 lakhs/M) at Survey No. 5/P, 6/2, Navavas, Taluka Talod, District Sabarkantha, Gujarat by **M/s Mother Lam Pvt. Ltd.– Reg. TOR.**

Project proposal was considered in the 36th *Expert Appraisal Committee (Industry-2) meeting held during 11th – 12th June, 2012 and the committee was of the view that a detailed justification for setting up the unit in close proximity of river to be provided. In addition, water consumption is on high side. Therefore, adequate water balances needs to be provided.*

Project proponent vide letter dated 21st September, 2012 informed that Mishwo River is flowing at distance of 2.42 Km from the project site. The Timba lake is located at a distance of 11 Km. Water requirement has been revised from 64.5 m³/day to 33.87 m³/day.

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

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, if any, from the State Forest Department
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, 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. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
 27. An action plan to control and monitor secondary fugitive emissions from all the sources.
 28. 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.
 29. Permission for the drawl of 33.87 m³/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
 30. Action plan for 'Zero' discharge of effluent shall be included.
 31. Treatment of phenol in the effluent, if any.
 32. 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).
 33. 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.
 34. Explore the possibility to use fuel other than wood.
 35. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
 36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
 37. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
 38. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
 39. A write up on "Treatment of workers affected by accidental spillage of methanol/phenol".
 40. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
 41. An action plan to develop green belt in 33 % area
 42. 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.
 43. 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.
- 44. Details of occupational health surveillance programme.
- 45. Socio-economic development activities shall be in place.
- 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. 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.
- 49. 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.
- 50. 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 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.
- 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. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.

- viii. 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.

6.3.3 Expansion of Iron Ore Pelletization, Sinter Plant, SMS/MS Billet, Seamless pipe, MS bars/Rods, Oxygen Gas in the Existing Plant at Village Marakuta, Tehsil & District Jharsuguda, Odisha by M/s MSP Metalics Limited- **regarding TORs.**

Project proposal was considered in the 3rd Reconstituted *Expert Appraisal Committee (Industry) meeting held during 3rd – 5th December, 2012 and the Committee prescribed TOR alongwith public hearing. The Committee noted that the project is located in CEPI area and cost of project is Rs. 1279 Crore. Therefore, the Committee found that there is no ground to exempt public hearing under 7 (ii) of EIA Notification, 2006.*

6.3.4 Additional Exploratory Drilling in KG (On land) PEL Blocks Andhra Pradesh by M/s Oil and Natural Gas Corporation Limited.- **reg. TOR to EC.**

Project proposal was considered in the 34th Reconstituted *Expert Appraisal Committee (Industry) meeting held during 13th– 14th April, 2012 and the Committee desired following information:*

1. Repeat the ambient air quality monitoring in respect of NOx and methane and non methane hydrocarbon.
2. Hazardous waste management methods as per guidelines.
3. To conduct public hearing.

Project proponent vide letter dated 5th February, 2013 submitted following additional information.

- i. The ambient air quality monitoring in respect of NOx and methane and non-methane hydrocarbon is submitted.
- ii. Details of hazardous waste management are submitted.
- iii. Public hearing reports conducted on 11.10.2011, 04.11.2010 and 30.11.2011 for same blocks have been submitted.
- iv. Certified compliance report from regional office at Bangalore. Report seems to be satisfactory.

Since three public hearings have been conducted for different drilling projects for the same block within the period of one year, the Committee exempted the public hearing under section 7 (ii) as per EIA Notification, 2006.

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

- i. Ambient air quality should be monitored at the nearest 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, CH₄, HC, Non-methane HC etc.
- ii. Mercury should be analyzed in air, water and drill cuttings twice during drilling period.
- iii. Approach road should be made pucca to mitigate generation of suspended dust.
- iv. 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.
- v. Total water requirement should not exceed 20 m³/day/well and prior permission should be obtained from the Competent Authority.
- vi. 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.
- vii. 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 Bangalore.
- viii. Good sanitation facility should be provided at the drilling site. Domestic sewage should be disposed off through septic tank/ soak pit.
- ix. 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.
- x. 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.
- xi. 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.

- xii. 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.
- xiii. The Company should carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected should be submitted six monthly to the Ministry and its Regional Office at Bangalore.
- xiv. 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.
- xv. Emergency Response Plan (ERP) should be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvi. 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.
- xvii. Occupational health surveillance of the workers should be carried out as per the prevailing Acts and Rules.
- xviii. 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.
- xix. Restoration of the project site should be carried out satisfactorily and report should be sent to the Ministry's Regional Office at Bangalore.
- xx. 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 Bangalore.
- xxi. Under Corporate Social Responsibility (CSR), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.
- xxii. Company should have own Environment Management Cell having qualified persons with proper background.
- xxiii. 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.

xxiv. Drilling site should be atleast 500 m away from the school.

6.3.5 Increase in production of Pentaerythritol (450 MTPM to 560 MTPM) and Sodium Formate (275 NTPM to 336 MTPM) at Plot No.B5-B10, Sy.No.126-131, 137 & 165 at village Kudikadu, Mandal & District Cuddalore, Tamil Nadu by M/s Asian Paints Limited (TOR to EC)

Project proposal was considered in the 1st Reconstituted *Expert Appraisal Committee (Industry) meeting held during 24th–25th September, 2012 and the Committee recommended following specific conditions:*

- i Total fresh water requirement from SIPCOT water supply shall not exceed 437.7 m³/day and prior permission shall be obtained from the concerned authority and a copy submitted to the Ministry's Regional Office at Bangalore. No ground water shall be used.
- ii Total industrial wastewater generation should not exceed 380 m³/day. Industrial effluent should be treated in ETP followed by Reverse Osmosis. Treated effluent should be recycled/reused within factory premises after achieving desired water quality for various purposes. Rejects from RO should evaporated in MEE followed by ATFD.

Now, project proponent informed that actual fresh water requirement after expansion will be 695 m³/day instead of 437.7 m³/day. Industrial wastewater generation will be 161 m³/day instead of 380 m³/day. Production capacity figure of Sodium Formate should be 336 MTPM instead of 335 MTPM. Further, project proponent has submitted revised water balance chart.

After detailed deliberations, the Committee found additional information satisfactory and recommended following specific conditions:

- i Total fresh water requirement from SIPCOT water supply shall not exceed 695 m³/day and prior permission shall be obtained from the concerned authority and a copy submitted to the Ministry's Regional Office at Bangalore. No ground water shall be used.
- ii Total industrial wastewater generation should not exceed 161 m³/day. Industrial effluent should be treated in ETP followed by Reverse Osmosis. Treated effluent should be recycled/reused within factory premises after achieving desired water quality for various purposes. Rejects from RO should evaporated in MEE followed by ATFD.

- 6.3.6 Exploratory Drilling in Offshore NELP Block KG-OSN-2004/1, KG Basin in AP by M/s ONGC Ltd.-regarding amendment in environmental clearance.

Project proposal was considered in the 2nd Reconstituted *Expert Appraisal Committee (Industry) meeting held during 29th-31st October, 2012 and the Committee* recommended the proposal for amendment in environmental clearance. Environmental clearance was granted by the MoEF vide letter no J-11011/541/2007-IA II (I) dated 3rd June, 2009 for drilling of 7 wells. The Committee exempted the public hearing under 7 (ii) of EIA Notification, 2006.

6th March, 2013

6.4.0 Consideration of the Projects:

- 6.4.1 Integrated Steel Plant (4 MTPA), captive power plant (400 MW) and captive port in district Jagatsinghpur, Orissa of **M/s POSCO (India) Private Limited – Revalidation of environmental clearance regarding.**

The above proposal was accorded Environmental Clearance (EC) by MoEF vide letter no. J-11011/285/2007-IA II (I) dated 19.7.2007. Subsequently, MoEF constituted a Committee under the chairmanship of Ms. Meena Gupta to review the environment and other clearances. The Committee submitted two reports one by Ms. Meena Gupta and another by Dr.Urmila Pingle, Dr.Devendra Pandey and Dr.V.Suresh on 18th October, 2010. The EC was reviewed by the EAC (Industry-1) in its 15th and 17th meeting held during 25-27th October, 2010 and 13-14th December, 2010. Based on the recommendations of EAC, the additional conditions were stipulated by the MoEF vide letter dated 31.1.2011.

Thereafter, the Project Proponent (PP) has requested MoEF for extension of validity of EC for 5 years. The proposal was placed before the 37th Meeting of the Expert Appraisal Committee (Industry-1) held during 14-15th June, 2012. The EAC recommended revalidation of the environmental clearance granted to M/s POSCO India Private Limited by a period of five years i.e. up to 18th July, 2017 with due regard to the observations recorded as to meeting held on 13-14th December 2010 whereat the comprehensive EIA prepared by the M/s POSCO India Pvt. Ltd, consequent to the original environmental clearance accorded on 19.7.2007 was considered.

Meanwhile, the Hon'ble National Green Tribunal vide judgement dated 30.3.2012 in Appeal No.8/2011: Prafulla Samantray & Ors Vs Union of India & Ors passed the following directions:

- i. The MOEF shall make a fresh review of the Project with specific reference to the observations/ apprehensions raised by the Review Committee in both the reports i.e. the one given by Ms. Meena Gupta and the other by the Majority Members apart from consideration to the views of the EACs and also with reference to the observations made in this Judgment by issuing fresh TOR accordingly.

- ii. However, the final order dated 31.01.2011 made by the MOEF shall stand suspended till such fresh review, appraisal by the EACs and final decision by MOEF is completed, since some study might have already been initiated in view of the final order dated 31.1.2011.
- iii. The MOEF shall constitute the said fresh review committee by engaging subject matter specialists for better appreciation of environmental issues. The project proponent shall be asked to furnish relevant details required for the said review by the newly constituted committee to recommend specific conditions to be attached/ revised in the ECs granted by MOEF.
- iv. The MOEF shall define timelines for compliance of the conditions in the ECs and considering the nature and extent of the project, MOEF should establish a special committee to monitor the progress and compliance on regular basis.
- v. The MOEF shall consider optimizing the total land requirement for 4 MTPA Steel plant proportionately instead of allotting entire land required for 12 MTPA steel plant which is an uncertain contingency.
- vi. The MOEF shall consider feasibility of insisting upon every major industry that requires large quantity of water to have creation of its own water resource facility rather than using/ diverting the water that is being meant for drinking/ irrigation purposes.
- vii. It is desirable that the MOEF shall establish clear guidelines/directives for project developers that they need to apply for a single EC alone if it involves components that are essential part to the main industry such as the present case where main industry is the Steel plant, but it involves major components of port, captive power plant, residential complex, water supply, etc.
- viii. It is desirable that MOEF shall undertake a study on Strategic Environmental Assessment for establishment of number of ports all along the coastline of Orissa with due consideration to the issues related to biodiversity, risks associated, etc.
- ix. It is also desirable that MOEF shall take a policy decision that in large projects like POSCO where MOUs are signed for large capacities and upscaling is to be done within a few years, the EIA right from the beginning, should be assessed for the full capacity and EC granted on this basis.

In pursuance to the directions given by the Hon'ble NGT, MoEF constituted an Expert Committee under the chairmanship of Shri K.Roy Paul was constituted. The Committee submitted its report to the Ministry on 22.10.2012. Keeping in view of the observations/recommendations made by the said Expert Committee, the previous recommendation of the EAC (Industry -1) for extension of validity period of EC accorded to M/s POSCO India Private Limited has become in fructuous.

In view of the above, Ministry has placed aforesaid all expert committees report along with the Hon'ble NGT judgment dated 30.3.2012 before the Reconstituted Expert Appraisal Committee (Industry) to consider the proposal for revalidation. The PP also made a detailed presentation before the Committee. On behalf of Odisha Industrial

Infrastructure Development Corporation, Government of Odisha - Shri Niranjan Sahu, Chief General Manager (Land) attended the meeting.

The proponent presented the current land acquisition status, construction schedule, status of regulatory approvals, project facilities, findings of the comprehensive EIA report, response of M/s POSCO India Private Limited to the recommendations of the Shri K.Roy Paul Committee report. It was informed by the proponent that as an intermediate plan they are planning to establish the 4 MTPA Integrated Steel Plant (ISP) in area of 2700 acres. However, their original plan of setting up of 12 MTPA ISP over an area of 4004 acres has not changed.

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

- i. Revised layout plan for 2700 acres of land, indicating survey numbers and grid wise the process units to be coming up. The map should indicate components of 4MTPA and 8 MTPA in the area with different markings(colours) to clearly distinguish both in the map(4MTPA layout over that superimposed 8MTPA Layout)
- ii. Revised lay out plan shall also show the 33% of green belt area
- iii. Commitment from IDCO to the proponent indicating the time frame for handing over 2700 acres of land
- iv. Iron ore linkage documents
- v. Commitment regarding Liquefied Natural Gas (LNG) supply for the CPP
- vi. Permission for the water withdrawal for the ISP project from the Competent Authority shall be submitted
- vii. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
- viii. Recent satellite image of the study area
- ix. Baseline Ambient Air Quality shall be monitored for one month period and the data shall be submitted
- x. 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.
- xi. MoU with cement plants for slag utilization
- xii. Revised water balance diagram for 4 MTPA ISP
- xiii. Possibility of setting up of water storage facilities for 3-4 months shall be explored
- xiv. Details of setting up of residential/ township facilities shall be explored
- xv. Information on finex technology along with its operational parameters data from the existing plants of POSCO
- xvi. Feed preparation system for the finex process units

6.4.2 Environmental Clearance for 3 MTPA Cement, 2 MTPA Clinker and 3 MTPA Captive Limestone Mine at Village Alsindi in District Mandi in Himachal Pradesh by M/s Lafarge India Private Limited – **Revalidation of Environmental Clearance.**

The above proposal was accorded Environmental Clearance (EC) by MoEF vide letter no. J-11011/241/2007-IA II (I) dated 8.6.2009. As per the EC accorded, total area for the cement plant is 110 ha (108 ha under protected forest and 2 ha. private land).

Out of total 800 ha area for lime stone mining, 750 ha mine area is protected forest and 50 ha is private land. Subsequently, the National Environmental Appellate Authority (NEAA) vide order dated 30.8.2010 in Appeal No. 34 & 35/2009, quashed the environmental clearance accorded to M/s Lafarge India Private Limited on 8.6.2009. M/s Lafarge India Private Limited filed a Civil Writ Petition 6802/2010 in the Hon'ble High Court of Himachal Pradesh praying to quash and set aside the order dated 30.08.2010 passed by NEAA.

The Hon'ble High Court of Himachal Pradesh on 12.8.2011 passed the judgment. The operative part of the judgment is as follows:

- i. The environmental clearance granted by the Expert Appraisal Committee (EAC) has to be set aside. The matter is remanded to the EAC who should direct the Sub Committee to visit the site and submit its report. Before visiting the site, the Sub Committee should ensure that sufficient notice is given to the people of the area so that they can appear before the Members of the Sub Committee and put -forth their views. The Sub Committee may if it so desire make a video recording of its site visit and its interaction with the people. The EAC after considering the report of the Sub Committee should decide the matter afresh.
- ii. The EAC to ensure that it gives its finding within a period of two months from the date a copy of this order is produced before it by any of the parties. Needless to say, any party aggrieved by the order of the EAC can approach the appropriate forum including the National Green Tribunal for redressal of their grievances.

The matter was placed before the EAC (Industry-1) in its 28th meeting held on 26th & 27th September, 2011. As per the order of the Hon'ble High Court, a Sub Committee comprising of following members was constituted to visit the mine site and cement plant area:

- | | | |
|-------------------------------|---|----------|
| 1) Shri M S Nagar | - | Chairman |
| 2) Professor Manju Mohan | - | Member |
| 3) Professor C.S. Dubey | - | Member |
| 4) DR. K. SANKAR | - | Member |
| 5) Representative of the MoEF | | |

In compliance with the Hon'ble High Court's directions, the Deputy Commissioner, Mandi and the Member Secretary, Himachal Pradesh Pollution Control Board (HPPCB) were requested by the MoEF give sufficient notice to the people of the area including their Sarpanchs, Mahila Mandals & local NGOs if any and make all the necessary arrangements for the meeting of Sub-committee with local people on 17.10.2011. The SDM, Karsog, Dist. Mandi vide his office letter dated 10.10.2011 informed the above and the local Govt. Officials about the Sub-committee's visit and requested to participate in the same. The HPSPCB has also advertised about the Sub-committee's visit in the local news paper on 15.10.2011.

The sub-committee, namely Shri M.S. Nagar, Prof. C.S. Dubey, Dr. K.Sankar and Shri M. Ramesh (Scientist 'C' & Representative of MoEF) undertook the study tour as above from 16.10.2011 to 18.10.2011. Shri Surendra Kumar, Scientist 'F', MoEF

Regional Office, Chandigarh and Shri Ravinder Sharma, AEE, HPPCB accompanied & assisted the sub-committee. The sub-committee submitted its report to the EAC (Industry-1) and also made a presentation. In conclusion, the sub-committee feels that taking an overall fresh view of the matter, it would be in the fitness of things to revive the impugned Environmental Clearance of June 2009 and re-issue the same along with additional special conditions indicated in the report. Some of these would have to be complied with prior to the issue of EC and the rest to be implemented and reported back, as the project construction and operation progresses.

The EAC (Industry-1) accepted the recommendations of the sub-committee and sought the following additional information from the proponent in its 29th meeting held during 24-25th October, 2011.

- i. Explore the feasibility of surface mining shall be studied by a very reputed agency within 3 months and the report shall be submitted to EAC.
- ii. A note on the impact of increased crusher capacity.
- iii. An authenticated map of the study area showing the location of Majathal WLS, RF, PF, Airport, Golf Course, Tourist Centers etc. In the event, the Majathal WLS is found to be within 10 kms (as the crow flies) between the boundary to boundary of the lease area and the WLS, then a wild life conservation plan for the Schedule fauna should be submitted, duly authorized by the prescribed authority, i.e. Chief Wild Life Warden of HP.

The proponent vide letter 25.6.2012 submitted the aforesaid additional information to the Ministry. The proponent also provided the copy of application submitted for obtaining NOC from Standing Committee for National Board of Wildlife to the Ministry. Shri M.S.Nagar, Chairman - Sub Committee has attended the meeting and briefed the members about the findings of the Sub-Committee report. The project proponent also made a presentation before the Committee.

The proponent informed that the Central Institute of Mining and Fuel Research Institute (CIMFR) have undertaken a study to explore the feasibility of surface mining. CIMFR recommended that application of surface miner is not feasible as the Cut-ability Index and Ultimate crushing strength of Limestone in the proposed deposit is very high. Further, the proponent informed that there will be no increase in crusher capacity. The capacity of crusher remains as 1200 tons/hour. As per the authenticated map submitted by the proponent, the Majathal Wildlife Sanctuary is located at aerial distance of 9 km from the boundary of the mining lease area and 8.25 km from the plant area. Additionally, the proponent submitted the Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden. An amount of Rs.2,13,77,520.00 is earmarked for the implementation of the Wildlife Conservation Plan. The modified mining plan was approved by IBM vide letter dated 23.3.2010 for an area of 800 ha.

After detailed deliberations, the Committee found the additional information submitted by the proponent is adequate. The Committee recommended the revalidation of the environmental clearance granted to M/s Lafarge India Private Limited and suggested to stipulate following additional specific conditions including the recommendations given in the Sub-Committee visit report while considering for revalidation of environmental clearance.

- i. A comprehensive Disaster Management Plan incorporating calamity specific ways and means of addressing them shall be prepared and report submitted to the Ministry's Regional Office of this Ministry at Chandigarh, SPCB and CPCB. Such preparedness shall also include water and airborne epidemics too.
- ii. The company shall contribute their cost sharing towards the widening and strengthening road network in consultation with the State Transport Department and PWD.
- iii. The company shall undertake an adequate care and maintenance of the conveyor routes in collaboration with the State Public Welfare Department.
- iv. The company shall adopt a Best Mining Practice for the given mining conditions. In the mining area, adequate no. of check dams, retaining structures and settling ponds for the rain water from the catchment area shall be provided.
- v. The company shall carry out the vibration studies when the regular mining with blasting commences to evaluate the zone of influence and impact of blasting on the neighborhood. The report shall be submitted to the Ministry's Regional Office of this Ministry at Chandigarh.
- vi. The company shall make necessary alternative arrangements in consultation with the forest department to provide alternate areas for livestock grazing for the local people.
- vii. Rehabilitation and Resettlement (R & R) Plan shall be prepared and submitted to the State Government of Himachal Pradesh. This shall be implemented as per the R & R Policy of the State Government of Himachal Pradesh. All the recommendations mentioned in the R & R Plan shall be strictly followed including suitable employment and other facilities to all the oustees. Compensation paid in any case shall not be less than the norms prescribed under National Resettlement and Rehabilitation Policy, 2007.
- viii. The funds earmarked for the implementation of the Wildlife Conservation Plan shall not be diverted for any other purposes.
- ix. A 10 member monitoring committee with Chief Conservator of Forests - Wildlife, Himachal Pradesh as Chairman shall be constituted. The Committee shall meet twice in a year to review programme of works prescribed in the conservation plan. The monitoring reports should be forwarded to Chief Wildlife Warden with a copy to the Regional Office of this Ministry at Chandigarh for ensuring compliance of observations/recommendations of the monitoring reports.

6.4.3 Augmentation of Clinker Production Capacity from 2.05 MTPA to 3.5 MTPA at Village Baga, District Solan, Himachal Pradesh by M/s Jaiprakash Associates- Amendment in EC – Discussion of site visit report of Sub Committee of EAC – regarding

M/s Jaiprakash Associates Limited have proposed for amendment in the Environmental Clearance accorded on 18.5.2006 for augmentation of Clinker Production Capacity from 2.05 MTPA to 3.5 MTPA at Village Baga, District Solan, Himachal Pradesh. It was informed that augmentation will be done without installing additional equipments and no additional area is required. Augmentation will be done by optimizing the operation. Existing plant area is 166.01 ha. Environmental clearance was accorded by the MoEF vide their letter no. J-11011/26/2006-IA II (I) dated 18th May, 2006 for 2.05 MTPA Clinker and 2.54 MTPA Cement Plant. The proponent requested for amendment of environmental clearance accorded on 18th May, 2006 due to enhancement of clinker production capacity from 2.05 MTPA to 3.5 MTPA. After deliberations, the Committee in its 4th meeting held during 8-9th January, 2013 desired that a Sub-committee of EAC should visit the project site and submit a report to the REAC(I) before further considering the proposal for amendment of environmental clearance. Accordingly, a sub-committee consisting of following members visited the site on 22-24th February, 2013.

- i. Dr.R.K.Garg, Vice Chairman, EAC – Industry
- ii. Dr.P.S.Dubey, Member, EAC – Industry
- iii. Dr.P.L.Ahujarai, Adviser, M/o Environment and Forests
- iv. Dr.Surendra Kumar, Director, Regional Office – Chandigarh, M/o Environment and Forests
- v. Shri Sundar Ramanathan, Dy.Director, M/o Environment and Forests

The sub-committee submitted its report to the REAC (Industry) and also made a presentation.

As per the site visit report, the sub-committee had a visit of the plant and also had a round of one of the two limestone mines, examined the various documents related to environmental parameters and the proposal for assessment of capacity augmentation presented by the project proponent. The Committee also went through the recent monitoring report of the Regional Office of this Ministry at Chandigarh. The observations of the sub-committee are as below:

- Housekeeping in the plant is quite satisfactory and there is no fugitive dust emission.
- All the transfer points of the solid material were completely enclosed
- The transportation of crushed ore from both the mines (Baga and Bhalag) to the plant is by a closed pipe conveyor.
- Online ambient air quality and continuous stack emission monitoring systems were found to be in a working condition and are being displayed in the Control Room. The ambient air quality data is also being displayed at the entry gate of the plant site.
- The Committee did not find much of green belt although the project people informed that they have planted 45,000 saplings.
- After going through the point wise compliance of the conditions of the EC, the Committee observed that most of the conditions have been complied with. However, Regional Office has asked the unit to submit the physical and financial progress about the green belt plantation every six months. The report of the Regional Office also mentioned about the recommendations of a three member Committee appointed on the direction of the Hon'ble High

Court on the complaint made by some villagers regarding the muck stacked in the Balag nala. The project proponent confirmed that they have complied with the recommendation of the High Court appointed Committee. They produced photographs in support of this.

The sub-committee observations on the monitoring data of stacks and ambient air quality provided by the project proponent are as below:

- It was found that the Particulate Matter emission through all the stacks is much below the prescribed standard of 50 mg/m³. It was observed that the air pollution control system provided by them had been designed to meet the particulate emission of 30 mg/m³. The actual values were found to be in the range of 10 mg/m³. This was also verified from the data monitored by the Himachal Pradesh State Pollution Control Board which showed much lower values.
- The reported data on average water consumption was found to be 1695m³/day against the environmental clearance (EC) condition of 3000 m³/day. The unit is adopting the zero liquid discharge concept.

The sub-committee observations on the capacity augmentation report (Prepared by M/s Holtech Consultancy) submitted by the proponent are as below:

- I. All the systems in the plant including the kiln and all associated systems have been designed for a capacity of 9000 TPD. The Committee also observed that the actual production figures provided by the project proponent showed average production of the order of 8000 – 9000 TPD. The report of the Regional Office i.e. from April – November, 2012 showed the monthly production of Clinker from 1,66,000 (5500 TPD) to 2,76,000 (9200 TPD). From this, it is evident that the plant has capacity to produce 9000 TPD with all the environmental safe guards.
- II. The Committee also observed that in the augmentation proposal, the consultant M/s Vimta Labs, Hyderabad had considered the impact of transportation of the clinker and cement at the enhanced rate and concluded that there is adequate capacity available for movement of additional vehicles. The Committee observed that presently the Consent from the State Pollution Control Board is for an annual clinker production capacity of 2.05 MTPA.
- III. The Committee noted that the Bandli Wildlife and Majhathal Wildlife Sanctuaries are located at a distance of 9.9 km and 5.5 km respectively from the plant site. The Hon'ble Supreme Court vide order dated 4.12.2006 in Writ Petition No. 460 of 2004: Goa Foundation Vs Union of India inter-alia included that *"The Ministry of Environment and Forests would also refer to the Standing Committee of the National Board of Wildlife, under section 5(b) and 5(c) (ii) of the Wild Life (Protection) Act, the cases where environment clearance has already been granted where activities are within 10 km zone"*. In pursuance of this Order, MoEF had issued a Public Notice on 1.1.2009 directing all the concerned that those projects/activities which are located within ten kilometers of the boundaries of Sanctuary and National Parks shall seek clearance under the Wildlife (Protection) Act, 1972 if it has not been done so far by submitting the details of the projects to the Standing Committee of the National Board for Wildlife, constituted under the Wildlife (Protection) Act, 1972, by 31.1.2009 with a copy for

information to the Ministry. In view of the Hon'ble Supreme Court order of 4.12.2006, the project proponent needs clearance from the Standing Committee of the National Board for Wildlife. Accordingly, the M/s Jaiprakash Associates Limited shall apply for the clearance to the Standing Committee of the National Board for Wildlife and a copy of the application shall be submitted to the Ministry.

In conclusion, the sub-committee felt that the unit has obtained Environmental Clearance for clinker production of 2.05 MTPA (6500 TPD). However, the designed capacity of the clinker production unit is 9000 TPD and based on 330 days operation it can produce 2.97 MTPA of clinker. The operating experience of the unit also confirms that the plant is capable of producing 9000 TPD. Further, the Committee recommends that M/s Jaiprakash Associates Limited as a first step get the amendment in the environmental clearance for a clinker production of 9,000 TPD and 2.97 MTPA. The proposal of the company for expansion to 10500 TPD and 3.5 MTPA can be considered at a later stage. The Committee also recommends that M/s Jaiprakash Associates Limited shall seek clearance from the Standing Committee for National Board for Wildlife (SCNBWL) under the Wildlife Protection Act, 1972 as the Bandli Wildlife and Majhathal Wildlife Sanctuaries are located at a distance of 9.9 km and 5.5 km respectively from the plant site. A copy of the application submitted to the SCNBWL shall be provided to the impact assessment division for considering the EC amendment proposal. The Committee also recommends that the unit has to put in greater efforts in strengthening the green belt development.

The REAC (Industry) accepted the visit report of the sub-committee and recommended the following:

- i. As the proposal involves violation, the Ministry shall deal with the violation matter in accordance with its Office Memorandum dated 12.12.2012.
- ii. M/s Jaiprakash Associates Limited shall seek clearance from the Standing Committee for National Board for Wildlife (SCNBWL) under the Wildlife Protection Act, 1972. A copy of the application submitted to the SCNBWL shall be provided to the Ministry for considering the EC amendment proposal.
- iii. After the receipt of the credible action taken report from the State Government of Himachal Pradesh and formal resolution by the Board of Directors of the Company ensuring that violations will not be repeated, Ministry may process the proposal for amendment in the EC in respect of the clinker production from 2.05 MTPA (6500 TPD) to 2.97 MTPA (9000 TPD).
- iv. Till the regularization of requisite statutory approvals, M/s Jaiprakash Associates Limited shall restrict the clinker production to 2.05 MTPA (6500 TPD) against the current clinker production capacity of 2.97 MTPA (9000 TPD).
- v. M/s Jaiprakash Associates Limited shall submit a fresh application in accordance with procedure stipulated in the EIA Notification, 2006 for the expansion of clinker production from 2.97 MTPA (9000 TPD) to 3.5 MTPA (10500TPD).

6.4.4 Expansion of Sponge Iron Plant (300 TPD to 800 TPD), Induction Furnace (1,35,000 TPA), Rolling Mill (1,20,000 TPA) and Captive Power Plant-25 MW (16 MW of WHRB and 9 MW of AFBC) at village Dhauhan, Tehsil Chunar, District

Mirzapur in Uttar Pradesh by M/s Shanti Gopal Concast Limited - Discussion regarding site visit

The aforesaid proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) 3RD meeting held during 3-5th December, 2012. After detailed deliberations, the Committee recommended that a site visit be undertaken by a sub-committee for further consideration.

Accordingly, it was decided that the sub – committee comprising of Prof. R.C.Gupta and the representative from MoEF will visit the site during April 2013 and the report will be submitted to REAC (I) for further reconsideration.

6.4.5 Expansion of Carbon Black Plant (12,500 MTPM to 18,750 MTPM) alongwith Power Plant (33.7 MW to 47 MW) at K-16, Phase-II, SIPCOT Village Pappankuppam, Gummidipoondi, District Thiruvallur, Tamil Nadu by M/s High-Tech Carbon India (A Unit of Aditya Birla NUVO Limited) – Amendment in EC condition.

After deliberation, the Committee desired that project implementation status may be obtained from the other Carbon Black Unit, where such FGD condition was stipulated. The matter may be put up again with detailed note on sulphur dioxide emissions load before and after FGD installation in such type of plant. The Committee deferred the matter.

7th March, 2013

6.5.0 Consideration of the Projects:

6.5.1 Enhancement in production capacity from 6000 TPA to 18,000 TPA Ferro Alloys at Village Matkambada, Tehsil Barbil, District Keonjha, Orissa by M/s Pankaj Ferro Tech Pvt. Limited - regarding Environmental Clearance

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

6.5.2 Expansion of Cement Plant, Clinker (1.8 MTPA to 2.6 MTPA) at Village Rauri, Tehsil Arki, District Solan, Himachal Pradesh by M/s Ambuja Cement Limited – regarding environmental clearance

The project authorities and their consultant M/s EMTRC Consultants Private Limited, New Delhi 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 91st meeting of the Expert Appraisal Committee (Industry) held during 9-11th February, 2009 for preparation of EIA/EMP report. The ToR was awarded on 12th March, 2009 for preparation of EIA/EMP report. All the Cement Plants (\geq 1.0 MTPA) are listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

The ToR was awarded for the expansion of Cement Plant, Clinker (1.8 MTPA to 2.6 MTPA) at Village Rauri, and lime stone mining (5.5 MTPA to 7.6 MTPA) at Villages Kashlog, Mangu and Pati, Tehsil Arki, District Solan, Himachal Pradesh. *However, the mining component of the project [Lime stone mining - 5.5 MTPA to 7.6 MTPA at Kashlog mine] will be appraised by the EAC – Mining.*

M/s. Ambuja Cement Limited have proposed to expand their cement plant clinkerization unit from 1.8 MTPA to 2.6 MTPA at village Rauri, Tehsil Arki, District Solan, Himachal Pradesh. The proposed expansion will be carried out within the existing land of 23.35 ha itself and no additional land is required for the expansion project. No Forest land is involved. The Majathal wildlife sanctuary and Piplughat wildlife sanctuary are located at a distance of 2.7 km and 4.0 km respectively from the plant site. In this regard, the proponent has submitted a copy of the No Objection Certificate obtained from Principal Chief Conservator of Forests cum Chief Wildlife Warden, Government of Himachal Pradesh. The proponent also submitted the copy of application submitted to the D.F.O, Wildlife Division, Shimla seeking the recommendations to National Board of Wildlife (NBWL) under the Wildlife (Protection) Act, 1972 for obtaining Wildlife Clearance. The Sutlej river is located at a distance of 6 km from the limestone mining site. There are 24 protected forest blocks located within 10km radius of the project site. Total cost for clinkerization expansion is Rs. 75 crores. Rs.109 crores and Rs.6.5 crores is earmarked towards the capital cost and recurring cost per annum towards the environmental protection measures.

The existing plant got environmental clearance from the Ministry vide letter no. J-11011/203/2006-IA.II (I) on 17th January, 2006. Regional Office of MoEF at Chandigarh had sent the certified compliance report for the existing unit. The Committee noted that the compliance to the Environmental Clearance (EC) conditions for the existing unit to be satisfactory.

Additionally, the Project Authorities informed that the proposed expansion of the plant will be achieved by modification/debottlenecking of existing units to increase productivity and there will be no change in plant lay out. The total raw materials requirement for the proposed expansion are Limestone – 1.05 MTPA, Shale – 0.117 MTPA; Iron ore – 0.2 MTPA; Red Ochre – 0.012 MTPA and Coal – 0.197 MTPA. Limestone and shale will be sourced from Kashlog mine and transported through overland belt conveyor. Iron ore will be purchased from open market and transported by road. The coal will be imported from South Africa. The power requirement for the proposed expansion is 30 MW, which will be met from the State Electricity Board.

As per the records, there are two court cases - Civil Writ Petition No.10581 of 2011: Narpat Ram & Ors Vs State of Himachal Pradesh & Ors and Civil Writ Petition No 9442 of 2011: Prem Lal Sharma Vs State of Himachal Pradesh is pending before the Hon'ble High Court of Himachal Pradesh at Shimla regarding cement plant and lime stone mining project of M/s Gujarat Ambuja Cement Limited.

Ambient air quality monitoring has been carried out at 10 locations during December 2008 to February 2009 and April to June 2011 and the data submitted indicated: PM₁₀ (31-66 µg/m³), PM_{2.5} (14-32 µg/m³), SO₂ (4.0-11.3 µg/m³) and NO_x (9.0-

18.9 $\mu\text{g}/\text{m}^3$). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 1.7 $\mu\text{g}/\text{m}^3$, 1.5 $\mu\text{g}/\text{m}^3$ and 7.6 $\mu\text{g}/\text{m}^3$ with respect to PM, SO₂ and NO_x respectively. To control air emissions, adequate stack height will be provided. Bag filter will be used in coal mill to control dust pollution. Electro Static Precipitator (ESP) will be used in clinker cooler to control dust pollution. Fugitive dust emission from raw mill hopper, blending silos, kiln feed, clinker storage silos, truck loading machine and all transfer points and vents will be captured and controlled using bag filters. Water sprinkling arrangement will be done around raw material stockpiles.

The existing water requirement is 500 m³/day and no additional water will be required for the proposed expansion. No wastewater will be discharged outside the plant premises. Dust collected from the air pollution control systems will be reused. The domestic wastewater will be treated in the Sewage Treatment Plant. Spent oil will be given to authorized re-processors. The Committee noted that following schedule I fauna are present in the in the study area:

- i) Himalayan Black Bear (Bhalu) – *Selenarctos thibetanus*
- ii) Panther (Tendua) – *Panthera pardus*
- iii) Ghoral – *Nemorhaedus goral*
- iv) Barking deer (Kakar) – *Muntiacus muntjac*
- v) Indian wild boar (Jingli suar) *Sus scrofa*

Further, the Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Himachal Pradesh State Pollution Control Board on 30.8.2012. The issues raised in the public hearing were regarding water scarcity problem, recruitment of locals, Impact on Rauri village as the operations in the night are badly affecting the life of villagers, dust problem and fodder pollution etc. In response to this, the proponent informed that 55 MCM water is recharged in this area by means of rain water harvesting structures. With respect of recruitment of locals, the proponent informed that there are 620 employees out of which 450 are Himachalis. With respect of impact on Rauri village, the proponent informed that they have covered all the belt conveyors, transfer points and raw material hopper building which has resulted in significant reduction in noise level within the permissible limits. Further, the proponent has committed that they will initiate health assessment study once Rauri plant operates at full production capacity for one year.

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

- i. Environmental Clearance is subject to the final outcome of Civil Writ Petition No.10581 of 2011: Narpat Ram & Ors Vs State of Himachal Pradesh & Ors and Civil Writ Petition No 9442 of 2011: Prem Lal Sharma Vs State of Himachal Pradesh pending before the Hon'ble High Court of Himachal Pradesh at Shimla.
- ii. Environmental Clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the Standing Committee for National Board for Wildlife.

- iii. Environmental Clearance is subject to the final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No. 460 of 2004 as may be applicable to this project.
- iv. A Wildlife Conservation Plan for protection/conservation of endangered flora and fauna, if any, shall be prepared in consultation with the State Wildlife Department before start of construction of work on the project. A copy of the same shall be submitted to the Ministry.
- v. The funds earmarked for the implementation of the Wildlife Conservation Plan shall not be diverted for any other purposes.
- vi. A 10 member monitoring committee with Chief Conservator of Forests - Wildlife, Himachal Pradesh as Chairman shall be constituted. The Committee shall meet twice in a year to review programme of works prescribed in the conservation plan. The monitoring reports should be forwarded to Chief Wildlife Warden with a copy to the Regional Office of this Ministry at Chandigarh for ensuring compliance of observations/recommendations of the monitoring reports.
- vii. 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.
- viii. 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.
- ix. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials 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. A transport management plan in this regard to reduce the impact shall be submitted to the Ministry's Regional Office within six months.
- x. The existing water requirement is 500 m³/day and no additional water will be required for the proposed expansion. 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.
- xi. 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.

- 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 / re-processors only.
- xiii. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision should be made accordingly.
- xiv. As proposed, green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.
- xv. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.
- xvi. 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 should be transported in the closed containers only and should not be overloaded. Vehicular emissions should be regularly monitored.
- xvii. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 30.8.2012 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 Chandigarh.
- xviii. 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 Chandigarh. Implementation of such program shall 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 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.

6.5.3 Expansion of Chemical Unit (24,980.04 to 1,45,685.04 MTPA) at Sy.No. 202 to 205, 265b, 266a, 266b, 285 to 294, 296 to 298, 321, 323, 326, 200, 199 Coastal Highways, Village Mujpur, Tehsil Padra, District Vadodara, Gujarat by M/s Gulbrandsen Chemicals Pvt. Ltd- regarding Environmental Clearance

The project authorities and their consultant M/s EQMS India Private Limited, New Delhi 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 32nd meeting of the Expert Appraisal Committee (Industry -2) held on 16-17th February, 2012 for preparation of EIA/EMP report. The ToR was

awarded on 25th May, 2012 for preparation of EIA/EMP report. All Synthetic Organic Chemical Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s. Gulbrandsen Chemicals Private Limited have proposed to expand their Chemical Unit (24,980.04 to 1,45,685.04 MTPA) at Sy.No. 202 to 205, 265b, 266a, 266b, 285 to 294, 296 to 298, 321, 323, 326, 200, 199 Coastal Highways, Village Mujpur, Tehsil Padra, District Vadodara, Gujarat. The proposed expansion will be carried out in an area of 2.73 ha. 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. Total cost of the project is Rs.50 crores. Rs. 1 crore and Rs.2 crores is earmarked towards the capital cost and recurring cost per annum towards the environmental protection measures. Rs. 23.20 lakhs is earmarked towards the CSR related activities for a period of 2013-16.

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

S.N.	Name of Product	Existing (MTPA)	Proposed (MTPA)	Total after expansion (MTPA)
1.	Organometallic compounds	21836.04	32700	54536.04
2.	Polyethylene wax	0.0	20000	20000.0
3.	R&D Products Organometallic Compounds/Organic/inorganic chemicals	0.0	25.0	25.0
4.	Aluminum Chloride (25%) (AlCl ₃)	3144	48510	51654
5.	Ethyl Iodide (C ₂ H ₅ I)	0.0	19470	19470
	Total	24980.04	120705	145685.04

The existing plant got environmental clearance from the Ministry vide letter no. J-11011/257/2008-IA.II (I) on 23.11.2010. Regional Office of MoEF at Bhopal had sent the certified compliance report for the existing unit. The Committee noted that there is a change of product slate without prior permission from the Ministry and also proponent has not undertaken community welfare measures in the project area. In response to this, the proponent submitted that they have not started the manufacturing any product without prior permission from the Ministry and they have submitted the detailed CSR action plan for the period of 2013-16. After discussions, the Committee found that response of the project proponent is satisfactory.

The total raw materials required are Aluminium, Ethylene, Hydrogen, Hexane, Caustic, CO₂, HCL, AlCl₃ and ethanol etc. The power requirement for the proposed expansion is 2100 KVA, which will be met from the Madhya Gujarat Vij Company Limited.

Ambient air quality monitoring has been carried out at 6 locations during December 2011 to February, 2012 and the data submitted indicated: PM₁₀ (88.2-122.4 µg/m³), PM_{2.5} (48.6-64.8 µg/m³), SO₂ (10.6-16.4 µg/m³) and NO_x (14.8-37.5 µg/m³). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 0.663 µg/m³, 0.62 µg/m³ and 0.209 µg/m³ with respect to PM, SO₂ and NO_x respectively. Adequate stack height will be provided for wider dispersion of emissions. The raw materials will be stored in the dedicated sheds to avoid fugitive emissions. The Ventury caustic scrubbing system will be provided to collect the unreacted fumes of anhydrous aluminium chloride. Chlorine scrubbing system will be provided to handle the emergency situation of a leakage in chlorine cylinder.

The water requirement is 101.82 m³/day which will be sourced from existing bore well and purchased RO water. The wastewater generation is 4.5 m³/day. Out of 4.5 m³/day, the domestic effluent is 2 m³/day. This effluent will be treated in STP and reused for gardening purposes. The remaining wastewater (boiler – 0.5 m³/day and cooling – 2 m³/day) will be recycled and reused for domestic purpose. There will be no process wastewater generation. Used oil will be sent to the registered recyclers. The other solid waste such as waste/residue containing oil, distillation residue, waste refractory, ETP sludge will be sent to TSDF at Nandeswari and Ankleshwar, operated by Nandeswari Environment Control Limited (NECL) and Bharuch Enviro Infrastructure Limited (BEIL) respectively. M/s. Gulbrandsen Chemicals Private Limited is a member to the said TSDFs.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 16.8.2012. The issues raised in the public hearing were regarding adverse environmental impacts, employment opportunity, water balance, CSR activities etc which are addressed in the EIA/EMP report.

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

- i. Ambient air quality data should be collected as per NAAQS standards notified by the Ministry on 18th November, 2009.
- ii. Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- iii. Stack of adequate height should be installed to oil fired boiler to disperse waste gases into atmosphere.
- 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 SPCB.
- v. Ventury Caustic scrubber should be provided to control process emissions.
- vi. Total water requirement for the expansion should not exceed 101.82 m³/day and prior permission should be obtained from the concerned Authority.

- vii. No process wastewater will be generated. The boiler and cooling tower blow down water will be recycled and reused for domestic purpose. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- viii. 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 firefighting facilities in case of emergency.
- ix. 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 Heat Transfer Area (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 equipments 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.
- x. As proposed, green belt should be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xi. Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xii. All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 16.8.2012 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 Bhopal.
- xiii. 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 Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiv. The company shall provide housing for 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.

6.5.4 Proposed expansion unit of custom synthesis products for pharma/drug intermediates and specialty chemicals at Distt. Valsad, Gujarat by **M/s Aarti Industries Ltd - regarding TOR.**

The project authorities along with their consultant (M/s Jyothi Labs) 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. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. Since the existing unit is a category 'A' project and being a proposal for expansion to 'A' category project as per the Schedule of EIA Notification, 2006, the proposal has been appraised by the Expert Appraisal Committee (Industry) in the Ministry.

M/s Aarti Industries Limited (Custom Synthesis Division) have proposed to expand the production of Pharma/drug manufacturing capacity from 30 MT/Month to 84 MT/Month [Existing 30 MT/Month; Expansion: 54 MT/Month] at Plot Nos. 22/C/1&2, GIDC Estate, Phase I, GIDC, Vapi, District Valsad, Gujarat. Further, proponent has proposed to set up a purification capacity for caffeine of 100 MT/Month. The proponent has environmental clearance for its existing production from the Ministry vide letter no. J-11011/710/2008 IA.II(I) dated 7.11.2008. The Consent to Operate for the existing production was obtained from Gujarat Pollution Control Board. Total land requirement is 26200 m² (6.47 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. Total cost of the project is Rs. 2201.62 lakhs. The existing and the proposed products details are as below:

SR. NO.	NAME OF PRODUCT	QUANTITY AS PER EXISTING CC&A MT/MONTH	QUANTITY AS PER PROPOSED EXPANSION IN MT/MONTH	QUANTITY IN MT/MONTH (TOTAL)
1.	ZN V,C ₁₅ H ₁₉ NO ₂ .HCl	10.0	-----	10.0
2.	CS-V(11-chloro-Dibenzo[b,f][1,4]thiazepine	20.0	-----	20.0
3.	TV-VII((3S) -3-Amino-2,3,4,5-Tetrahydro-2-oxo-1H-1 Benzazepine-1-acetic acid,Tert butyl ester)	(Any product from serial No.2 to 11)		
4.	TV-INT (Ethyl ,2-(4-Nitrobenzene Sulphonyl)			
5.	PAN-IV (11,16,17,21-Tetra hydroxy-pregna-1,4 dine-3,20-dione)			
6.	MES-II (2-S-Thiuronium ethane sulphonate)			
7.	IB-V (8-Isopropyl -8-azabicyclo [3.2.1]octane-3-y1-2-formyl phenyl acetate)			
8.	Fly X ((2S,3as,7as)-1-[2-[1-			

SR. NO.	NAME OF PRODUCT	QUANTITY AS PER EXISTING CC&A MT/MONTH	QUANTITY AS PER PROPOSED EXPANSION IN MT/MONTH	QUANTITY IN MT/MONTH (TOTAL)
	(Ethoxycarbonyl)-(S)-Propyl] Octahydroindole-2-Carboxylic acid			
9.	QN-II (1,2,3,4-Tetrahydro isoquinoline -2-Benzyl CARboxylate PTSA salt)			
10.	FL-II HCL (1-[2-Amino-1 (4-Methoxyphenyl) Ethyl] Cyclohexanol Hydrochloride			
11.	BA-II (5-methyl-N-[4-(trifluoromethyl phenyl)]isoxazole-4-carboxamide			
12.	DX I 2-Cyclo hexyl Ethyl amine	----	30	30
13.	DX VI Dextro Methopan HBr	-----	10	10
14.	SAF III Diflunisal 4-(2,4Difluorophenyl)-Phenol	-----	4	4
15.	Maxy VI	----	10	10
16.	Caffiene (Purification)	----	100	100
Total		30	154	184

BY PRODUCTS:-

SR. NO.	LIST OF BYPRODUCT	QUANTITY AS PER EXISTING CC&A MT/MONTH	QUANTITY AS PER PROPOSED EXPANSION IN MT/MONTH	QUANTITY IN MT/MONTH (TOTAL)
1	Phosphorous Oxychloride	0	0	0
2	30% HCL	22.96	11.03	33.99
3	Potassium Bromide and/or	8.9	--	8.9
4	Acetic acid and/or	3.4	----	3.4

BY PRODUCTS:-				
SR. NO.	LIST OF BYPRODUCT	QUANTITY AS PER EXISTING CC&A MT/MONTH	QUANTITY AS PER PROPOSED EXPANSION IN MT/MONTH	QUANTITY IN MT/MONTH (TOTAL)
5	Sodium Bromide and/or	11.42	----	11.42
6	MCBA	11.60	-----	11.60
7	Phosphoric acid	17.275	11.03	28.305
CO PRODUCT				
1.	Maleic Acid	-----	21	21

The power requirement is 1000 KVA which will be met from the Dakshin Gujarat Vij Co. Limited. D.G. set with a capacity of 650 KVA and 1000 KVA will be used as a standby power. The water requirement is 200.5 m³/day [Fresh: 110 KLD and Recycled: 90.5 KLD] which will be sourced from GIDC water supply.

To control the air emissions, adequate stack height will be provided. The waste water generation is 51.32 m³/day which will be treated in the Effluent Treatment Plant. Used oil will be sold to registered recyclers. Spent catalyst will be sent to registered regenerators. ETP waste will be sent to TSDF at Vapi.

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 / 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. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS

- P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
 12. Project site layout plan 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.
 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. A list of industries containing name and type in 10 km radius shall be incorporated.
 16. 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".
 17. Manufacturing process details for the synthetic chemicals unit should be included.
 18. Mass balance for the raw material and products should be included.
 19. Energy balance data for all the components should be incorporated.
 20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
 21. 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.
 22. 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.
 23. Vehicular pollution control and its management plan should be submitted.
 24. 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.
 25. 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.
 26. 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.
 27. 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.
 28. Ambient air quality monitoring 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
 - 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.
- 29. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
- 30. A plan for use of wastes containing energy as AFR may also be made part of the EIA Report.
- 31. One season data for gaseous emissions other than monsoon season is necessary.
- 32. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
- 33. 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.
- 34. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
- 35. 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.
- 36. 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.
- 37. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
- 38. 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.
- 39. 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.

40. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
41. 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.
42. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
43. 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.
44. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
45. Project to explore possibility of use of industrial waste as AFR (Alternate Fuels & Raw materials) in cement kilns.
46. Occupational health:
 - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - c. Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
 - d. 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.
47. 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.
48. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment and item-wise details along with time bound action plan should be prepared and incorporated.

49. Total capital cost and recurring cost/annum for environmental pollution control measures.
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.

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 is not required as the unit is located in the notified industrial area.

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

6.5.5 Iron Ore Pellets (2500 MT/M) at Plot No. 1 & 2, Sl No. 825, Village Uplat, District Thane, Maharashtra – 401606 by **M/s Dhanraj Steel Wires Pvt. Ltd. regarding TOR.**

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 Reference for preparation of EIA/EMP report. The proposed project falls under primary metallurgy, listed at Sl. No. 3(a) of Schedule of EIA Notification, 2006 under Category 'B'. However, project site is located within 10 Km radius of the inter-state

boundary and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at the Central level.

M/s Dhanraj Steel Wires Private Limited have proposed to manufacture Iron Ore Pellets – 2500 MT/Month at Plot No 1, Survey No. 825/272, Village Uplat, Taluka – Talasery, District Thane, Maharashtra. Total land requirement is 3790 m². 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. Total cost of the project is Rs. 0.39 crores. Rs. 17.5 lakhs and Rs. 1.74 lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures. The raw materials required are Iron Ore (2875 MT/Month), Bentonite (25 MT/Month) and Pet Coke (250 MT/Month).

The power requirement is 320 hp which will be met from the Maharashtra State Electricity Distribution Company Limited. The water requirement is 24 m³/day.

To control the air emissions, adequate stack height will be provided. There will be no industrial waste water generation. The domestic waste water generation is 1 m³/day which will be treated in the soak pit/septic tank. Used oil will be sold to registered recyclers.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
5. 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.
6. 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.
7. 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.
8. 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.
9. Details and classification of total land (identified and acquired) should be included.

10. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
11. A list of industries containing name and type in 10 km radius shall be incorporated.
12. 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".
13. Manufacturing process details for all the process units should be included.
14. Mass balance for the raw material and products should be included.
15. Energy balance data for all the components should be incorporated.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
17. 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.
18. 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.
19. Vehicular pollution control and its management plan should be submitted.
20. 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.
21. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
22. Air quality modeling for all the plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included.
23. 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.
24. Ambient air quality monitoring 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
 - 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.
25. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
26. One season data for gaseous emissions other than monsoon season is necessary.
27. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
28. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used 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.
29. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
30. 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.
31. 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.
32. A note on the impact of drawl of water on the nearby River during lean season.
33. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
34. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
35. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
36. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
37. 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.
38. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
39. 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.
40. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
41. 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.

42. 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.
43. 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.
44. Total capital cost and recurring cost/annum for environmental pollution control measures.
45. 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.
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.

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 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 MoEF 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.

6.5.6 Expansion of Rayon grade pulp production from 74,000TPA to 100,000TPA at district: Haveri, Karnataka by **M/s Grasim Industries Limited - regarding TOR.**

The project authorities along with their consultant (M/s Vimta Labs, Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. All the Pulp & Paper Units are listed at S.N. 5(i) under category 'A' of the Schedule of the EIA notification 2006 and appraised at the Central level.

M/s Grasim Industries Limited have proposed to expand the production of Rayon Grade Pulp Plant from 74,400 TPA to 1,00,000 TPA at Kumarapatnam, Ranebennur Taluka, Haveri District, Karnataka. The proposed expansion will be achieved through de-bottlenecking and modernization by incorporating process technology & equipment like hot stock screening, advanced brown stock washing, oxygen delignification & ECF bleaching. Total land requirement is 2.3 acres which is available within the existing mill premises. The Tungabhadra river is located at a distance of 1.5 km from the project site. The Ranebennur reserved forests is located at a distance of 5.3km from the project site. 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. The raw materials required are wood, sodium sulphate, sulphuric acid, hydrochloric acid, sodium chlorate, sea shell, caustic soda ad elemental chlorine. Total cost of the project is Rs. 400 crores.

The existing water requirement is 36,000 m³/day sourced from Tungabhadra river. No additional water is required for the proposed expansion. However, for construction activity about 500 m³/day is envisaged.

To control the air emissions, adequate stack height will be provided. After the expansion, the industrial waste water generation is 120 m³/day which will be discharged in to the Tungbhadra river after adequate treatment. Lime mud and saw dust will be recycled/reused. Used oil will be sold to registered recyclers.

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 / 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. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. 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.
12. 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.
13. 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.
14. Details and classification of total land (identified and acquired) should be included.
15. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
16. Petrography, grain size analysis and major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO_2 , Al_2O_3 , MgO , MnO , K_2O , CaO , FeO , Fe_2O_3 , P_2O_5 , H_2O , CO_2 .
17. MOU / contracts / assurances that regular/continuous supply of raw materials will be ensured for next 5-10 years (from non-forest sources).

18. A note on pulp washing system capable of handling wood pulp should be included.
19. Manufacturing process details for the existing and proposed plant should be included. Chapter on Pulping & Bleaching should include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery should include : no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
20. Studies should be conducted and a chapter should be included to show that Soda pulping process can be employed for Eucalyptus/Casurina to produce low kappa (bleachable) grade of pulp.
21. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be abolished within 2 years of issue of environment clearance as proposed.
22. A commitment that no extra bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills.
23. 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.
24. A list of industries containing name and type in 10 km radius shall be incorporated.
25. 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".
26. 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.
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 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 steel plant and Captive Power Plant 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 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 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.
61. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.

62. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
63. 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.
64. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
65. 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.
66. 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.
67. 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.
68. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.

69. A note on identification and implementation of Carbon Credit project should be included.
70. Total capital cost and recurring cost/annum for environmental pollution control measures.
71. 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.
72. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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.

- 6.5.7 Expansion of existing project by installation of clinker Unit having capacity of 45 TPD within existing 50 TPD Grinding Unit at Village Jealgora, P.O. K.G. Ashram, Govindpur, Disttict Dhanbad, Jharkhand -828109 by **M/s Sri Kedar Nath Industries. - regarding TORs**

The project authorities and their consultant (M/s. Anacon Labs, New Delhi) 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 the Cement Plants (≤ 1.0 MTPA) are listed at S.No. 3(b) under Category 'B' of the schedule of EIA Notification, 2006. The proponent has approached the Ministry due to the absence of SEIAA/SEAC for Jharkhand State. However, the Committee noted that the Ministry vide notification dated 27th December, 2012 constituted the SEIAA/SEAC for the Jharkhand State in accordance with the EIA Notification, 2006.

After detailed deliberations, the Committee decided to refer the proposal to SEIAA, Jharkhand for necessary action.

6.5.8 Expansion of Steel plant (from 1.000 MTPA to 1.500 MTPA) at Village Barbadi, Distt. Wardha, Maharashtra by M/s Lloydsteel Industries Ltd. - regarding TOR

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

6.5.9 Modernization of Green Sand Foundry at M/s Brakes India Limited, Foundry Division Unit1, Pandiyanellore Village, Walajapet Taluk, Vellore District, Tamil Nadu.- regarding TOR.

The project authorities along with their consultant (M/s ABC Technologies) 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. All the Metallurgical Industries (Ferrous and Non Ferrous) are listed at S.N. 3(a) under category 'A' of the Schedule of the EIA notification 2006 and appraised at the Central level.

M/s Brakes India Limited have proposed to modernize the sand foundry at Pandianellore village, Walaja Taluka, Vellore District, Tamil Nadu. Total land requirement is 19.22 ha which is already available within the existing plant premises. No additional land is required for the proposed modernization. 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. Total cost of the project is Rs. 2900 lakhs. Rs. 269.75 lakhs is earmarked towards the environmental protection measures. Following are the details of the existing and proposed additional products:

Sl. No.	Name of product	Production Capacity (MT/Annum)		
		Existing capacity	Proposed Additional	After Modernization
1.	Permanent mould grey iron casting	12000	-	12000
2.	Sand foundry S.G. Iron castings	35700	7980	43680
3.	Sand foundry grey iron castings	3180	4020	7200

The existing water requirement is 361.2 m³/day. The additional water required would be 28.896 m³/day. The power requirement for the proposed project will increase from 19800 KVA to 27800 KVA.

To control the air emissions, dust extraction system with efficiency more than 99% for sand plant and online shot blasting machine will be provided. The furnaces will be equipped with fume extraction system. There will be no industrial waste water generation. Return sand from sand plant will be used for stabilized mud block making and concrete manufacturing.

The proponent informed that the project site is located in a notified industrial area. However, the proponent has not submitted the relevant documents (Gazette Notification of State Govt. of Tamil Nadu) declaring the project site as a notified industrial area. The Committee decided not to exempt the project from the Public Hearing.

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 / 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. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.

12. Project site layout plan 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.
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. A list of industries containing name and type in 10 km radius shall be incorporated.
16. 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".
17. Manufacturing process details for all the process units should be included.
18. Mass balance for the raw material and products should be included.
19. Energy balance data for all the components should be incorporated.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
21. 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.
22. 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.
23. Vehicular pollution control and its management plan should be submitted.
24. 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.
25. 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.
26. 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.
27. 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.
28. Ambient air quality monitoring 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
 - 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.
29. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
 30. One season data for gaseous emissions other than monsoon season is necessary.
 31. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 32. 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.
 33. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 34. 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.
 35. 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.
 36. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 37. 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.
 38. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
 39. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
 40. 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.
 41. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.

42. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
43. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
44. 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.
45. 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.
46. 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.
47. Total capital cost and recurring cost/annum for environmental pollution control measures.
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. 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 Tamil Nadu 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.

6.5.10 Clinker (2.0 MTPA)/ Cement Grinding (2.5 MTPA) / CPP (24 MW) / WHR Power Plant (10 MW) / DG Set (2 x 6 MW) at village Velabai, Taluka Wani, District Yavatmal, Maharashtra by **M/s Jai Bhole Cement Combine Pvt. Ltd. - regarding TOR**

The project authorities and their consultant (M/s Creative Enviro Labs) 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. All the Cement Plants (≥ 1.0 MTPA) are listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Jai Bhole Cement Combine Private Limited have proposed to set up a Clinker unit – 2 MTPA; Cement Plant – 2.5 MTPA, Coal based Captive Power Plant of 72 MW, 10 MW waste heat recovery power plant and D.G. set of 2 x 6 MW capacity at

village Velabhai, Tehsil Wani, District Yavatmal, Maharashtra. The land requirement for the project is 100.81 ha. 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. Total cost of the project is Rs.1501.19 crores. Rs. 210 crores and Rs. 35 crores are earmarked towards capital cost and recurring cost/annum for pollution control measures. Rs.1550 lakhs has been earmarked towards the CSR related activities. The raw materials required are limestone, bauxite, iron ore, gypsum, fly ash and coal. The water requirement is 3500 m³/day, which will be sourced from Wardha river/Penganga river. The power demand for the proposed plant has been estimated to be 22-24 MVA and will be met from Maharashtra State Electricity Board.

The Committee was of the view that the capacity of the CPP proposed by the proponent is seems to be more than the actual power requirement. After discussions, the proponent agreed to reduce the capacity of CPP from 72 MW to 24 MW. Hence, the CPP capacity will be 24 MW instead of 72 MW.

To control air pollution, the Pollution control equipment like Bag House and Bag Filters will be provided for dust extraction. Flue gas chimneys with adequate height will be installed for Limestone Crusher, Raw Mill/Kiln, Cooler, Coal Mill, Cement Mill and packers for proper dispersion of particulate Matter and gaseous emissions. Low NOx burners will be provided for NOx control from Kiln stack. Fugitive emissions will be controlled by water sprinkling and proposed to install bag filter to control the fugitive emissions generated during material transfer, packing, loading and unloading. Domestic wastewater will be generated from Plant & Colony which will be reused after suitable treatment in a Sewage Treatment Plant (STP) and the same water will be used for greenbelt development. Waste oil will be collected in dedicated drums and stored on impervious concrete floor. The same will be sold to the vendors authorized by CPCB/SPCB for recycling. Dust collected in bag filters will be recycled within the process.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. Copies of 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. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.

9. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Details and classification of total land (identified and acquired) should be included.
12. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
13. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
14. Permission 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.
15. A list of industries containing name and type in 10 km radius shall be incorporated.
16. Residential colony should be located in upwind direction.
17. 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".
18. 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.).
19. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO_2 , Al_2O_3 , MgO , MnO , K_2O , CaO , FeO , Fe_2O_3 , P_2O_5 , H_2O , CO_2 .
20. 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.
21. 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.
22. Manufacturing process details for all the process units should be included.
23. Possibility of installation of WHRB will be explored and details included
24. Mass balance for the raw material and products should be included.
25. Energy balance data for all the components including proposed power plant should be incorporated.
26. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.

27. 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.
28. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
29. Vehicular pollution control and its management plan should be submitted.
30. 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.
31. 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.
32. 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.
33. 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.
34. Air quality modeling for all the plants proposed including mine for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included. Cumulative impacts of cement plant, Captive Power Plant and mines located at a distance of 2.0 km on the ambient air quality shall be assessed.
35. 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.
36. 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.

37. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
38. One season data for gaseous emissions other than monsoon season is necessary.
39. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
40. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used 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.
41. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
42. Ground water modelling showing the pathways of the pollutants should be included
43. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
44. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
45. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
46. A note on the impact of drawl of water on the nearby River during lean season.
47. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
48. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
49. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
50. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
51. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
52. 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.
53. 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.

54. 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.
55. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
56. 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.
57. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
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 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.
60. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
61. 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.
62. 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.
63. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
64. 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.
65. 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.
 66. A note on identification and implementation of Carbon Credit project should be included.
 67. Total capital cost and recurring cost/annum for environmental pollution control measures.
 68. 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.
 69. 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 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 report including public hearing proceedings.

6.5.11 Proposed manufacturing of Coal to Ammonia along with captive power plant at Distt. Jagatsinghpur, Odisha by **M/s Bharath Coal Chemicals Ltd.- regarding TOR.**

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

6.5.12 Expansion of Ferro Alloys Plant by installation of 1 X 9 MVA submerged Electric Arc furnace in Phase-I and 6 X 9 MVA submerged Electric Arc furnace in Phase-II at village Ghutgoria, Distt. Bankura, West Bengal by **M/s Cosmic Ferro Alloys Ltd.- regarding TOR.**

The project authorities along with their consultant (M/s Anacon Labs, New Delhi) 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 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 by the Expert Appraisal Committee (Industry) of MoEF.

M/s Cosmic Ferro Alloys Limited have proposed to expand their 5 x 9 MVA Submerged Electric Arc Furnace (SAF) by installation of 1 x 9 MVA SAF in phase I and 6 x 9 MVA SAF in phase II at village Ghutgoria, Tehsil Barjora, district Bankura, West Bengal. The existing plant got Environmental Clearance from MoEF vide letter no J-11011/538/2008-IA II(I) on 10.12.2008 and Consent to Operate from West Bengal Pollution Control Board on 31.08.2012. Total land requirement is 22 acres which is already available within the existing factory premises of 46.62 acres. No additional land is required for the proposed expansion. The Damodar river is located at a distance of 5 km from the project site. The Beliator protected forests is located at a distance of 0.8 km from the project site. No Forest land is involved. No National Park, Wildlife Sanctuary exists within 10 km radius of the project site. No court cases/litigation is pending against the project. The raw materials required are Mn ore, slag, coke, coal, quartzite, dolomite and Mn Ore. Total cost of the project is Rs. 157 crores. Rs. 5 crores and Rs.1 crores is earmarked for the capital cost and recurring cost per annum towards the environmental protection measures. The existing and the proposed products details are as below.

Existing product details:

S.No.	Furnace details	Silicon – Manganese (TPA)	Ferro-Manganese (TPA)
1.	5 x 9 MVA	56740	82800

Proposed product details:

S.No.	Furnace details	Silicon – Manganese (TPA)	Ferro-Manganese (TPA)
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Phase I			
6.	1 x 9 MVA	15800	21000
Phase II			
1.	9 MVA	15800	21000
2.	9 MVA	15800	21000
3.	9 MVA	15800	21000
4.	9 MVA	15800	21000
5.	9 MVA	15800	21000
6.	9 MVA	15800	21000
TOTAL (Phase I and II)	7 x 9 MVA	110600	147000
TOTAL CAPACITY AFTER EXPANSION	12 x 9 MVA	167340	229800

The water requirement for the proposed expansion is 72 m³/day sourced from Damodar river. The power requirement is 49 MVA which will be supplied by the Damodar Valley Corporation. A D.G set with a capacity of 250 KVA is proposed as a standby power.

To control the air emissions, adequate stack height will be provided. The particulate matter shall be effectively collected through bag filter. The raw material handling system will be provided with dust suppression/ dust collection systems. No liquid effluent will be discharged outside the plant premises. Domestic waste water will be treated in the septic tank/ soak pit. The Fe-Mn slag will be reused for production of Si-Mn. The Si-Mn slag will be used for low land filling and road making.

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. A certified 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. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
6. A line diagram/flow sheet for the process and EMP
7. Coal linkage documents
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.

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. 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.
13. A list of industries within 10 km radius of the plant area.
14. Details and classification of total land (identified and acquired) should be included.
15. Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
16. List of raw material required, Chemical analysis of all the raw materials including Trace Elements and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
17. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included. Silico Manganese Slag Management Plan may be specifically made.
18. Mass balance for the raw material and products should be included.
19. Energy balance data for all the components of ferro alloy plant should be incorporated.
20. Design details of Ferro Alloy Plant and manufacturing process details should be included.
21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
22. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out including cumulative Impact of the surrounding industries.
23. 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.
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.
25. Air quality modeling for ferro alloy plant for specific pollutants needs to be done. APCS for the control of emissions should also be included to control emissions within 50 mg/Nm³.
26. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.

27. Air Quality Impact Prediction Modeling based on ISCST-3 or the latest models. 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.
28. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and 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. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
31. 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.
32. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
33. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.
34. A note on the impact of drawl of water on the nearby River during lean season.
35. Action plan for rainwater harvesting measures.
36. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
37. 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.

38. Pretreatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.
39. 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.
40. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included. Land filling is not allowed.
41. 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.
42. Provision of Toxic Chemical Leachability Potential (TCLP) test for the slag and its end use should be included.
43. Commitment that no Ferro chrome will be manufactured without prior approval of the Ministry.
44. Action plan for the green belt development plan in 33 % area should be included.
45. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
46. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
47. Occupational health:
 - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - c) Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
 - d) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
48. 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.
49. 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.
50. Total capital cost and recurring cost/annum for environmental pollution control measures.
 51. 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.
 52. 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.

6.5.13 Proposed establishment of 03 nos. Of Oil Collection and processing installations GAMJI GGS EPS-II,GAMIJ EPSIII & RAMOL EPS at Dist. Kheda, Gujarat by **M/s ONGC Ltd.- regarding TOR.**

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 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 Ltd. have proposed for establishment of 03 nos. of Oil Collection and Processing Installations GAMJI GGS EPS-II,GAMIJ EPSIII & RAMOL EPS at District Kheda, Gujarat. 70 MTD crude oil and gas 7500 standard m³/day will be handled in GAMIJ EPS II. 200 MTD crude oil and gas 15000 standard m³/day will be handled in GAMIJ EPS III. 150 MTD crude oil and gas 10000 standard m³/day will be handled in RAMOL EPS III. Plot area of GAMIJ EPS II is 16846 m². Plot area of GAMIJ EPS III is 20609 m². Plot area of Ramol EPS is 27200 m² No forest land is involved. No court case/litigation is pending against the project. Cost of project is Rs. 14.51 Crore.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of 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. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely/ critically polluted area.
7. Project location and plant layout.
8. Current status of construction activities.
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.
13. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
14. Details of the total land and break-up of the land use for green belt and other uses.
15. List of products alongwith the production capacities.
16. Detailed list of raw material required and source, mode of storage and transportation.
17. Oil separation process details alongwith the chemical reactions and process flow chart.
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 including HC and VOCs 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.
21. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
22. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
23. Details of water and air pollution and its mitigation plan
24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. 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.
26. Permission for drawl of water from concerned authority. Water balance chart including quantity of effluent generated recycled and reused and discharged.
27. Action plan for 'zero' discharge of effluent should be included. Treatment & disposal of produced water.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. 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.
30. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
31. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
32. An action plan to develop green belt in 33 % area
33. 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.
34. Details of occupational health programme.
 - vii) To which chemicals, workers are exposed directly or indirectly.
 - viii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - ix) What measures company have taken to keep these chemicals within PEL/TLV.
 - x) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - xi) What are onsite and offsite emergency plan during chemical disaster.
 - xii) Liver function tests (LFT) during pre-placement and periodical examination.
35. Details of occupational health surveillance programme.
36. Socio-economic development activities should be in place.

37. Note on compliance to the recommendations mentioned in the CREP guidelines.
38. 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.
39. **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.
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. 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.
42. 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) 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.

6.5.14 Proposed expansion of 1.8 MMTPA cement plant to 3.6 MMTPA by installation of 1.8 MMTPA cement plant at village Jhalo ka Garha, P.O. Wajwana, Tehsil Garhi, District Banswara, Rajasthan at Dist. Banswara, Rajasthan by **M/s Trinetra Cement Ltd.- regarding TOR.**

The project authorities along with their consultant (M/s Consulting Engineers Group Limited, Jaipur) 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. All the Cement Plants (≥ 1.0 MTPA) are listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Trinetra Cement Limited (TCL) have proposed to expand their existing 1.8 MMTPA cement plant to 3.6 MMTPA by installation of 1.8 MMTPA cement plant at village Jhalo ka Garha, P.O. Wajwana, Tehsil Garhi, District Banswara, Rajasthan. The existing plant got Environmental Clearance from MoEF vide letter no J-11011/630/2008-IA II(I) on 3.6.2009. The EC includes the cement plant and associated mining lease and coal based thermal power plant of 50 MW capacity. The proponent obtained Consent to Establish/Consent to Operate for the existing project from Rajasthan State Pollution Control Board on 17.9.2009 and 19.11.2010 respectively. Total land requirement is 7 ha which is already available within the existing factory premises of 66.52 ha. No additional land is required for the proposed expansion. The Chap river and Mahi river is located at a distance of 4.5 km and 13 km respectively from the project site. 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. The raw materials required are lime stone, coal, red ochre, gypsum and fly ash. Total cost of the project is Rs. 550 crores.

The water requirement for the proposed expansion is 1050 m³/day sourced from ground water. The power requirement for the proposed expansion is 16.5 MW which will be supplied from Ajmer Vidyut Vitran Nigam Ltd (AVVNL) and Captive Power Plant.

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

1. Executive summary of the project
2. Photographs of the existing and proposed plant area.
3. A certified 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. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
6. Copies of coal linkage documents
7. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.

9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. 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.
12. 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.
13. 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.
14. Details and classification of total land (identified and acquired) should be included.
15. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
16. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
17. 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.
18. A list of industries containing name and type in 10 km radius shall be incorporated.
19. Residential colony should be located in upwind direction.
20. 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".
21. 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.).
22. 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.
23. 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.

24. 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.
25. Manufacturing process details for all the plants should be included.
26. Possibility of installation of WHRB will be explored and details included
27. Mass balance for the raw material and products should be included.
28. Energy balance data for all the components should be incorporated.
29. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
30. 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.
31. 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.
32. Vehicular pollution control and its management plan should be submitted.
33. 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.
34. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
35. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
36. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
37. Air quality modeling for 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 located at a distance of 2.0 km on the ambient air quality shall be assessed.
38. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
39. Ambient air quality monitoring 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.
40. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
 41. One season data for gaseous emissions other than monsoon season is necessary.
 42. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 43. 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.
 44. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 45. Ground water modelling showing the pathways of the pollutants should be included
 46. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
 47. 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.
 48. 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.
 49. A note on the impact of drawl of water on the nearby River during lean season.
 50. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 51. 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.
 52. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.

53. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
54. 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.
55. 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.
56. 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.
57. 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.
58. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
59. 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.
60. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. 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.
63. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
64. 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.
65. Occupational health:
 - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

- c. Annual report of health status of workers with special reference to Occupational Health and Safety.
- d. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
- 66. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
- 67. 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.
- 68. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
- 69. A note on identification and implementation of Carbon Credit project should be included.
- 70. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 71. 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.
- 72. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

6.5.15 Proposed integrated Steel plant (10.0 MTPA) and 900 MW Captive power plant at District Ranchi, Jharkhand by M/s JSW Jharkhand Steel Ltd - regarding TOR.

The Committee deferred the consideration of the proposal as the proposal was found to be incomplete in several technical aspects. After detailed deliberations, the Committee sought the following information for reconsideration.

- i. Revised form -I and pre-feasibility project report covering all the technical aspects of the proposed plant facilities and the environmental aspects regarding anticipated air emissions, effluent generation, solid waste generation and its utilization.
- ii. Possibility of setting up of railway siding facility for transportation of the raw materials and end products shall be explored.
- iii. Primary drainage area of the project site as well as the catchment including likely change in the drainage pattern due to project may be provided.

6.5.16 Proposed 1,90,000 TPA Tunnel Kiln Based DRI Production line with Electric Arc Furnace at Village Karwas, Distt. Jaipur, Rajasthan by M/s Lubok Industries Pvt. Ltd.- regarding TOR.

The project authorities along with their consultant (M/s GRC India Training and Analytical Laboratory, New Delhi) 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 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 Lubok Industries Private Limited have proposed to set up green field project 1,90,000 TPA Tunnel Kiln based DRI production line with EAF, LRF and CC based 1,80,000 TPA billet production at village Karwas, Tehsil Kotpulli, District Jaipur, Rajasthan. Total land requirement is 31.51 acres. The Sabi river and Sota nala (canal) is located at a distance of 8 km and 2 km from the project site. The Baneti protected forests and Ramsinghpura protected forests are located at a distance of 9 km and 6km respectively from the project site. 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. The raw materials required are waste iron oxide/mill scale/BOF and EAF dust, coke breeze, coal, steel scrap, flux, lime stone, furnace oil, electrode, lime and molasses. Total cost of the project is Rs. 253 crores. Rs. 9.30 crores and Rs.1.40 crores is earmarked for the capital cost and recurring cost per annum towards the environmental protection measures. The proposed product details are summarized as below.

S.No.	Product details	Quantity (TPA)
1.	Sponge Iron (DRI)	190000
2.	Steel	184500
3.	Billets	180000
4.	Silicon Carbide Crucible	2000

The water requirement is 1300 m³/day sourced from underground water. The power requirement is 30 MVA which will be supplied by the Jaipur Vidyut Vitran Nigam Limited.

To control the air emissions, the tunnel kiln will be equipped with wet scrubber for desulphurization and bag filter. Regular water spraying will be done in the raw material handling area. adequate stack height will be provided. The particulate matter shall be effectively collected through bag filter. No liquid effluent will be discharged outside the plant premises. Domestic waste water will be treated in the sewage treatment plant. The slag will be used in road construction. The tar generated will be recycled and used for coal briquetting. The mill scale and dust of EAF and Ladle Refined Furnace (LRF) will be recycled and used as a raw material.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Coal linkage documents
5. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
6. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
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 use/land-cover mapping of the area.
 9. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
 10. A list of industries within 10 km radius of the plant area.
 11. Details and classification of total land (identified and acquired) should be included.
 12. Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
 13. List of raw material required, Chemical analysis of all the raw materials including Trace Elements and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
 14. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included.
 15. Mass balance for the raw material and products should be included.
 16. Energy balance data for all the components of plant facilities should be incorporated.
 17. Management Plan of TAR, ash and slag should be made part of the EIA Report.
 18. Manufacturing process details of all the process unit shall be included.
 19. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
 20. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out including cumulative Impact of the surrounding industries.
 21. 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.
 22. 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.
 23. Air quality modeling for the plant for specific pollutants needs to be done. APCS for the control of emissions should also be included to control emissions within 50 mg/Nm³.
 24. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
 25. Air Quality Impact Prediction Modeling based on ISCST-3 or the latest models. 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.
26. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and 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. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 29. 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.
 30. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 31. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.
 32. A note on the impact of drawl of water on the nearby River during lean season.
 33. Action plan for rainwater harvesting measures.
 34. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 35. 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.
 36. Pretreatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.

37. 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.
38. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included. Land filling is not allowed.
39. 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.
40. Provision of Toxic Chemical Leachability Potential (TCLP) test for the slag and its end use should be included.
41. Action plan for the green belt development plan in 33 % area should be included.
42. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
43. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
44. 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.
45. Plan for the implementation of the recommendations made for the sponge iron plant in the CREP guidelines must be prepared.
46. 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.
47. 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.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.

49. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
50. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

6.5.17 Expansion of Laminate & Resin manufacturing unit of **M/s Century Plyboards (I) Ltd. (Kolkata Unit)** at Diamond Harbour Road, Village(s)-Kanchowki, Tehsil/P.S. Bishnupur, District-24 Parganas (South), West Bengal. - **regarding TOR.**

The project authorities along with their consultant (M/s. CTRAN Consulting Limited, Bhubaneswar) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References (ToR) for the preparation of EIA/EMP report. All Synthetic

Organic Resin Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Century Plyboards (I) Limited have proposed to expand the manufacture of electrical decorative laminates (300000 sheets/month to 600000 sheets/month), Phenol-Formaldehyde Resin (480 Tons/month to 960 Tons/month) and Melamine-Formaldehyde Resin (275 Tons/month to 550 Tons/month) at Diamond Harbour road, village- Kanchowki, block – Bishnupur, District 24 Parganas (south), West Bengal. Total plot area 15695 m². 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. Project cost is Rs. 5857.53 lakhs. Rs.152.2 lakhs and Rs.30 lakhs has been earmarked for the capital cost and recurring cost per annum towards the environmental protection measures. The raw materials required are paper, phenol, formalin, diethylene glycol, caustic soda, hexamine, methanol, melamine etc. Following are the details of the existing and the proposed products details.

Name of the product	Existing	Proposed	Total
Decorative laminates	300000 sheets/month	300000 sheets/month	600000 sheets/month
PF resin	480 Tons/month	480 Tons/month	960 Tons/month
MF resin	275 Tons/month	275 Tons/month	550 Tons/month

Water requirement is 22 m³/day which will be met from the ground water. The power requirement is 750 KVA which will be procured from M/s West Bengal State Electricity Distribution Company Limited. D.G set of 600 KVA is proposed as a standby power.

To control air emissions, stack of adequate height will be provided. Bag filter will be attached to the thermic fluid heater. The wastewater generated after adequate treatment will be used in green belt development and dust suppression. The glue sludge, cotton waste and poly bags will be sent to West Bengal Waste Management Group at Haldia.

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 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.

9. Promoters and their back ground.
10. Regulatory framework
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 along with total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location along with 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 along with supporting document.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
18. Permission, if any, from the State Forest Department
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products along with the production capacities.
21. Detailed list of raw materials required and source, mode of storage and transportation.
22. Manufacturing process details along with the chemical reactions and process flow chart.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. 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.
25. 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.
26. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
27. Control methanol emission from drying section.
28. Details of VOC monitoring system in the working zone environment, if any.
29. Name of all the solvents to be used in the process and details of solvent recovery system.
30. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
31. Details of water and air pollution and its mitigation plan.
32. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
33. An action plan to control and monitor secondary fugitive emissions from all the sources.
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. Air quality modelling for proposed plant.
35. Permission for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
36. Action plan for 'Zero' discharge of effluent shall be included.
37. Treatment of phenol in the effluent, if any.
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. Explore the possibility to use fuel other than wood.
41. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
42. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
43. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
44. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
45. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
46. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
47. An action plan to develop green belt in 33 % area
48. 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.
49. 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 has 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.
50. Details of occupational health surveillance programme.
51. Socio-economic development activities shall be in place.
52. 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.
53. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
54. 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.
55. 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.

56. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
57. 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.
58. 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 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.

6.5.18 Drilling of 25 Nos. Wells in 885.35 Sq.Km area of Jaiselmer Basin (comprises of 04 ML and one PEL Block) by **M/s ONGC Ltd. - regarding TOR.**

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 Ltd. has proposed for Exploratory-cum-Development (25 Wells) in 885.35 Sq.Km area of Jaisalmer Basin (comprises of 04 ML and one PEL Block). Total area of basin is 885.35 Sq.Km. No. of blocks are 5 ML (PEL converted to ML). Located in JAiselmer district of Rajasthan State and 05 Km from international border. 80 nos. of well have been drilled so far. One GCS with processing capacity 200000 m³/day is located at Gamnewala. Cost of project is Rs. 350 Crore. No forest land is involved. No national park/wildlife sanctuary is located within 10 KM distance. Approximate depth of the well will be 1000-3500 m. Water requirement will be 25 m³/day/well. Diesel consumption will be 2.5-3.0 kL/day/well. Waste water Generation will be 4 m³/day/well, Spent Oil will be sent to authorized recyclers. Drill Cuttings generation will be 100-250 m³/well (to be confined in waste pit).

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

1. A certified 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 a project
3. Project description, project objectives and project benefits.
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.
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 plant 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.
7. Distance from nearby critically/severely polluted area as per Notification dated 13th January, 2010, if applicable.
8. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
9. Details of project cost.
10. Details of all the facilities including CGS, GGS, OCS, produced water treatment etc to be installed. If existing facilities, give details.
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, waster water 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 loose materials.
 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 ONGC 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.
- 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 Rajasthan State Pollution Control Board for separate public hearing to be conducted for all Districts. The issues emerged and response to the issues raised during public hearing should be incorporated in the EIA report.

6.5.19 Proposed Greenfield 1.2MTPA Pelletisation plant at village Nuagaon, Tehsil Bonai, District Sundergarh ,Odisha by M/s Essel Mining & Industries Ltd. - regarding TOR.

The project authorities along with their consultant (M/s B.S Envi-Tech Private Limited, Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of References for the preparation of EIA/EMP report. 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.

M/s Essel Mining and Industries Limited have proposed to set up a 1.2 MTPA Iron-ore pelletisation plant at village Nuagaon, tehsil Bonai, sub-division Bonai, district Sundergarh, Odisha. The land requirement for the proposed project is 44.09 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. The karol nala is located at a distance of 0.15km from the project site. The reserved forests exists in the study area are Kathmala (2.7km), Mendharmaruni (5.6 km), karo (4.9km), sarkanda (3.1km) and torah (4.4km). Project cost is Rs. 379.68 Crores. The raw materials required are iron ore fines, bentonite, coal/coke breeze and dolomite/limestone. The iron ore will be sourced from adjacent mines of M/s Essel Mining and Industries Limited (0.15 km distance from the plant site) for which Terms of Reference has already been accorded by the Ministry vide letter no. J-11015/171/2011-

IA. II(M). The power requirement will be met from WESCO Limited. The water requirement is 960 m³/day.

The Committee noted that baseline survey was carried out in the study area during September 2012 to November, 2012 and this data will be used for the preparation of the EIA/EMP report. To control the air emissions, ESP will be provided to the induration furnace. Water sprinkling will be done to control the fugitive dusts. Dust collected from the ESP, Bag filter will be collected and reused in the process itself.

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. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.
9. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Details and classification of total land (identified and acquired) should be included.
12. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
13. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
14. Permission 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.
15. A list of industries containing name and type in 10 km radius shall be incorporated.
16. Residential colony should be located in upwind direction.

17. 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".
18. 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.
19. Manufacturing process details for all the process units should be included.
20. Possibility of installation of WHRB will be explored and details included
21. Mass balance for the raw material and products should be included.
22. Energy balance data for all the components should be incorporated.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
24. 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.
25. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
26. Vehicular pollution control and its management plan should be submitted.
27. 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.
28. 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.
29. 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.
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.
31. 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 mines and pellet plant on the ambient air quality shall be assessed.
32. 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.
33. 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.
34. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
 35. One season data for gaseous emissions other than monsoon season is necessary.
 36. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 37. 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.
 38. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 39. Ground water modelling showing the pathways of the pollutants should be included
 40. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
 41. 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.
 42. 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.
 43. A note on the impact of drawl of water on the nearby River during lean season.
 44. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 45. 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.
 46. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.

47. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
48. 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.
49. 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.
50. 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.
51. 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.
52. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
53. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
54. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
55. 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.
56. 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.
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 based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
 60. A note on identification and implementation of Carbon Credit project should be included.
 61. Total capital cost and recurring cost/annum for environmental pollution control measures.
 62. 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.
 63. 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 Odisha 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.

6.5.20 Expansion of existing project by manufacturing of Metallic & Non-metallic Stearate and Calcium Phosphate at Shed No. C1-1901/19 & C1-1901/20, 3rd Phase, G., GIDC Notified Area, Vapi, Taluka Pardi, District Valsad, Gujarat by M/s Harihar Organics Pvt. Ltd.- regarding TOR.

The project authorities along with their consultant (M/s. Unistar Environment and Research Labs Private Limited, Vapi, Gujarat) 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 (ToR) 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, project site is located within 10 Km of interstate boundary and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s Harihar Organics Private Limited have proposed to expand the manufacture of metallic and non-metallic stearate by dry process at shed no C1-1901/19 & C1-1901/20, 3rd phase GIDC notified area, Vapi, district Valsad, Gujarat. Total plot area 1565. 84 m² which is available within the existing plant premises. 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. Project cost is Rs. 83 lakhs. Out of Rs. 83 lakhs, Rs. 5 lakhs and Rs.0.70 lakhs has been earmarked for the capital cost and recurring cost per annum towards the environmental protection measures. The Damanganga river is located at a distance of 4.4 km from the project site. The raw materials required are metallic salt, stearic acid, caustic soda. Calcium hydroxide, phosphoric acid etc. Following are the details of the existing and the proposed products details.

Sr. No.	Products Name	Unit	Existing	Proposed	After expansion
1.	Metallic Separate- wet process	MT/Month	9.00	0.00	9.00
2.	Metallic & Non-Metallic Stearate- Dry process	MT/Month	0.00	200.00	200.00
3.	Calcium Phosphate – dry process	MT/Month	--	100.00	100.00
	Total	MT/Month	9.00	300.00	309.00

Water requirement is 5 m³/day which will be met from the GIDC water supply. Power requirement is 150 KWH which will be met from Dakshin Gujarat Vij Company Limited. D.G set of 100 KVA is proposed as a standby power.

To control air emissions, stack of adequate height will be provided. Bag filter will be attached to the thermic fluid heater. The wastewater generated after adequate treatment in the ETP will be used in green belt development and dust suppression. The ETP waste will be sent to the Vapi Waste and Effluent Management Company Limited. Used oil will be sold to registered recyclers.

The Committee noted that the secondary data collected by the M/s Unistar Environment and Research Labs Private Limited 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. Justification of the project
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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. Promoters and their back ground.
10. Regulatory framework
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 along with total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location along with 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 along with supporting document.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
18. Permission, if any, from the State Forest Department
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products along with the production capacities.
21. Detailed list of raw materials required and source, mode of storage and transportation.

22. Manufacturing process details along with the chemical reactions and process flow chart.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. 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.
25. 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 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.
26. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
27. Control methanol emission from drying section.
28. Details of VOC monitoring system in the working zone environment, if any.
29. Name of all the solvents to be used in the process and details of solvent recovery system.
30. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
31. Details of water and air pollution and its mitigation plan.
32. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
33. An action plan to control and monitor secondary fugitive emissions from all the sources.
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. Air quality modelling for proposed plant.
35. Water balance chart including quantity of effluent generated recycled and reused and discharged.
36. Action plan for 'Zero' discharge of effluent shall be included.
37. Treatment of phenol in the effluent, if any.
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. Explore the possibility to use fuel other than wood.
41. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
42. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
43. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
44. An action plan to develop green belt in 33 % area
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 has 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.
47. Details of occupational health surveillance programme.
48. Socio-economic development activities shall be in place.
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. 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.
52. 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.
53. 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.
54. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment and item-wise details along with time bound action plan should be prepared and incorporated.
55. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
56. 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 is not required as the unit is located in the notified industrial area.

6.5.21 Proposed expansion of MS Steel Ingots/Billets at Village: Dhamadhka, Distt. Kutch, Gujarat by M/s Jay Bharat Steel Corporation. - regarding TORs.

The project authorities along with their consultant (M/s Anacon Laboratories Private Limited, 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 References for the preparation of EIA/EMP report. The proposed project activity is covered under Category (A) and listed at S.No.3(a) of the Schedule of the EIA notification 2006 and have to be appraised at the Central level.

M/s Jay Bharat Steel Corporation have proposed to expand their MS Steel Ingots/Billets along with a captive power plant of 10 MW capacity at Survey No. 405/3, 406, 407 Village Dhamdaka, Bhuj Bhachau Road, Taluka Anjar, District Kutch, Gujarat. The existing plant got Consent to Establish from Gujarat Pollution Control Board on 17.9.2011. The existing plant is located in an area of 21690.98 m². The additional land requirement for the proposed expansion is 36664.24 m². 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. The power requirement for the proposed expansion is 40 MW which will be met from M/s Paschim Gujarat Vij Corporation Limited and the captive power plant. D.G set of 1000 KVA is proposed as a standby power. The water requirement after the proposed expansion is 235 m³/day which will be sourced from Narmada water. The Amradi lake and Tapar dam is located at a distance of 3.75 km and 9.5 km respectively. The raw materials required are steel scrap, sponge iron, ferro alloys, MS billets, Manganese ore, Limestone, sand and coal. Project cost is Rs. 90 Crores (Existing – 10 Crores and Proposed – 80 Crores).

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

Sr. No	Particular	Plant Configuration	Product Details	Production
Existing				
1	Induction furnace	1 x 5 Ton	MS Steel Ingots / Billets	27576 TPA
2	CCM	6 x 11 strand		
Proposed				
1	Induction furnace	7 x 15 Ton	MS Steel Ingots /Billets	6,00,000 TPA
2	CCM	6 x 11 strand		
3	Rolling Mill	2 x 30 Ton	MS Joists	2,00,000 TPA
			TMT Bars/ Angles/Channels	2,00,000 TPA
4	Electric Arc furnace	1 x 5 Ton	Silico Manganese	18,000 TPA
5	Power Plant	30+30 Ton AFBC	Power	10 MWH
By product				
1	Slag			1,44,000 TPA
2	Coal Ash/fines			25,000 TPA

To control the air emissions, the air pollution control systems such as pulse jet bag filter, Electro Static Precipitator and stack of adequate height will be provided. The raw material handling section would be provided with dust suppression/dust collection systems. Greenbelt development will be done all along the plant boundary. Covered conveyor belts will be used to prevent fugitive emissions. The industrial effluent generation is 15 m³/day which will be treated in the ETP. The treated effluent will be used for gardening and dust suppression. ETP waste will be send to the authorized TSDF site. Used oil will be sent to registered recyclers.

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 raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
15. 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. 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 steel plant and Captive Power Plant 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 the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
58. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
59. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
60. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
63. Occupational health:
 - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - c. Annual report of health status of workers with special reference to Occupational Health and Safety.
 - d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
 - e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
64. Plan for the implementation of the recommendations made for the steel plant in the CREP guidelines must be prepared.
65. Corporate Environment Policy

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
66. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
67. A note on identification and implementation of Carbon Credit project should be included.
68. Total capital cost and recurring cost/annum for environmental pollution control measures.
69. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
70. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 Gujarat 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.

6.5.22 Proposed expansion of Mini Integrated Steel Plant project at Distt. Saraikela-Kharswan, Jharkhand by M/s Divine Alloys & Power Corporation Ltd - regarding TORs.

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

6.5.23 Proposed 9000TPA Ferro Molybdenum plant at Dist. Jajpur, Odisha by M/s Tierra Industries 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 Reference for preparation of EIA/EMP report. All the Metallurgical Industries (Ferrous Non Ferrous) are 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 Tierra Industries Limited have proposed to establish a Ferro Molybdenum plant at Village Sundaria, Tehsil Dharmasala, District Jajpur, Odisha. Total land requirement is 24 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. Total cost of the project is Rs.26.17 crores. The power requirement is 1 MW which will be met from the CESCO (State Grid). D.G.set of 3x1000 KVA will be used as stand by during power failure. The water requirement is 5 m³/hr which will be sourced from existing bore well. The raw materials required for this project are: Roasted Molybdenum concentrates (10386 TPA), Salter peter (311.58 TPA), Aluminium granular (623.16 TPA), Roll scale (2077.2 TPA), Fe-Si fines (2852.1 TPA), steel cutting (2413.8 TPA) and Flourite (207.9 TPA). The product Ferro Molydenum (FeMo) will have Mo – 55 % to 70% with impurities like S: 01-0.15; C: 0.1-1.5, p-0.05-0.08 & rest Fe.

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

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

3. A line diagram/flow sheet for the process and EMP
4. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. Details and classification of total land (identified and acquired) should be included.
11. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
12. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
13. 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.
14. A list of industries containing name and type in 10 km radius shall be incorporated.
15. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
16. Studies for slag material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
17. Manufacturing process details all the plants should be included.
18. Mass balance for the raw material and products should be included.
19. Energy balance data for all the components should be incorporated.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
21. 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.
22. 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.

23. Vehicular pollution control and its management plan should be submitted.
24. A write up on use of high calorific hazardous wastes from all the sources and commitment regarding use of hazardous waste should be included.
25. 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.
26. 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.
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.
28. 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. Impact on the nearby forests shall be assessed.
29. 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.
30. Ambient air quality monitoring 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
 - 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.
31. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
32. One season data for gaseous emissions other than monsoon season is necessary.
33. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
34. 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.

35. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
36. Ground water modelling showing the pathways of the pollutants should be included
37. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
38. 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.
39. 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.
40. A note on the impact of drawl of water on the nearby River during lean season.
41. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
42. 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.
43. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
44. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
45. 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.
46. 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.
47. 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.
48. 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.
49. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
50. 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.
51. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the

- reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
52. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
 53. 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.
 54. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
 55. 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.
 56. 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.
 57. 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.
 58. 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.
 59. Total capital cost and recurring cost/annum for environmental pollution control measures.
 60. 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.
 61. 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 Odisha 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.

6.5.24 Proposed manufacturing of bulk drugs intermediates at Distt. Panchkula, Haryana by **M/s Syschem (india) Ltd - regarding TORs.**

The project authorities along with their consultant (M/s EQMS India Private Limited) 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 outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Syschem India Limited have proposed to expand their manufacturing of drugs and its intermediates at Khasra No. 84,85 and 149/1 at village Bargodam, Taluka Kalka, District Panchkula, Haryana. The existing plant got Consent to Establish from Harayana Pollution Control Board on 17.9.2011. The existing plant established prior to 2006, hence it does not attract Environmental Clearance. Total plot area for the expansion is 25662.91 m². 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. The power requirement for the proposed expansion is 1520 KVA which will be met from M/s Uttar Haryana Bijli Vitran Nigam Limited. D.G set of 1500 KVA is proposed as a standby power. The water requirement after the proposed expansion is 578 m³/day which will be sourced from bore well. The Kansal Ki Khol reserved forests is located at a distance of 5.5 km from the project site. The Sirsa Nadi is located at a distance of 4.48 km from the project site. Project area falls in the seismic zone IV. The raw materials required are clarithromycin, fexofenadine, atorvastatin, pentazocine, pioglitazone HCL and cefaclor etc. Project cost is Rs. 71 Crores.

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

Active Pharmaceuticals Ingredients – Drugs & Intermediated				
Sl. No.	Product	Capacity (Tons per Annum)		
		Existing	Proposed	After Expansion
1.	Clarithromycin	0	72	72
2.	Fexofenadine	0	72	72
3.	Atorvastatin	0	48	48
4.	Pentazocine	0	18	18
5.	Clopidogrel Hydrogen Sulphate	0	72	72
6.	Pioglitazone HCL	0	12	12
7.	Quetiapine Fumarate	0	72	72
8.	Ceflexcin	0	12	12
9.	Cephalaxim	0	72	72
10.	Cefaclor	48	36	84
11.	7ACCA	0	36	36
12.	R&D – Pilot Product (10%)	0	36	36
Total		48	558	606
		After Expansion 372 Tones out of 606 Tones (Maximum 5 product at a time)		
Wood and Auto Finishes				
Sl.No.	Product	Capacity (Tons per Annum)		
		Existing	Proposed	After Expansion
1.	Sanding Sealer	250	0	250
2.	T.T. Clear/Lacquer	250	0	250
3.	Melamine Glossy/Matt/Satin	250	0	250
4.	Thinner N.C.	500	0	500
5.	Melamine Thinner	50	0	50
6.	Remover	100	0	100
7.	Thinner G.P./P.U	1000	0	1000

To control air emissions, stack of adequate height will be provided. The wastewater generation is 268 KLD. This effluent will be treated in the ETP. Spent oil/waste containers will be send to approved recyclers.

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 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. Promoters and their back ground.
10. Regulatory framework
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 along with total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location along with 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 along with supporting document.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
18. Permission, if any, from the State Forest Department
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products along with the production capacities.
21. Detailed list of raw materials required and source, mode of storage and transportation.
22. Manufacturing process details along with the chemical reactions and process flow chart.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. 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.
25. 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 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.

26. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
27. Details of VOC monitoring system in the working zone environment, if any.
28. Name of all the solvents to be used in the process and details of solvent recovery system.
29. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
30. Details of water and air pollution and its mitigation plan.
31. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
32. An action plan to control and monitor secondary fugitive emissions from all the sources.
33. 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.
34. Permission for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
35. Action plan for 'Zero' discharge of effluent shall be included.
36. Treatment of phenol in the effluent, if any.
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. Explore the possibility to use fuel other than wood.
40. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
41. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
42. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
43. A write up on "Safe Practice" followed for hazardous chemicals handling, storage, transportation and unloading to be submitted.
44. A write up on "Treatment of workers affected by accidental spillage of hazardous chemicals.
45. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
46. An action plan to develop green belt in 33 % area
47. 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.
48. 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 has 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.
49. Details of occupational health surveillance programme.
 50. Socio-economic development activities shall be in place.
 51. 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.
 52. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
 53. 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.
 54. 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.
 55. 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.
 56. 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.
 57. Total capital cost and recurring cost/annum for environmental pollution control measures.
 58. 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.
 59. 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 Haryana 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.

6.5.25 Expansion of Asbestos Fibre Cement Sheet Manufacturing Plant from 14500 T/M to 30000 T/M at Podanur, District Coimbatore, Tamil Nadu by M/s Everest Industries Limited.-regarding TORs.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. All the Asbestos milling and asbestos based products have been listed at Sl. No. 4(c) of Schedule of EIA Notification, 2006 as Category 'A' and have to be appraised at the Central level.

M/s Everest Industries Limited have proposed to expand Chrysotile Asbestos Fibre Cement Products (Roofing sheets & accessories) from 14500 Tons/Month to 30,000 Tons/ Month at survey nos 586/1,586/2 and 587 at Podanur town, Coimbatore South Taluk, Coimbatore district, Tamil Nadu. The proposed expansion will be done in the land area of 40.5 acres. No Forest land is involved. No National Park, Wildlife Sanctuary within 10 km radius of the project site. No court cases/litigation is pending against the project. Total cost of the project is Rs.3 crores. The raw materials required are cement (11617 TPM), fly ash (7821 TPM), Chrysotile asbestos fibre (2381TPM) and Pulp (209 TPM) etc. Chrysotile fiber will be imported from Canada and Brazil. The water requirement is 315 KLD.

The proponent has submitted a copy of the certificate obtained from Kurichi New Town Development Authority, Coimbatore stating that the project site falls under the industrial use of Kurichi scheme and requested the Committee to exempt the project from the Public Hearing. The proponent also submitted that in the previous EC granted by the Ministry vide F.No. J-11011/673/2007-IA.II(I) dated 22.2.2008, that the Public Hearing is exempted due to expansion of the proposed unit in the same campus as per Section 7 (ii) of EIA Notification, 2006.

Based on this document, the proponent requested the Committee to exempt the project from the Public Hearing. The Committee noted that the proponent has not submitted the relevant documents i.e. Gazette Notification of State Govt. of Tamil Nadu declaring the project site as a notified industrial area. Hence, the Committee decided not to exempt the project from the Public Hearing.

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. 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. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
6. A line diagram/flow sheet for the process and EMP
7. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
8. Modern up-to-date Asbestos plant with automatic bag opening devices should be installed.
9. The safety measures adopted during import and transport of Asbestos from Canada or any other country should be included.
10. Present land use of study area for 10 Km radius should be included. Detailed topographical map indicating drainage pattern and other features of the area should also be included.
11. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land viz. allotment letter should be included.
12. 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 should be incorporated. The same should be used for land use /land-cover mapping of the area.
13. Project site layout plan to scale using AutoCAD, 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.
14. Cumulative data base of last 2 yrs. for emissions e.g. aerosols size, optical depth, CO, CO₂, surface and air temperature, NO, CH₄, anions/cations/trace metals as given below in surface/subsurface water with present GW level and its fluctuation for last 5-10 yrs from CGWB as may be applicable.
15. For the project location 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.
16. Geo-technical data by a bore hole of upto 40 mts. in every One sq. km area such as ground water level, SPTN values, soil fineness, geology, shear wave velocity

- etc. for liquefaction studies. This will help making a future Seismic Hazard and Earthquake Risk Management area.
17. Site-specific micro-meteorological data including inversion height and mixing height should be included
 18. Details of the other industries located in 10 km radius should be included
 19. One season base line data on air, water, soil & noise etc. should be included
 20. A chapter on chemistry of asbestos, handling of asbestos material, precautions proposed for the direct contact, arrangements made for storage and monitoring of asbestos fibres etc. other details as per given below:
 - i. Size of silica sand, transportation, storage, spillway of melt and temperature management for float glass and mirror Industry along with silicosis management and toxicity studies and management for Ag etc.
 - ii. Source and location of Asbestos (GPS) even if imported, size in F/ml, levels in environment, Chemical composition of raw material as especially amount of Tremolite, Crocidolite, Amosite and other amphiboles, Hexavalent chromium in raw material especially in serpentine, talc and chrysotile, Electron microscopy, XRD and Raman Spectra studies.
 - iii. Health Management Plan for Mesothelium, Lung cancer and Asbestosis related problems in asbestos industries.
 21. 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.),
 22. 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.
 23. 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.
 24. Mode of transport of raw materials from sources are to be shown. All the trucks for raw material and finished product transportation must be "Environmentally Compliant"
 25. Studies are also required for management of muck disposal, slurry, sludge material and solid waste generated if the raw materials used has trace elements and a management plan.
 26. Air quality modeling for the Asbestos handling system. Ambient air quality monitoring modelling along with cumulative impact. Following are to be included as an annexure for the day (24 hrs) considered for maximum GLC:
 - 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.
 - xii. Existing stack emission data and fibre concentration in the work zone.
27. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines and latest notification vide G.S.R. 414(E) dated 30th May, 2008 should be included.
 28. Chemical characterization of RSPM and incorporation of RSPM data. Location of one AAQMS in downwind direction.
 29. 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.
 30. 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.
 31. Actual source and permission for the drawl of water from bore well from the SGWB/CGWA 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
 32. Ground water monitoring minimum at 8 locations should be included.
 33. Scheme for proper storage of asbestos fibres and disposal of solid/hazardous waste should be included.
 34. Presence of aquifer/aquifers within 1 km of the project boundaries should be included. Management plan for recharging the aquifer should be given so as to limit the water extraction within permissible limit of CWC or CGWB should be included.
 35. 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.

36. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management should be included.
37. Ground water modeling showing the pathways of the pollutants should be included
38. Column leachate study for all types of stockpiles or waste disposal sites, at 20°C-50°C should be conducted and included.
39. All samplings for water have to be done during the peak summer time (Sampling number, dates and standard deviation should be included.
40. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well should be ensured.
41. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents should be included.
42. 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.
43. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from asbestos bearing effluent should be included.
44. 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 should be included.
45. All stock piles should be on top of a stable liner to avoid leaching of materials to ground water.
46. The green belt should be around the project boundary in 33 % area and a scheme for greening of the traveling roads should also be incorporated. All rooftops/terraces should have some green cover.
47. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
48. 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.
49. Detailed action plan for compliance of the directions (including the recent Kalyaneswari case) of the Hon'ble Supreme Court of India regarding occupational health and safety measures in asbestos industries should be included.

50. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
51. Compliance to the recommendations mentioned in the CREP guidelines should be included.
52. An action plan on entire operation should be automatic and closed system for all operations for fibre handling and processing should be included.
53. Details of arrangement for measurement and monitoring of asbestos fibre (Phase contrast microscope) should be included.
54. 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.
55. EMP should include the concept of waste-minimization, recycle/reuse/recovery techniques, Energy conservation, and natural resource conservation.
56. EMP should include a clear map for plantation/green belt.
57. Commitment that laboratory for monitoring asbestos fibres will be established at the site.
58. 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.
59. 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.
60. 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-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA/EMP report shall be submitted to Tamil Nadu 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, after public consultation.

6.5.26 Expansion of the Manufacturing unit of Industrial Chemicals (from 275 TPD to 315 TPD) at Village Bhra Dera Bassi, Bhra-Gulabpur Road, District Mohali, Punjab by M/s Punjab Acids-Chem (P) Ltd. - regarding TORs.

The project authorities along with their consultant [M/s Envirotech (India) Consortium, Chandigarh] 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 outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level. Further, the project site is located within 10 km radius of the inter-state boundary.

M/s Punjab Acids Private Limited have proposed to expand their manufacturing of chemicals unit at Village Behra, Near PM; Post Office Rampur, Sainia Derabassi, District Mohali, Punjab. The existing plant got Consent to Operate from Punjab Pollution Control Board on 12.3.2012. Total plot area for the expansion is 10 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. The power requirement for the proposed expansion is 699 KW which will be met from M/s Punjab State Power Corporation Limited. D.G set of 750 KVA is proposed as a standby power. The water requirement after the proposed expansion is 185 m³/day which will be sourced from tube well. The Bir Kheri and Bir Dadrala protected forests is located at a distance of 3 km and 4 km from the project site. The Dangri Nadi river is located at a distance of 6 km from the project site. Ghagar Nadi is located at a distance of 8 km from the project site. The raw materials required are sulphur, sulphuric acid, sulphur trioxide, Methanol, Urea and Caustic soda etc. Project cost is Rs. 4426 lakhs. Rs. 29 lakhs and Rs. 3 lakhs is earmarked towards the capital and recurring cost per annum towards the environmental protection measures.

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

Sl. No.	Product	Capacity (Tons per Annum)		
		Existing	Proposed	After Expansion
1.	Sulfuric Acid	75	125	200
2.	Alum	200	Nil	200
3.	Oleum	Nil	70	70

4.	Di-Methyl Sulphate	Nil	30	30
5.	Sodium Bi-sulphite	Nil	30	30
6.	Sulfamic Acid	Nil	30	30
7.	Liquid SO ₃	Nil	30	30

To control air emissions, stack of adequate height will be provided. The wastewater generation is 10 KLD. This effluent will be treated in the ETP. Used oil will be send to registered recyclers.

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 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. Promoters and their back ground.
10. Regulatory framework
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 along with total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location along with 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 along with supporting document.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
18. Permission, if any, from the State Forest Department
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products along with the production capacities.
21. Detailed list of raw materials required and source, mode of storage and transportation.
22. Manufacturing process details along with the chemical reactions and process flow chart.

23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. 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.
25. 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 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.
26. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
27. Details of VOC monitoring system in the working zone environment, if any.
28. Name of all the solvents to be used in the process and details of solvent recovery system.
29. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
30. Details of water and air pollution and its mitigation plan.
31. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
32. An action plan to control and monitor secondary fugitive emissions from all the sources.
33. 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.
34. Permission for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
35. Action plan for 'Zero' discharge of effluent shall be included.
36. Treatment of phenol in the effluent, if any.
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. Explore the possibility to use fuel other than wood.
40. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
41. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
42. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
43. A write up on "Safe Practice" followed for hazardous chemicals including methanol handling, storage, transportation and unloading to be submitted.
44. A write up on "Treatment of workers affected by accidental spillage of hazardous chemicals including methanol.
45. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
46. An action plan to develop green belt in 33 % area

47. 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.
48. 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 has 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.
49. Details of occupational health surveillance programme.
50. Socio-economic development activities shall be in place.
51. 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.
52. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
53. 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.
54. 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.
55. 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.
56. 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.
57. Total capital cost and recurring cost/annum for environmental pollution control measures.
58. 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.
59. 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 Punjab Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

6.5.27 Expansion project to manufacture API Bulk Durgs at Plot No. 2209, Notified Industrial Estate, GIDC Sarigam, Distt. Valsad, Gujarat by **M/s Macleods Pharmaceuticals Ltd. - regarding TORs.**

The project authorities along with their consultant [M/s Eco Chem Sales and Service, Surat] 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, 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.

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 for the expansion is 54265 m². 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. The power requirement for the proposed expansion is 1900 KVA which will be met from M/s DGVGL. Also, 3 Nos of D.G sets of 320 KVA, 1010 KVA and 1250 KVA is proposed as a standby power. The water requirement after the proposed expansion is 190 m³/day which will be sourced from canal of river Damanganga through GIDC Sarigam. 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, TPM		
		Existing	Proposed	Total
1	API Bulk Drugs	4.5	7.5	12.0

To control air emissions, stack of adequate height will be provided. The wastewater generation is 138 KLD [Domestic: 30 KLD; Gardening: 9 KLD and Industrial: 99 KLD]. The industrial effluent will be treated in the solvent stripper followed by the MEE & primary, secondary & tertiary treatment units. The treated effluent will be send to Arabian Sea through underground drainage line. Used oil will be send to registered recyclers.

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 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. Promoters and their back ground.
10. Regulatory framework
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 along with total capital cost and recurring cost/annum for environmental pollution control measures.

15. Project site location along with 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 along with supporting document.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
18. Permission, if any, from the State Forest Department
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products along with the production capacities.
21. Detailed list of raw materials required and source, mode of storage and transportation.
22. Manufacturing process details along with the chemical reactions and process flow chart.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. 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.
25. 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 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.
26. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
27. Details of VOC monitoring system in the working zone environment, if any.
28. Name of all the solvents to be used in the process and details of solvent recovery system.
29. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
30. Details of water and air pollution and its mitigation plan.
31. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
32. An action plan to control and monitor secondary fugitive emissions from all the sources.
33. 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.
34. Permission for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
35. Action plan for 'Zero' discharge of effluent shall be included.
36. Treatment of phenol in the effluent, if any.
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. Explore the possibility to use fuel other than wood.

40. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
41. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
42. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
43. A write up on "Safe Practice" followed for hazardous chemicals including methanol handling, storage, transportation and unloading to be submitted.
44. A write up on "Treatment of workers affected by accidental spillage of hazardous chemicals including methanol.
45. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
46. An action plan to develop green belt in 33 % area
47. 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.
48. 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 has 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.
49. Details of occupational health surveillance programme.
50. Socio-economic development activities shall be in place.
51. 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.
52. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
53. 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.
54. 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.
55. 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.
56. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment and item-wise details along with time bound action plan should be prepared and incorporated.
57. Total capital cost and recurring cost/annum for environmental pollution control measures.

58. 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) 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 is not required as the unit is located in the notified industrial area.

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

6.5.28 Proposed 0.1 MTPA Cold Briquetted Iron through Tunnel kiln (3 Nos) for High Dense Metallic Cake (HDMIC) plant along with 3x4500NM³/ Hr producer Gas Plant, 2x15T Induction Furnace & 0.075 MTPA Re-Rolling Mill at Village Basingi, Tehsil Bahalda, District Mayurbhanj, Odisha by **M/s Sebox Resources Pvt. Ltd - regarding TORs.**

The project authorities along with their consultant (M/s Visiontek Consultancy Services Private Limited, Bhubaneshwar) 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. All the Metallurgical Industries (Ferrous Non Ferrous) are 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 Sebox Resources Private Limited have proposed to establish a 0.1 MTPA Cold Briquetted Iron through Tunnel kiln (3 Nos) for High Dense Metallic Cake (HDMIC) plant along with 3x4500NM³/ Hr producer Gas Plant, 2x15T Induction Furnace & 0.075 MTPA Re-Rolling Mill at Village Basingi, Tehsil Bahalda, District Mayurbhanj, Odisha. Total land requirement is 18.83 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. Total cost of the project is Rs.82.70 crores. Rs. 4.96 crores and Rs.1.04 crores is earmarked for the capital cost and recurring cost per annum towards the environmental protection measures. Rs.4.14 crores is earmarked for the CSR related activities. The power requirement is 12.6 MW which will be met from the NESCO. The water requirement is 270 m³/day. The Kharkhai river is located at a distance of 1.75 km from the project site. The raw materials required for this project are: high grade/low grade iron ore fines, mill scale, coke breeze, coal, ferro alloys and MS ingots/billets.

Following are the production capacity details:

S.No.	Unit	Capacity
1.	Tunnel Kiln (3 Nos) for HDMIC (High Dense Metallic Cake)	3 x 100 TPD ~ 0.1 MTPA
2.	Producer gas plant	3x 4500 Nm ³ /hr
3.	SMS unit (2x15 TIF, 1x30 T LRF & CCM)	0.081 MTPA
4.	Re-Rolling Mill	0.075 MTPA

To control the air emissions, coal handling plant will be equipped with pulse jet type bag filter and dust deduction system. Stack of adequate height will be provided for proper dispersion of air emissions. The wastewater generation is 24.3 m³/day. ETP sludge will be disposed in secured land fill.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
 10. Details and classification of total land (identified and acquired) should be included.
 11. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
 12. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
 13. 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.
 14. A list of industries containing name and type in 10 km radius shall be incorporated.
 15. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
 16. Studies for slag material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
 17. Manufacturing process details all the plants should be included.
 18. Mass balance for the raw material and products should be included.
 19. Energy balance data for all the components should be incorporated.
 20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
 21. 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.
 22. 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.
 23. Vehicular pollution control and its management plan should be submitted.
 24. A write up on use of high calorific hazardous wastes from all the sources and commitment regarding use of hazardous waste should be included.
 25. 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.
 26. 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.
 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.
 28. 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. Impact on the nearby forests shall be assessed.
 29. 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.

30. Ambient air quality monitoring 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
 - 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.
31. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
32. One season data for gaseous emissions other than monsoon season is necessary.
33. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
34. 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.
35. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
36. Ground water modelling showing the pathways of the pollutants should be included
37. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
38. 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.
39. 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.
40. A note on the impact of drawl of water on the nearby River during lean season.
 41. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 42. 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.
 43. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
 44. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
 45. 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.
 46. 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.
 47. 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.
 48. 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.
 49. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
 50. 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.
 51. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
 52. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
 53. 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.
 54. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
 55. 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.
 56. 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.

57. 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.
58. 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.
59. Total capital cost and recurring cost/annum for environmental pollution control measures.
60. 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.
61. 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 Odisha 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.

6.5.29 Proposed expansion of manufacturing of chemicals unit at plot no. 148/1, Near Bhairavnath Textile, Chhatral Kadi road, Village Dhanol, Taluka Kalol, District Gandhinagar, Gujarat by **M/s Bhole Intermediates.- 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 outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Bhole Intermediates have proposed to expand their manufacturing of chemicals unit at plot no. 148/1, Near Bhairavnath Textile, Chhatral Kadi road, Village Dhanol, Taluka Kalol, District Gandhinagar, Gujarat. The existing plant got Consent to Operate from Gujarat Pollution Control Board on 3.8.2012. Total plot area is 3678 m². 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. The power requirement for the proposed expansion will be met from M/s Uttar Gujarat Vij Company Limited. The water requirement after the proposed expansion is 3600 liters/day. The raw materials required are Metanilic Acid, Ethyl Chloride, Caustic lye, Caustic Potash and HCL etc. Project cost is Rs. 26.54 lakhs. Rs. 2.62 lakhs and Rs.3.3 lakhs is earmarked for capital cost and recurring cost per annum towards the environmental protection measures.

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

Sl. No.	Product	Capacity		
		Existing	Proposed	After Expansion
1.	DEMAP	5 MT/Month	30 MT/Month	35 MT/Month
2.	Dilute Caustic Lye (By Product)	30 KL/Month	127.5 KL/Month	157.5 KL/Month

To control air emissions, stack of adequate height will be provided. The wastewater generation is 600 liters/day. Used oil will be send to registered recyclers.

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 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. Promoters and their back ground.
10. Regulatory framework
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 along with total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location along with 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 along with supporting document.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
18. Permission, if any, from the State Forest Department
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products along with the production capacities.
21. Detailed list of raw materials required and source, mode of storage and transportation.
22. Manufacturing process details along with the chemical reactions and process flow chart.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. 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.

25. 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 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.
26. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
27. Details of VOC monitoring system in the working zone environment, if any.
28. Name of all the solvents to be used in the process and details of solvent recovery system.
29. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
30. Details of water and air pollution and its mitigation plan.
31. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
32. An action plan to control and monitor secondary fugitive emissions from all the sources.
33. 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.
34. Permission for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
35. Action plan for 'Zero' discharge of effluent shall be included.
36. Treatment of phenol in the effluent, if any.
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. Explore the possibility to use fuel other than wood.
40. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
41. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
42. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
43. A write up on "Safe Practice" followed for hazardous chemicals including methanol handling, storage, transportation and unloading to be submitted.
44. A write up on "Treatment of workers affected by accidental spillage of hazardous chemicals including methanol.
45. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
46. An action plan to develop green belt in 33 % area
47. 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.
48. 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 has 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.
49. Details of occupational health surveillance programme.
 50. Socio-economic development activities shall be in place.
 51. 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.
 52. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
 53. 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.
 54. 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.
 55. 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.
 56. 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.
 57. Total capital cost and recurring cost/annum for environmental pollution control measures.
 58. 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.
 59. 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 Gujarat 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.

6.5.30 Proposed Clinker Grinding Unit (2*0.75 MTPA) along with D.G. set (2 x 5 MW) and Autoclaved Aerated Concrete Block (1000 m³/day) at Chakla (Bhedyadang) Industrial area, Tehsil Kishanganj, Dist. Kishanganj, Bihar by M/s JK Lakshmi Cement Ltd. - regarding TORs.

The project authorities along with 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 stand alone clinker grinding units are covered under Category 'B' as per para 3(b) of the Schedule of the EIA notification 2006. However, project site is located within 10 Km of interstate boundary of Bihar and West Bengal and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s JK Lakshmi Cement Limited have proposed to establish a 2x0.75 stand alone clinker grinding unit, D.G set of 2x5 MW and Autoclaved Aerated Concrete Block (1000 m³/day) at Chakla (Bhedyadang) Industrial area, Tehsil Kishanganj, Dist. Kishanganj, Bihar. The land requirement for the project is Rs.34.64 crores. 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. Total cost of the project is Rs.260 crores. Rs. 30 crores and Rs. 85 lakhs are earmarked towards capital

cost and recurring cost/annum for pollution control measures. The power requirement is 10 MVA which will be met from M/s Bihar State Electricity Board. D.G set of 2x5 MW will be installed as a standby power. The water requirement is 1000 m³/day which will be met from ground water. The Mahananda river is located at a distance of 1.5km from the project site. The project site falls in seismic zone – IV. The raw materials required are Clinker, Gypsum and Fly ash etc.

The proponent has submitted a copy of the certificate as well as the allotment letter obtained from Bihar Industrial Area Developmental Authority indicating the allotment of industrial area on lease to M/s JK Lakshmi Cement Limited for a period of 90 years. Based on this document, the proponent requested the Committee to exempt the project from the Public Hearing. The Committee noted that the proponent has not submitted the relevant documents i.e. Gazette Notification of State Govt. of Bihar declaring the project site as a notified industrial area. Hence, the Committee decided not to exempt the project from the Public Hearing.

To control the air emissions, bag filters will be provided. Water sprinkling will be done to control the dust emissions. No waste water will be generated from the cement grinding process. Dust collected from the air pollution control equipment will be recycled back into the process. Used oil will be sent to registered recyclers.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
5. 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.
6. 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.
7. 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.
8. 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.
9. Details and classification of total land (identified and acquired) should be included.

10. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
11. A list of industries containing name and type in 10 km radius shall be incorporated.
12. 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".
13. Manufacturing process details for all the process units should be included.
14. Mass balance for the raw material and products should be included.
15. Energy balance data for all the components should be incorporated.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
17. 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.
18. 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.
19. Vehicular pollution control and its management plan should be submitted.
20. 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.
21. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
22. Air quality modeling for all the plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included.
23. 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.
24. Ambient air quality monitoring 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
 - 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.
- 25. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
- 26. One season data for gaseous emissions other than monsoon season is necessary.
- 27. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
- 28. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used 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.
- 29. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
- 30. 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.
- 31. 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.
- 32. A note on the impact of drawl of water on the nearby River during lean season.
- 33. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
- 34. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
- 35. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
- 36. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
- 37. 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.
- 38. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
- 39. 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.
- 40. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
- 41. 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.

42. 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.
43. 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.
44. Total capital cost and recurring cost/annum for environmental pollution control measures.
45. 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.
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.

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 Bihar 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.

6.5.31 Proposed Specialty chemical manufacturing plant at Village: Mandali, Distt. Mehsana, Gujarat by **M/s Keshav Fertilizers Pvt. Ltd. - regarding TORs.**

The Committee deferred the consideration of the proposal as the proposal found to be incomplete in several technical aspects. After detailed deliberations, the Committee sought the following information for reconsideration.

- Revised form -I and pre-feasibility project report covering all the technical aspects of the proposed plant facilities and the environmental aspects regarding anticipated air emissions, effluent generation, solid waste generation and its utilization.

6.5.32 Proposed manufacturing of Phenol formaldehyde resin and Melamine Urea formaldehyde resin at Distt. Surat, Gujarat by **M/s Evergreen Boardlam 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. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Evergreen Board Lam Private Limited have proposed to expand their manufacturing of chemicals unit at block no.110, Near Hi Tech Board, Village Ninat, Taluka Bardoli, District Surat, Gujarat. The existing plant got Consent to Operate from Gujarat Pollution Control Board on 3.8.2012. Total plot area is 48462 m². 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. The power requirement for the proposed expansion is 1000 KVA which will be met from M/s Dakshin Gujarat Vij Company Limited. The water requirement after the proposed

expansion is 11000 liters/day. The raw materials required are Urea Formaldehyde, Phenol Formaldehyde, Melamine Formaldehyde and Melamine Urea Formaldehyde etc. Project cost is Rs. 43.52 lakhs. Rs. 25.6 lakhs and Rs.4.49 lakhs is earmarked for capital cost and recurring cost per annum towards the environmental protection measures.

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

Existing:

Sl. No.	Name of the existing product	Capacity m ³ /month
1.	Particle Boards	4165
2.	Prelam particle boards	4165

Proposed:

Sl. No.	Name of the proposed product	Capacity MT/month
1.	Phenol formaldehyde resin	500
2.	Melamine urea formaldehyde resin	
3.	Urea formaldehyde resin	
4.	Melamine formaldehyde resin	

To control air emissions, stack of adequate height will be provided. The wastewater generation is 5850 liters/day. This effluent will be treated in the ETP. ETP sludge will be sent to TSDF site. Used oil will be send to registered recyclers.

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 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. Promoters and their back ground.
10. Regulatory framework
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 along with total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location along with 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 along with supporting document.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
18. Permission, if any, from the State Forest Department
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products along with the production capacities.
21. Detailed list of raw materials required and source, mode of storage and transportation.
22. Manufacturing process details along with the chemical reactions and process flow chart.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. 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.
25. 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 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.
26. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
27. Details of VOC monitoring system in the working zone environment, if any.
28. Name of all the solvents to be used in the process and details of solvent recovery system.
29. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
30. Details of water and air pollution and its mitigation plan.
31. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
32. An action plan to control and monitor secondary fugitive emissions from all the sources.
33. 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.
34. Permission for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
35. Action plan for 'Zero' discharge of effluent shall be included.
36. Treatment of phenol in the effluent, if any.

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. Explore the possibility to use fuel other than wood.
40. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
41. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
42. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
43. A write up on "Safe Practice" followed for hazardous chemicals handling, storage, transportation and unloading to be submitted.
44. A write up on "Treatment of workers affected by accidental spillage of hazardous chemicals.
45. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
46. An action plan to develop green belt in 33 % area
47. 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.
48. 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 has 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.
49. Details of occupational health surveillance programme.
50. Socio-economic development activities shall be in place.
51. 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.
52. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
53. 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.

54. 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.
55. 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.
56. 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.
57. Total capital cost and recurring cost/annum for environmental pollution control measures.
58. 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.
59. 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 Gujarat 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.

6.5.33 Proposed setting up of EPS at M#1 and (2) setting up of EPS M1A1 in CB-ONN-2002/03(Sanand Miroli Block) in Ahmedabad District, Gujarat by **M/s Gujarat State Petroleum 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 along with the draft Terms of Reference for preparation of EIA/EMP report. All the off-shore and on-shore oil and gas exploration, development & production plants are listed at S.N. 1(b) under Category 'A' and appraised at the Central Level.

M/s Gujarat State Petroleum Corporation Ltd have proposed to set up surface protection facilities – Two Nos in CB ONN-2002/02 Sanand Miroli block, Ahmedabad District, Gujarat. The block falls in Ahmedabad, Mehsana and Gandhinagar districts of Gujarat. Total area of the block is 285 sq.km. Major area of the block falls in Ahmedabad district. GSPC has obtained the Environmental Clearance for drilling of total 17 wells in CB ONN-2002/03 block vide MoEF letter No. J-11011/1046/2007-IAII (I) dated 7.2.2008. Public Hearing for the block was conducted on 4.12.2007 at Ahmedabad.

Out of 17 drilled wells, M/s GSPC has proposed two surface facilities falls in (M 1 and M1 A1) in Dholka Taluka of Ahmedabad district. The details of these two surface facilities are as below. No Forest land is involved. No National Park, Wildlife Sanctuary within 10 km radius of the project site. No court cases/litigation is pending against the project.

S.No.	Facility name	Latitude/Longitude	Survey No	Location	Area	Production
1.	M1: SURFACE PRODUCTION FACILITY – 19418 sq.m.	Latitude : 22°45'38.30" N Longitude : 72°30'35.20" E	832, 833, 835, 836, 832.	Ambliyara	Ahmedabad	Crude oil: 2-4 SCM/day, Water: 0.5-2 SCM/day and Associated Gas: 100-150 SCM/day
2.	M1 A1 : SURFACE PRODUCTION FACILITY - 22585 sq.m	Latitude : 22°45'27.78" N Longitude : 72°30'44.34" E	827, 828, 829, 830P, 833, 832.	Ambliyara	Ahmedabad	Crude oil: 2-4 SCM/day, Water: 1-3 SCM/day and Associated Gas: 120-200

S.No.	Facility name	Latitude/Longitude	Survey No	Location	Area	Production
						SCM/day

The power requirement will be met through Gujarat Electricity Board. D.G sets of 63.5 KVA each will be used in the M 1 and M1A1 production facility as a standby arrangement. To control the air emission, stack of adequate height will be provided. Total water consumption is 4.4 KLD. The wastewater generation from the M 1 and M1A1 is 0.55-2.05 KLD and 1.05-3.05 KLD respectively. The oily cotton waste will be disposed through authorized disposal site.

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

1. Executive summary of the project
2. Photographs of the EPS facilities area
3. 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.
4. Justification of the project.
5. Promoters and their back ground.
6. Regulatory framework
7. A map indicating location of the project and distance from severely/ critically polluted area.
8. Project location and plant layout.
9. Current status of construction activities.
10. Infrastructure facilities including power sources.
11. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
12. Project site location along with site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
13. Present land use based on satellite imagery for the study area of 10 km radius.
14. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
15. Details of the total land and break-up of the land use for green belt and other uses.
16. List of products along with the production capacities.
17. Detailed list of raw material required and source, mode of storage and transportation.
18. Manufacturing process details along with the chemical reactions and process flow chart.
19. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
20. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQS notified on 16th September, 2009. Location of one AAQMS in downwind direction.
21. One season (one month) 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 including HC and VOCs 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.
22. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
 23. Design details of ETP, incinerator, if any along with boiler, scrubbers/bag filters etc.
 24. Details of water and air pollution and its mitigation plan
 25. An action plan to control and monitor secondary fugitive emissions from all the sources.
 26. 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.
 27. Permission for drawl of water from concerned authority. Water balance chart including quantity of effluent generated recycled and reused and discharged.
 28. Action plan for 'zero' discharge of effluent should be included. Treatment & disposal of produced water.
 29. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
 30. 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.
 31. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
 32. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
 33. An action plan to develop green belt in 33 % area
 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.
 36. Details of occupational health surveillance programme.
 37. Socio-economic development activities should be in place.
 38. Note on compliance to the recommendations mentioned in the CREP guidelines.
 39. 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.
 40. 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 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.
 - c. 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.
 - d. 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.
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. 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.
 43. 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.
 44. 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. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard, circular no. J-11013/77/2004-IA II(I) dated 2nd December, 2009 and 30th September, 2011 available on the Ministry's website <http://www.moef.nic.in> may be referred.
- ix. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

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 Gujarat 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.

6.5.34 Proposed expansion plant for the manufacture of pesticide products at Plot no. 1,15,16, Opp. State Bank of India, GIDC Ind. Estate, Nandesari, Dist.Vadodara, Gujarat by **M/s GSP Crop Science Pvt. Ltd. - regarding TORs.**

The project authorities and their consultant (M/s Aqua Air Environmental Engineers Private Limited) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA/EMP. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s GSP Crop Science Private Limited have proposed to expand their manufacturing of Pesticide manufacturing unit at Plot no. 1,15,16, Opp. State Bank of India, GIDC Ind. Estate, Nandesari, Dist.Vadodara, Gujarat. Total plot area is 20873 m². 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. The power requirement for the proposed expansion is 2 MW which will be met from M/s Madhya Gujarat Vij Company Limited. The water requirement after the proposed expansion is 443 KLD which will be sourced from GIDC water supply. Project cost is Rs. 35 crores. Rs.3 crores is earmarked towards the environmental pollution control measures.

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

Sr. No.	Name of Product	Existing Capacity (MT/Month)	Proposed Capacity (MT/Month)	After Proposed Expansion (Total) (MT/Month)
1.	Chlorpyrifos	100	25	125
2.	Glyphosate	50	-50	00
3.	Pendimethaline	50	75	125
4.	Triazophos	58	-33	25
5.	Profenofos	25	25	50
6.	Hexaconazole technical	--	20	20
7.	Metribuzin	--	50	50
8.	Diafenthuron technical	--	50	50

9.	Fipronil	--	10	10
10.	Tricyclazole	--	25	25
11.	Bifenthrin	--	5	5
12.	Fenpyroximate	--	5	5
13.	Propanil	--	40	40
14.	Azoxystrobin	--	20	20
15.	Cyproconazole	--	20	20
16.	Carboxin	--	5	5
17.	Thiomethoxozim	--	20	20
Total		283	312	595

By-products

S. No.	Name of Product	Existing Capacity (MT/Month)	Proposed Capacity (MT/Month)	After Proposed Expansion (Total) (MT/Month)
1.	Spent HCl (30%)	5	9	34
2.	HBr	8	2	20
3.	Poly Aluminium Chloride	-	5	25
4.	Liquid Ammonia	-	4	14
5.	NaBr	-	4.4	4.4
6.	Methyl Acetate	-	0	30
7.	Spent Sulphuric Acid (45% - 50%)	-	87.5	187.5
8.	Sodium Sulphite (Na ₂ SO ₃)	-	1	11
9.	Sodium Formate	-	5	15

To control the air emissions, stack of adequate height will be provided. Effluent generation will be 317 m³/day and treated in ETP. ETP sludge will be sent to TSDF. Used oil will be sent to authorized recycler/re-processors. HCl will be sold to actual users.

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

1. Executive summary of the project
2. Justification of the project.
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. 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
 8. Promoters and their back ground.
 9. Regulatory framework
 10. A map indicating location of the project and distance from severely polluted area
 11. Project location and plant layout.
 12. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified industrial area should be included necessarily.
 13. Infrastructure facilities including power sources.
 14. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
 15. Project site location along with photographs and 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.
 17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
 18. Details of the total land and break-up of the land use for green belt and other uses.
 19. List of products along with the production capacities.
 20. Detailed list of raw material required and source, mode of storage and transportation.
 21. Manufacturing process details along with the chemical reactions and process flow chart.
 22. A report on study of dioxine emissions from other existing plant located anywhere.
 23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
 24. 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.
 25. 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, HCl, Cl₂ including HC and VOCs 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.
 26. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
 27. Name of all the solvents to be used in the process and details of solvent recovery system.
 28. Design details of ETP, incinerator, if any along with control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
 29. Details of water and air pollution and its mitigation plan

30. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
31. An action plan to control and monitor secondary fugitive emissions from all the sources.
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. Air quality modelling for proposed plant.
33. Permission from Competent Authority for the drawl of 54 m³/day water from the public water supply. Water balance chart including quantity of effluent generated recycled and reused and discharged.
34. Action plan for 'Zero' discharge of effluent should be included.
35. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
36. 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 management of fly ash generated from boiler should be included.
37. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
38. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
39. Risk assessment for storage for chemicals/solvents.
40. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
41. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
42. 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.
43. Details of occupational health programme.
 - xiv) To which chemicals, workers are exposed directly or indirectly.
 - xv) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - xvi) What measures company has taken to keep these chemicals within PEL/TLV.
 - xvii) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - xviii) What are onsite and offsite emergency plan during chemical disaster.
 - xix) Liver function tests (LFT) during pre-placement and periodical examination.
44. 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.
51. 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.
 52. 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. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment and item-wise details along with time bound action plan should be prepared and incorporated.
 54. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
 55. 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 is not required as the unit is located in the notified industrial area.

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

6.5.35 Proposed Onshore oil and gas exploration in the block SR-0NN-2005/I, at Dist, Korea, Chhattisgarh by **M/s Deep Industries Ltd. - regarding TORs.**

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

6.5.36 Proposed Chemicals unit at plot no. 2 & 3, village Ukharala, Distt. Bhavnagar, Gujarat by **M/s Medinex Laboratories 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 report. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A'. and appraised at Central level.

M/s Medinex Speciality Chemicals Pvt. Ltd have proposed for expansion of Synthetic Organic Chemicals Manufacturing Unit at Plot No. 2 & 3, Sy. No. 277/1, Village Ukharal, Tehsil Ghogha, District Bhavnagar, Gujarat. No forest land is involved. No court case/litigation is pending against the project. No national park or wildlife sanctuary is located within 10 Km. Lakhanaka dam and Gaurishankar lake are located at a distance of 4.93 Km and 8.91 Km respectively. Total plant area is 9905 m². Out of which, greenbelt will be developed in 3440.64 m². The cost of project is Rs. 7 Lakh. Following will be products will be manufactured:

S.N.	Name of the Product	Product code	Quantity (KG. /Month)
Existing			
1	Adrenaline Bitartrate	A1	50
2	Noradrenaline Bitartrate	A2	25
3	Dihydralazine Sulphate Hydrated	B1	250
4	L-Glutamic Acid	B2	250
5	Hydrochlorothiazide	B3	2000
6	Adrenochrome Mono Semicarbazone	C1	100
7	Isoprenaline Sulphate	C2	25
8	Isoprenaline Hydrochloride	C3	25
9	Dipivefrine Hydrochloride	C4	25
Proposed			
10	Dimenhydrinate	D1	500
11	L-Glutamic acid Hydrochloride	D2	1500
12	Ambroxol Hydrochloride	D3	1000
13	Acebrophylline	D4	500
14	L-Pyro Glutamic acid	D5	1000
<p>Note: Plant consist of production activity in three series namely A,B&C. at present, A1&A2 is connected in series A, B1 to B3 is connected in series B, C1 to C4 is connected in series C. Either product A1 or A2 is manufactured at a time. Either product B1 or B2 or B3 is manufactured at a time. Either product C1 or C2 or C3 or</p>			

C4 is manufactured at a time. Only one product will be produced at a time in three different series, A, B & C. Addition of new products will be carried out in spare capacity of C series.

Stack height of 12 m will be provided to oil fired boiler. Water requirement from ground water source will be increased from 10.527 m³/day to 13.654 m³/day after expansion. Industrial effluent will be increased from 9.527 m³/day to 12.4 m³/day after expansion. Industrial effluent will be treated in ETP. ETP sludge and Hyflow powder will be sent to TSDF. Used oil will be sent to authorized recyclers/re-processors.

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. 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 of raw material and products.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. 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.

22. 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 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.
23. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.
25. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
28. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
29. 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.
30. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
31. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
32. Zero discharge effluent concepts to be adopted.
33. 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).
34. 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.
35. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
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. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
38. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
39. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
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. Note on compliance to the recommendations mentioned in the CREP guidelines.
 45. 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.
 46. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
 47. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 48. 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.
49. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
 50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
 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.

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. 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 submitted to the Ministry for obtaining environmental clearance.

6.5.37 Proposed Ferro Alloys manufacturing and Sinter plant at Village Belsonda & Ghondari, Tehsil Mahasamund, District Mahasamund, Chhattisgarh by M/s Balaji Power (Unit of Hira Ferro Alloys Limited) - regarding TORs.

The project authorities a 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. All the Metallurgical Industries (Ferrous Non Ferrous) are 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 Balaji Power (Unit of Hira Ferro Alloys Limited) have proposed to establish a manufacturing of Ferro Alloys through Submerged Arc Furnace along with a Sinter Plant at villages Belsonda & Ghodari, Tehsil Mahasamund, District Mahasamund, Chhattisgarh. It was informed by the proponent that in the same premises already 8.5 MW biomass based power plant is operating for which Consent to Operate was obtained from Chhattisgarh Environment Conservation Board on 20.2.2013. The total land requirement is 16.54 acres. The land is already purchased by the proponent and the survey number details of the proposed plant site are 1184, 1246/2, 1247/1, 1258, 1259/1, 1260/2, 206(P), 207, 208(P), 209, 210/1, 208/2664, 213, 214, 215 and others. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. Tumgaon Reserved Forests and Sorid Reserved Forests are located within 10 km radius of the project site. Mahanadi river, Kodar river and Sukhi river are located at a distance of 1.8 km, 7.2 km and 8.4 km distance from the project site. No court cases/litigation is pending against the project. Total cost of the project is Rs.60.80 crores. The power requirement will be met from 8.5 MW biomass based power plant. The water requirement is 200 KLD which will be sourced from Mahanadi river. The raw materials required for this project are: quartz, coke, scrap, manganese ore, dolomite and iron ore etc.

To control air emissions, Submerged Electric Arc Furnace and the sinter plant will be equipped with fume extraction system with bag filters. There will be industrial effluent generation and plant will adopt zero effluent discharge.

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 / 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
8. A line diagram/flow sheet for the process and EMP
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. 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.
12. 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.
13. 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.
14. Details and classification of total land (identified and acquired) should be included.
15. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
16. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
17. 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.
18. A list of industries containing name and type in 10 km radius shall be incorporated.

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 slag 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 all the plants should be 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 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 proposed plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included. Impact on the nearby forests shall be assessed.
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 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
 - 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 viz. fly ash etc. 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 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.
55. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
56. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
57. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
58. 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. 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.
61. 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.
62. 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.
 63. Total capital cost and recurring cost/annum for environmental pollution control measures.
 64. 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.
 65. 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 Chhattisgarh Environment and Conservation 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.

6.5.38 Proposed expansion of specialty chemical products, API and intermediates manufacturing plant at Distt. Mehsana, Gujarat by M/s Shanku's Chem-Sciences Pvt. Ltd. - regarding TORs.

The project authorities along with their consultant [M/s Aqua-Air Environmental Engineers Private Limited, Surat] 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 outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Shanku's Chem-Sciences Private Limited have proposed to expand their API and API Intermediates drug manufacturing unit at Survey no. 243/B, 244, 245/P, Ahmedabad-Mehsana Highway, Mandali Crossroad, Mandali-382 732, Dist. Mehsana, Gujarat. Total plot area for the expansion is 45310 m². 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. The power requirement for the proposed expansion is 1.5 MW which will be met from M/s Gujarat Electricity Board. The water requirement after the proposed expansion is 126 m³/day which will be sourced from bore well. Total project cost is Rs. 10 crores.

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

Sr. No.	Name of Product	Existing quantity MT/month	Proposed quantity MT/month	Total After Proposed Expansion quantity MT/month
Existing				
1.	Di Calcium Phosphate	250	--	250
Proposed				
2.	2,6-dimethyl-5-methoxycarbonyl-4-(3-nitrophenyl)-1,4-dihydropyridine-3-carboxylic acid	--	180	180
3.	(Z)-1-Phenyl-2-(phthlamidomethyl)-N,N-diethylcyclopropanecarboxamide	--		
4.	CIS(±)-1-PHENYL-3- OXABICYCLO [3.1.0] HEXANE-2-one	--		
5.	Milnacipran and its intermediate	--		
6.	(S)-2-[4-(3-fluorobenzyloxy) benzyl amino] propanamide	--		
7.	Safinamide and its intermediate	--		
8.	N-[2-(7-methoxynaphthalen-1-yl)-	--		

Sr. No.	Name of Product	Existing quantity MT/month	Proposed quantity MT/month	Total After Proposed Expansion quantity MT/month
	ethanamine			
9.	7-Methoxy-1-Naphthyl Acetonitrile	--		
10.	Agomelatine and its intermediate	--		
11.	Lacosamide and its intermediate	--		
12.	(R)-N-benzyl-2-t-butoxycarbonylamino-3-methoxy propanamide	--		
13.	Cyclopropyl methyl chloride	---		
14.	2-(chloromethyl)-4-methoxy-3,5-dimethylpyridine hydrochloride	--		
15.	2,2-Azobis [2-methyl-N-{2-hydroxyethyl} propionamide]	--		
16.	N-Amino Azabicyclo octane Hcl	--		
17.	3 Ethyl 4-methyl 2-oxo pyrroline	---		
18.	Diazabicyclo[4.3.0]nonane	--		
19.	Trimethylsilyl Triflate	--		
20.	Ciprofloxacin Hydrochloride and its intermediate	--		
21.	Q Acid intermediate of Ciprofloxacin Hydrochloride	--		
22.	Lansoprazole and its intermediate	--		
23.	Fenofibrate and its intermediate	--		
24.	Omeprazole and its intermediate	--		
25.	Rabeprazole and its intermediate	--		
26.	Atorvastatin and its intermediate	--		
27.	Olanzapine and its intermediate	--		
28.	Valsartan and its intermediate	--		
29.	Venlafaxine and its intermediate	--		
30.	Losartan Potassium and its intermediate	--		
31.	Rosiglitazone and its intermediate	--		
32.	Pioglitazone and its intermediate	--		
33.	Irbesartan and its intermediate	--		
34.	Sertraline and its intermediate	--		
35.	Aripiprazole and its intermediate	--		
36.	Sildenafil and its intermediate	--		
37.	Telmisartan and its intermediate	--		
38.	Olmesartan and its intermediate	--		
39.	Citrizine Di HCl and its intermediate	--		
40.	Nebivolol and its intermediate	--		
41.	Glibenclamide and its intermediate	--		
42.	Ropinirole and its intermediate	---		

Sr. No.	Name of Product	Existing quantity MT/month	Proposed quantity MT/month	Total After Proposed Expansion quantity MT/month
43.	Fluconazole and its intermediate	--		
44.	Loratadine and its intermediate	--		
45.	Erythromycin Stearate /Estolate I.P.	--		
46.	Clarithromycin	--		
47.	Carvedilol and its intermediate	--		
48.	Celecoxib and its intermediate	--		
49.	Desloratadine and its intermediate	--		
50.	Meloxicam and its intermediate	--		
51.	R & D	0.5		
Total		250.5	180	430.5

To control air emissions, stack of adequate height will be provided. The wastewater generation is 110 KLD. The industrial effluent will be treated in the ETP. About 62.5 KL/Day effluents (low COD) shall be collected in Collection Tanks. The effluent is pumped to equalization cum Neutralization Tank, where the continuous addition and stirring of lime is done to maintain the pH of wastewater. Then after, neutralized wastewater shall go to Flash Mixer (FM) by gravity. Alum shall be dosed from Alum Dosing Tank (ADT) and Polyelectrolyte shall be added from Polyelectrolyte Dosing Tank (PEDT) into FM to carry out coagulation by using a Flash Mixer mechanism. Effluent from Flash Mixer shall go to Primary Clarifier (PCL) where the suspended solids are allowed to settle down. Then after, effluent shall be treated in Aeration tank and then go to Secondary Clarifier (SCL) where the suspended solids are allowed to settle down. Then treated effluent will go to RO, where RO Reject stream will be sent to MEE and Permeate stream will be reused. Another, 50 KL/Day effluents (High COD & High TDS) will be treated in MEE Unit. MEE salt will be disposed at TSDF site and condensate water will be reused in Cooling Tower, Boiler, Flushing and Scrubber. Domestic wastewater of 11.5 KLD will be treated in septic tank & soak pit. ETP sludge will be disposed in the TSDF site. Used oil will be sent to registered recyclers.

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 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. 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
8. Promoters and their back ground.
9. Regulatory framework
10. A map indicating location of the project and distance from severely polluted area
11. Project location and plant layout.
12. Infrastructure facilities including power sources.
13. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
14. Project site location along with site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
15. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project along with supporting document.
16. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
17. Permission, if any, from the State Forest Department
18. Details of the total land and break-up of the land use for green belt and other uses.
19. List of products along with the production capacities.
20. Detailed list of raw materials required and source, mode of storage and transportation.
21. Manufacturing process details along with the chemical reactions and process flow chart.
22. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
23. 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.
24. 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 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.
25. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
26. Details of VOC monitoring system in the working zone environment, if any.
27. Name of all the solvents to be used in the process and details of solvent recovery system.
28. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
29. Details of water and air pollution and its mitigation plan.
30. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
31. An action plan to control and monitor secondary fugitive emissions from all the sources.

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. Air quality modelling for proposed plant.
33. Permission for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
34. Action plan for 'Zero' discharge of effluent shall be included.
35. Treatment of phenol in the effluent, if any.
36. 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).
37. 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.
38. Explore the possibility to use fuel other than wood.
39. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
40. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
41. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
42. A write up on "Safe Practice" followed for hazardous chemicals including methanol handling, storage, transportation and unloading to be submitted.
43. A write up on "Treatment of workers affected by accidental spillage of hazardous chemicals including methanol.
44. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
45. An action plan to develop green belt in 33 % area
46. 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.
47. 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 has 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.
48. Details of occupational health surveillance programme.
49. Socio-economic development activities shall be in place.
50. 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.
51. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

52. 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.
53. 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.
54. 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.
55. 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.
56. Total capital cost and recurring cost/annum for environmental pollution control measures.
57. 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.
58. 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 Gujarat 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.

6.5.39 Proposed Mill Expansion Plan increase in paper production from 137,000 tpa to 201,000 tpa and increasing Captive Co-Generation Plant from 49.9 to 90.9 MW at village Dhaula, Tehsil Barnala, district Sangrur, Punjab by M/s Trident Limited (Paper Division) - **regarding TORs.**

The project authorities along with their consultant (M/s Vimta Labs, Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. All the Pulp & Paper Units are listed at S.N. 5(i) under category 'A' of the Schedule of the EIA notification 2006 and appraised at the Central level.

M/s Trident Limited (Paper Division) have proposed to upgrade the paper production from 375 to 550 TPD, straw pulp (225 to 280 TPD), wood pulp (65 to 150 TPD) and Co-generation power plant from 49.4 to 90.9 MW at village Dhaula, Tehsil Barnala, district Sangrur, Punjab. The proponent informed that the existing project was accorded environmental clearance by the Ministry during 2005. Total land requirement is 20 acres which is available within the existing mill premises of 405 acres. No additional land is required for the proposed expansion. No Forest land is involved. Dhanaula canal and Ghonsan canal is located at a distance of 2.3 km and 2.8 km distance from the project site. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. Total cost of the project is Rs. 440 crores. Rs.81 crores is earmarked towards the environmental pollution control measures.

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

S.No.	Description	Unit	Existing	Proposed Expansion	Total after expansion
1.	Paper	TPD	375	175	550
2.	Straw Pulp	TPD	225	55	280
3.	Wood Pulp	TPD	65	85	150
4.	Co-gen power plant	MW	49.4	41.5	90.9

The proponent has submitted a copy of the gazette notification dated 3.3.2011 issued by the Department of Industries and Commerce declaring the land of village Dhaula, Fategarrh Chhanna and Handiaya District Barnala as an Industrial Area. The

proponent requested the Committee to exempt the project from the Public Hearing. The Committee decided to exempt the project from the Public Hearing.

The fresh water requirement after the proposed expansion is 27600 m³/day sourced from canal as well as from the ground water. To control the air emissions, adequate stack height will be provided. After the expansion, the industrial waste water generation is 27420 m³/day. Boiler ash will be sent to cement mill. The straw dust and wood dust will be used as a fuel in boilers. Used oil will be sent to registered recyclers.

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 / 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. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. 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.
12. 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.
13. 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.
14. Details and classification of total land (identified and acquired) should be included.

15. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
16. Petrography, grain size analysis and major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO_2 , Al_2O_3 , MgO , MnO , K_2O , CaO , FeO , Fe_2O_3 , P_2O_5 , H_2O , CO_2 .
17. MOU / contracts / assurances that regular/continuous supply of raw materials will be ensured for next 5-10 years (from non-forest sources).
18. A note on pulp washing system capable of handling wood pulp should be included.
19. Manufacturing process details for the existing and proposed plant should be included. Chapter on Pulping & Bleaching should include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery should include : no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
20. Studies should be conducted and a chapter should be included to show that Soda pulping process can be employed for Eucalyptus/Casurina to produce low kappa (bleachable) grade of pulp.
21. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be abolished within 2 years of issue of environment clearance as proposed.
22. A commitment that no extra bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills.
23. 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.
24. A list of industries containing name and type in 10 km radius shall be incorporated.
25. 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".
26. 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.
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 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 steel plant and Captive Power Plant 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 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 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.
61. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
62. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
63. 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.
64. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
65. 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.
66. 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.
67. 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.
68. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
69. A note on identification and implementation of Carbon Credit project should be included.
70. Total capital cost and recurring cost/annum for environmental pollution control measures.
71. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 is not required as the unit is located in the notified industrial area.

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

6.5.40 Cement Plant of 3500 TPD at Village khrew, District Pulwama Srinagar, J&K by **Trumboo Cements Pvt. Ltd. - regarding TORs.**

The project authorities and their consultant (M/s EQMS India Private Limited, Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. All the Cement Plants (≥ 1.0 MTPA) are listed at S.No. 3(b) under Category 'A' of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Trumboo Cements Private Limited have proposed to set up a Greenfield Cement Plant with a production capacity of 3500 TPD at village Khrew, District Pulwama, Srinagar, Jammu & Kashmir. The land requirement for the project is 40 ha. 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. Total cost of the project is Rs.445 crores. The Jhelum river is located at a distance of 10km from the project site. The water requirement is 500 m³/day which will be sourced from tube wells. The power requirement is 15 MVA which will be met from the PDD substation located at a distance of 3.5km. The raw materials required are Limestone (1.6 MTPA), Clay (0.35 MTPA), Sand (0.05 MTPA), Gypsum (0.017 MTPA) and coal (0.19 MTPA). The lime stone requirement will be met through the captive mine of sister concern of M/s Trumboo Cement Industries located at Wuyan (1.5km from the plant) which has 45 million tons of limestones (or) will be purchased locally.

The proponent has informed the Committee that as per the industrial policy letter No 1(13)200-NER dated 14.6.2002 of Ministry of Commerce and Industry the proposed project site has been identified as an industrial location. Based on this letter, the proponent requested the Committee to exempt the project from the Public Hearing. The Committee noted that the proponent has not submitted the relevant documents i.e. Gazette Notification of State Govt. of Jammu & Kashmir declaring the project site as a notified industrial area. Hence, the Committee decided not to exempt the project from the Public Hearing.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. Copies of limestone and 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. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
8. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.
9. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Details and classification of total land (identified and acquired) should be included.
12. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
13. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
14. Permission 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.
15. A list of industries containing name and type in 10 km radius shall be incorporated.
16. Residential colony should be located in upwind direction.
17. 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".
18. 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.).
19. 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.
 20. 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.
 21. 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.
 22. Manufacturing process details for all the plants should be included.
 23. Possibility of installation of WHRB will be explored and details included
 24. Mass balance for the raw material and products should be included.
 25. Energy balance data for all the components including proposed power plant should be incorporated.
 26. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
 27. 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.
 28. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
 29. Vehicular pollution control and its management plan should be submitted.
 30. 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.
 31. 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.
 32. 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.
 33. 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.
 34. 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 located at a distance of 2.0 km on the ambient air quality shall be assessed.
 35. 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.
 36. 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.
37. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
38. One season data for gaseous emissions other than monsoon season is necessary.
39. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
40. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used 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.
41. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
42. Ground water modelling showing the pathways of the pollutants should be included
43. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
44. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
45. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
46. A note on the impact of drawl of water on the nearby River during lean season.
47. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.

48. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
49. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
50. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
51. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
52. 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.
53. 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.
54. 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.
55. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
56. 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.
57. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
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 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.
60. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
61. 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.
62. 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.
63. Plan for the implementation of the recommendations made for the cement plant in the CREP guidelines must be prepared.
64. 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.
65. 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.
66. A note on identification and implementation of Carbon Credit project should be included.
67. Total capital cost and recurring cost/annum for environmental pollution control measures.
68. 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.
69. 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 Jammu & Kashmir 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.

6.5.41 Expansion project for the manufacturing of Synthetic Organic Chemicals (Pharmaceutical Bulk Drugs & Drug Intermediates) at District Vadodara, Gujarat by M/s Ami Life sciences 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. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Ami Life Sciences Private Limited have proposed to expand synthetic organic chemicals manufacturing unit from 65.7 MT/month to 115 MT/month (Expansion – 49.3 MT/month) at Block No. 82/B, Survey No. 106, 107, 114, 1677/1 & 1677/2, ECP Road, Post Karakhadi, Tal. Padra, Dist. Vadodara, Gujarat. The unit has been granted "Consent to Operate (CTO/CC&A)" from Gujarat Pollution Control Board (GPCB) for its existing plant bearing Order No. 30445, dated 11/08/2008. Total plot area for the expansion is 12305 m². 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. The Mahisagar river is located at a distance of 4.25km from the project site. The power requirement for the proposed expansion is 775 KVA which will be met from M/s MGVGL. Three D.G. sets of (125 KVA – 1 Nos; 600 KVA – 2 Nos) will be installed as a stand by power. The water requirement is 215.47 m³/day which will be sourced from bore well. Total project cost is Rs. 870.46 lakhs. Rs. 302 lakhs is earmarked towards the recurring cost per annum towards the environmental protection measures.

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

Existing product details:

Sr. No.	Name of Product	Production Capacity
1	1- Acetyl Naphthalene	2.00

2	2- Acetyl Naphthalene	1.00
3	ItopideHCl	6.00
4	Loxapine Succinate	1.20
5	Amoxapine	0.30
6	Venlafaxine	6.00
7	ProgunitHCl	6.00
8	CB-2-L-Valine	6.00
9	Nateglinide	0.60
10	Quetiapine	0.60
11	Carbomazepin	24.00
12	OxaCarbomazepin	12.00
TOTAL		65.70

Product details after proposed expansion:

Group	Name of Product	Production Capacity, TPM
A	(A-1) Doxofylline, (A-2) Febuxostat, (A-3) Fexofenadine hydrochloride, (A-4) N-Methyl-1-Naphthyl Methylamine HCl, (A-5) Di-L-ornithine alpha ketoglutarate Dihydrate, (A-6) Troxerutin, (A-7) Xanthinol Nicotinate, (A-8) Iron polymaltose, (A-9) Ipriflavone	30.00
B	(B-1) Quercetin, (B-2) Pure Rutin, (B-3) Racecadotril	25.00
C	(C-1) Choline Fenofibrate; (C-2) Fenofibrate; (C-3) Indapamide, (C-4) Pamabrom, (C-5) Tauroursodeoxycholic Acid, (C-6) Venlafexine hydrochloride, (C-7) Ranolazine Dihydrochloride and its intermediates, (C-8) Avanafil	5.00
D	(D-1) Acebrophylline, (D-2) Ambroxol hydrochloride and its intermediate (2 Amino 3, 5-dibromo Benzaldehyde), (D-3) Azilsartanmedoxomil potassium salt, (D-4) DesmethylVenlafexine Succinate Monohydrate, (D-5) Itopride hydrochloride, (D-6) Proguanil Hydrochloride, (D-7) Tranexamic acid, (D-8) Sitagliptin, (D-9) Deferiprone, (D-10) Alpha Lipoic Acid	20.00
E	(E-1) Crude Diacerein, (E-2) Dapoxetine Hydrochloride, (E-3) Flavoxate hydrochloride & Intermediate (3-Methylflavone -8-Carboxylic Acid), (E-4) Tadalafil, (E-5) Tapentadol hydrochloride, (E-6) Ursodeoxycholic Acid, (E-7) Linezolid, (E-8) S-Metoprolol Succinate, (E-9) Ticagrelor, (E-10) Ivacaftor, (E-11) Mirabegron	15.00
F	(F-1)Diacerein, (F-2) Eslicarbazepine Acetate, (F-3) Olopatadine hydrochloride, (F-4) Sevelamer carbonate, (F-5) Sevelamer hydrochloride, (F-6) Betahistine Dihydrochloride, (F-7) L-	20.00

	Methylfolate, (F-8) Perampanel	
Total		115.00

By-product details after proposed expansion:

Sr. No.	Name of By-Product	Quantity (MT/ Month)	Source
1	Potassium Acetate Solution	40.00	From mfg. of Product Crude Diacerein
2	Sodium Bromide Solution	50.00	From mfg. of Product Doxofylline
3	HBr Solution	90.00	From mfg. of Product Doxofylline
4	Acetic Acid & HBr Solution	25.00	From mfg. of Product Pamabrom
TOTAL		210.00	---

To control air emissions, stack of adequate height will be provided. The wastewater generation is 143.25 KLD. The industrial effluent will be treated in the ETP. Domestic wastewater will be treated in septic tank & soak pit. ETP sludge will be disposed in the TSDF site. Used oil will be sent to registered recyclers.

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

1. Executive summary of the projects
2. Justification of the project
3. Photographs of the existing and proposed project 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. Promoters and their back ground.
10. Regulatory framework

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 along with total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location along with 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 along with supporting document.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
18. Permission, if any, from the State Forest Department
19. Details of the total land and break-up of the land use for green belt and other uses.
20. List of products along with the production capacities.
21. Detailed list of raw materials required and source, mode of storage and transportation.
22. Manufacturing process details along with the chemical reactions and process flow chart.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. 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.
25. 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 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.
26. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
27. Details of VOC monitoring system in the working zone environment, if any.
28. Name of all the solvents to be used in the process and details of solvent recovery system.
29. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
30. Details of water and air pollution and its mitigation plan.
31. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
32. An action plan to control and monitor secondary fugitive emissions from all the sources.
33. 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.
34. Permission for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
35. Action plan for 'Zero' discharge of effluent shall be included.

36. Treatment of phenol in the effluent, if any.
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. Explore the possibility to use fuel other than wood.
40. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
41. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
42. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
43. A write up on "Safe Practice" followed for hazardous chemicals including methanol handling, storage, transportation and unloading to be submitted.
44. A write up on "Treatment of workers affected by accidental spillage of hazardous chemicals including methanol.
45. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
46. An action plan to develop green belt in 33 % area
47. 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.
48. 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 has 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.
49. Details of occupational health surveillance programme.
50. Socio-economic development activities shall be in place.
51. 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.
52. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
53. 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.

54. 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.
55. 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.
56. 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.
57. Total capital cost and recurring cost/annum for environmental pollution control measures.
58. 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.
59. 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 Gujarat 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.

6.5.42 Steel manufacturing plant at village Maharoomkhurd, District Rajnandgaon, Chattisgarh by **M/s Mahanadi Alloys India Pvt. Ltd. - regarding TORs.**

The project authorities a 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. All the Metallurgical Industries (Ferrous Non Ferrous) are 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 Mahanadi Alloys India Private Limited have proposed to establish a Steel Manufacturing Unit at village Maharoom-khurd, Tehsil and District Rajnandgaon, Chhattisgarh. The total land requirement is 15 acres. Out of 15 acres, 11.09 acres of land is already purchased by the proponent and the survey number details of the proposed plant site are 808,799,806,810,810/1,810/2,800,801,802,803,804,805,806,807,795/2,793,792,794, 784,795,797 799 and others. 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. Total cost of the project is Rs.60.80 crores. The power requirement will be met from CSPTDL grid. The water requirement is 350 KLD which will be sourced from ground water. The raw materials required for this project are: sponge iron, scrap, ferro alloys, quartz, coke, Mn ore, Mn slag, chromites ore and steel scrap etc. Total cost of the project is Rs.85 crores. Following are the init configuration and proposed product details:

Unit configuration details:

S.No.	Details	Unit Configuration
1.	Induction Furnace with CCM unit	2 x 12 MT
2.	Arc Furnace	1x 20 MT
3.	Induction furnace for steel casting	1x2 MT and 1x3MT
4.	Manufacturing of Ferro Alloys	4x9 MVA
5.	AOD/VOD/LRF	1 Nos
6.	Air Compressor (20000 m ³ /hr) for Oxygen/Argon/Nitrogen	1 Nos

Products to be manufactured:

S.No.	Details	Annual Production
1.	Stainless Steel Ingots/Billets/Slabs	60000 Tons/year
2.	MS Ingots/Billets/Blooms	78000 Tons/year
3.	Steel Casting	15000 Tons/year
4.	Ferro Alloys	

S.No.	Details	Annual Production
	i. Ferro Silicon	27000 Tons/year
	<i>and/or</i>	
	ii. Silicon Manganese	52500 Tons/year
	<i>and/or</i>	
	iii. Ferro Manganese	60000 Tons/year
	<i>and/or</i>	
	iv. Ferro Chrome	52500 Tons/year

To control air emissions, fume extraction system with bag filter will be installed in induction furnace. Arc furnace will also be equipped with bag filter. All the bag filters and scrubber will be designed that particulate matter emission will be below 50mg/Nm³. There will be no industrial effluent generation.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
4. A line diagram/flow sheet for the process and EMP
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. Details and classification of total land (identified and acquired) should be included.
11. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
12. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.

13. 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.
14. A list of industries containing name and type in 10 km radius shall be incorporated.
15. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
16. Studies for slag material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
17. Manufacturing process details all the plants should be included.
18. Mass balance for the raw material and products should be included.
19. Energy balance data for all the components should be incorporated.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
21. 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.
22. 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.
23. Vehicular pollution control and its management plan should be submitted.
24. A write up on use of high calorific hazardous wastes from all the sources and commitment regarding use of hazardous waste should be included.
25. 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.
26. 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.
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.
28. 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. Impact on the nearby forests shall be assessed.
29. 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.
30. Ambient air quality monitoring 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
 - 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.
31. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
 32. One season data for gaseous emissions other than monsoon season is necessary.
 33. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
 34. 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.
 35. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
 36. Ground water modelling showing the pathways of the pollutants should be included
 37. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
 38. 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.
 39. 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.
 40. A note on the impact of drawl of water on the nearby River during lean season.
 41. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 42. 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.
 43. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
 44. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.

45. 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.
46. 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.
47. 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.
48. 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.
49. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
50. 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.
51. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
52. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
53. 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.
54. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
55. 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.
56. 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.
57. 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.
58. 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.
 59. Total capital cost and recurring cost/annum for environmental pollution control measures.
 60. 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.
 61. 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 Chhattisgarh Environment and Conservation 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.

6.5.43 Expansion of Cold Rolling Mill from 0.3 MTPA to 0.8 MTPA capacity at Village Jamshedpur, District East Singhbhum, Jharkhand by M/s Tata Steel Ltd. - regarding TORs.

The project authorities along with their consultant (M/s Vimta Labs, Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. The proposed project activity is listed at S.No. 3(a) under Category 'B' of the schedule of EIA Notification, 2006. Since the existing unit is a category 'A' project and being a proposal for expansion to 'A' category project as per the Schedule of EIA Notification, 2006, the proposal has been appraised by the Expert Appraisal Committee (Industry) in the Ministry.

M/s Tata Steel Limited have proposed to expand the Cold Roll Mill Complex at Bara, Jamshedpur, East Singhbhum district, Jharkhand. The existing project has been granted environmental clearance by the MoEF vide letter no. J-11011/199/2007-IA II(I) on 7.8.2007. The proposed expansion will be achieved by modifying the push pull pickling line and setting up an additional mill 0.3 MTPA skin pass mill. The total land requirement for the expansion is 8.312 ha which is already available within the existing premises. No additional land is required for the proposed expansion. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. Subarnarekha river is located within 1km distance from the project site. The Kharkai river is located at a distance of 6.7 km from the project site. Total cost of the project is Rs.126 crores. The power requirement is 5.26 MW will be met from M/s Tata Power. The existing water requirement is 1712 KLD which is being sourced from JUSCO. No additional water is required for the proposed expansion. The raw materials required are HR coils and HCL acid.

The pickling line will be equipped with fume extraction system. The effluent from the pickling line will be treated in the ETP. Used lubricating and hydraulic oils will be given to authorized recyclers.

The Committee noted that the proponent will use baseline data collected during summer season of 2013 for the EIA/EMP report preparation.

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 / 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
8. A line diagram/flow sheet for the process and EMP
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. 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.
12. 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.
13. 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.
14. Details and classification of total land (identified and acquired) should be included.
15. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
16. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
17. 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.
18. A list of industries containing name and type in 10 km radius shall be incorporated.
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 slag 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 all the plants should be 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 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 proposed plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included. Impact on the nearby forests shall be assessed.
 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 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
 - 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 viz. fly ash etc. 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 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.
55. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
56. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
57. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
58. 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.
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.
60. 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.
61. 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.
 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 Jharkhand State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

6.5.44 Proposed capacity expansion of kraft Paper at District Udham Singh Nagar, Uttarakhand by **M/s Sidharth Paper Ltd. - regarding TORs.**

The project authorities along with their consultant (M/s J.M. Enviro Net 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. All the Pulp & Paper Units are listed at S.N. 5(i) under category 'A' of the Schedule of the EIA notification 2006 and appraised at the Central level. Further, the project site is located within 10km radius of the inter-state boundary.

M/s Sidhrath Papers Limited have proposed to expand the manufacturing of kraft paper from 60 TPD to 110 TPD at village Hariawala & Basai, Tehsil Kashipur, district Udham Singh Nagar, Uttarakhand. The proponent informed that the existing project was accorded Consent to Operate by Uttarakhand Pollution Control Board on 31.5.2012. Total land requirement is 7.8 ha. No No Forest land is involved. The Dehla river is located at a distance of 2.5km distance from the project site. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. The raw materials required are wheat straw, bagasse, Indian waste paper, caustic soda, fortified rosin and alum. The power requirement is 22500 kwh/day which will be sourced from captive power plant at the adjoining M/s Siddheswari Paper Udyog Limited. D.G sets of 750 KVA (one nos) and 500 KVA (3 Nos) is proposed as a stand by power. Also, 500 KVA load has been taken from Uttarakhand Power Corporation Limited. Total cost of the project is Rs. 427 lakhs. Rs.130 lakhs and Rs.95 lakhs is earmarked towards the capital cost and recurring cost per annum towards the environmental pollution control measures.

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

S.No.	Description	Unit	Existing	Proposed Expansion	Total after expansion
1.	Kraft Paper	TPD	60	50	110

The fresh water requirement after the proposed expansion is 2000 m³/day sourced from bore wells. To control the air emissions, adequate stack height will be provided. The waste water generated will be treated in the ETP. Used oil will be sent to registered recyclers.

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 / 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. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. 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.
12. 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.
13. 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.
14. Details and classification of total land (identified and acquired) should be included.
15. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
16. Petrography, grain size analysis and major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO_2 , Al_2O_3 , MgO , MnO , K_2O , CaO , FeO , Fe_2O_3 , P_2O_5 , H_2O , CO_2 .
17. MOU / contracts / assurances that regular/continuous supply of raw materials will be ensured for next 5-10 years (from non-forest sources).
18. A note on pulp washing system capable of handling wood pulp should be included.
19. Manufacturing process details for the existing and proposed plant should be included. Chapter on Pulping & Bleaching should include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery should include : no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln

20. Studies should be conducted and a chapter should be included to show that Soda pulping process can be employed for Eucalyptus/Casurina to produce low kappa (bleachable) grade of pulp.
21. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be abolished within 2 years of issue of environment clearance as proposed.
22. A commitment that no extra bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills.
23. 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.
24. A list of industries containing name and type in 10 km radius shall be incorporated.
25. 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".
26. 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.
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 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 steel plant and Captive Power Plant 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 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 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.
61. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.

62. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
63. 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.
64. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
65. 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.
66. 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.
67. 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.
68. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and

- item-wise details along with time bound action plan should be prepared and incorporated.
69. A note on identification and implementation of Carbon Credit project should be included.
 70. Total capital cost and recurring cost/annum for environmental pollution control measures.
 71. 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.
 72. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 Uttarakhand 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.

6.5.45 Proposed 7.0 MTPA Pellet Plant at Village: Meramandal, District. Dhenkanal, Odisha by M/s Bhushan Steel Ltd. - regarding TORs.

The project authorities along with 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 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 Bhusan Steel Limited have proposed to set up a 7 MTPA Iron-ore pelletisation plant at village Narendrapur, Tehsil Meramandali, District Dhenkanal, Odisha. The land requirement for the proposed project is 25 acres. The existing plant (ISP project) got environmental clearance from MOEF vide letter no. J-11011/829/2008-IAII(I) on 20.7.2012. The proposed plant will be located within the ISP premises. 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. The Brahmani river is located at a distance of 6 km from the project site. Project cost is Rs. 2000 Crores. The raw materials required are iron ore fines, bentonite, coal/coke breeze and dolomite/limestone. The power requirement will be met from WESCO Limited. The water requirement is 275 m³/hr. The iron ore for pellet making will be sourced from Joda and Barbil region.

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. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
6. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
7. A line diagram/flow sheet for the process and EMP
8. Copies of iron ore/coal linkage documents
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 raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
 15. 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. 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.
 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 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 for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included. Cumulative impacts of mines and pellet plant 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 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. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
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 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.
60. 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.

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. 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 Odisha 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.

6.5.46 Proposed capacity augmentation of existing DAP/NPK Plant at Village: Sikka, Distt. Jamnagar, Gujarat by M/s Gujarat State Fertilizer & Chemicals Ltd. - regarding TORs.

The project authorities along with their consultant (M/s. Bhagavathi Ana Labs Limited, Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA/EMP report. All fertilizer plants except Single Super Phosphate plant is listed at S.N. 5(a) of the Schedule of the EIA notification 2006 under category 'A' and appraised at Central level.

M/s Gujarat State Fertilizer and Chemicals Limited have proposed expand the DAP/NPK plant, 16.5 MW waste heat recovery boiler and installation of isolated storage facility for two ammonia, three phosphoric acid storage tanks of 10000 MT capacity at Sikka unit, GSFC complex, Sikka, village Moti Khadvi, District Jamnagar, Gujarat. Total plot area 104000 m². The marine national park is located at a distance of 7 km from the project site. Project cost is Rs. 2246 Crores. The environmental clearance for the DAP/NPK plant A,B trains and DAP/NPK plant C trains was obtained from MoEF on 31.7.1990 and 11.12.2001 respectively. The Wildlife Clearance for jetty and approach

road was obtained from Principal Chief Conservator of Forests, Gujarat on 5.6.2009. The Forest clearance was obtained on 9.8.1990.

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

Main facilities

S.No.	Product details	Existing Capacity MTPA	Proposed Capacity MTPA	Total MTPA
1.	DAP/NPK	9.846 Lakhs	5.4 Lakhs	15.246 Lakhs
2.	Phosphoric Acid	--	1.65 Lakhs	1.65 Lakhs
3.	Sulfuric Acid	--	6.00 Lakhs	6.00 Lakhs
4.	SSP	--	1.00 Lakhs	1.00 Lakhs
5.	WHRB – power plant	--	16.5 MW	16.5 MW

Associated facilities (Isolated storages details)

- i. Installation of three phosphoric acid and two ammonia tanks of 10000 MT capacity at Sikka Shore Terminal
- ii. Installation of one ammonia tank and one phosphoric acid tank of 10000 MT capacity within the plant premises

The proponent submitted the gazette notification of Industries Department of Govt. of Gujarat dated 19.12.1996 declaring the project site as a notified industrial area. The proponent requested for the exemption from conducting public hearing for the project. Further, the proponent submitted that they have obtained Terms of Reference (F.No.11-90/2012-IA.III) from EAC –CRZ for dredging, laying of overhead pipelines for liquid ammonia and phosphoric acid to transport the raw material from Sikka Shore Terminal to the plant site. The Committee noted that as per the ToR accorded by the EAC-CRZ, the Public Hearing is to be conducted for the dredging, laying of overhead pipelines for liquid ammonia and phosphoric acid to transport the raw material from Sikka Shore Terminal to the plant site. The Committee taken into the consideration the TOR accorded by EAC –CRZ and decided not to exempt the project from conducting public hearing.

Water requirement will be 4500 m³/day. Power requirement will be met through captive power generation.

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. Promoters and their back ground.
4. Regulatory framework.
5. 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 duly authenticated by the Chief Wildlife Warden along with his recommendations or comments

6. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife as the project is located within 7 Km distance of Marine National Park
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. A map indicating location of the project and distance from severely polluted area
9. Project location and plant layout.
10. Infrastructure facilities including power sources.
11. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
12. Project site location along with site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
13. Present land use based on satellite imagery for the study area of 10 km radius.
14. Details of the total land and break-up of the land use for green belt and other uses.
15. List of products along with the production capacities and list of solvents and its recovery plan.
16. Detailed list of raw materials required and source, mode of storage and transportation.
17. Manufacturing process details along with the chemical reactions and process flow chart of each products.
18. Action plan for the transportation of raw materials and products.
19. Details of the proposed pipeline facilities and isolated storage facilities.
20. Ambient air quality monitoring at 8 locations within the study area of 10 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
21. 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, NH₃, Fluoride, Benzene including VOCs 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 surface and ground water and noise monitoring should also be included.
22. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits. Control of fluorine emissions at source.
23. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO_x emission and method to control NO_x.
24. Details of water and air pollution and its mitigation plan.
25. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
26. 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.
27. Details of water requirement for the proposed and expansion project. Water balance chart including water intake, effluent generated, recycled and reused and discharged is to be provided.
28. Reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.

29. Recheck the water requirement figure, which seems to be higher side. 'Permission' for the drawl of proposed water from the competent authority.
30. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber etc.).
31. Action plan for Zero Discharge of effluent as proposed should be included.
32. Ground water monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
33. Baseline data for fluoride levels in surface water, ground water, soil in and around plant site.
34. 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 should be included.
35. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
36. Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
37. Action plan for regular monitoring of worker and population for fluoride in the working area and population within 1 Km.
38. Details of captive landfill along with design details as per CPCB guidelines. Location of secured land fill/TSDF.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. An action plan to develop green belt in 33 % area
41. 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.
42. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company has 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 should be in place.
45. 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.
46. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
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. 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.
49. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
50. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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. 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. In this regard circular no. J -11013/77/2004-IA II(I) dated 2nd December, 2009 posted on the Ministry's website <http://www.moef.nic.in> may be referred.
- ix. Certificate of Accreditation issued by the QCI to the environmental consultant should be included.

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 Gujarat 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.

6.5.47 Proposed expansion for manufacturing of technical pesticides and intermediates at Plot No. CH-21,22, GIDC Estate, Dahej, District: Bharuch, Gujarat by M/s Insecticides India 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. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s. Insecticides India Limited have proposed to expand their manufacturing of Pesticide and its intermediates manufacturing unit at Plot No. CH-21 and 22, GIDC Estate, Dahej, District: Bharuch, Gujarat. Total plot area for the expansion is 50000 m² which is already available within the existing plant premises of 160000 m². 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. The power requirement for the proposed expansion is 1500 KVA which will be met from M/s Dakshin Gujarat Vij Company Limited. The water requirement after the proposed expansion is 600 KLD which will be sourced from GIDC water supply. Project cost is Rs. 50 crores. Rs.2 crores is earmarked towards the environmental pollution control measures.

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

Sr. No.	Type of Products	Quantity (MT/Annum)		
		Existing	Expansion	Total
Phenoxy Herbicides		1950	0	1950
1.	2,4-D Ethyl Ester			
2.	2,4-D Sodium Salt			
3.	Quizalfop			
Imidazolinone Herbicide		300	0	300
4.	Imazethapyr			
Sulfonyl Urea Herbicides		80	50	1300
5.	Met sulfuron methyl			
6.	Sulfosulfuron			
Organochlorine Herbicides		1600	0	1600
7.	Butachlor			

Sr. No.	Type of Products	Quantity (MT/Annum)		
		Existing	Expansion	Total
8.	Pretilachlor			
Other Herbicides		5050	1070	6120
9.	Glyphosate			
10.	Oxyfluorfen			
11.	Paraquate			
12.	Bispyribac Sodium			
13.	Clodinafop propargyl			
14.	Pendimethaline			
15.	Quizalofop p ethyl			
Carbamate Insecticide		150	0	150
16.	Thiodicarb			
Neonicotinoid insecticide		1300	680	1980
17.	Acetamiprid			
18.	Imidacloprid			
19.	Thiacloprid			
20.	Thiamethoxam			
Organophosphorus insecticide		3600	6700	10300
21.	Attrazine			
22.	Chlorpyriphos			
23.	DDVP			
24.	Acephate			
25.	Ethoprophos			
26.	Fenamiphos			
27.	Monocrotophos			
28.	Profenofos			
Pyrethroid Insecticides		2420	200	2620
29.	Allethrin			
30.	Alpha cypermethrin			
31.	Cycluthrin			
32.	Cypermethrin			
33.	Delta cypermethrin			
34.	d-transallethrin			
35.	Lambda cyhalothrin			
36.	Permethrin			
37.	Prallethrin			
38.	Transfluthrin			
39.	Bifenthrin			
Other Insecticides		1600	250	1850
40.	Fipronil			

Sr. No.	Type of Products	Quantity (MT/Annum)		
		Existing	Expansion	Total
41.	Buprofezin			
42.	Cartap hydrochloride			
43.	Metalaxyl			
44.	Novaluron			
45.	Lufenuron			
Acaricide		0	800	800
46.	Diafenthriuron			
47.	Fenpyroximate			
48.	Propargite			
Conazole Fungicides		1400	250	1650
49.	Difenconazole			
50.	Hexaconazole			
51.	Ipconazole			
52.	Paclobutrazol			
53.	Propeconazole			
54.	Tebuconazole			
55.	Tricyclozole			
56.	Myclobutanil			
Other Fungicides		200	0	200
57.	Indoxacarb			
58.	Thiophenate methyl			
Fermentation technology		350	0	350
59.	Abamectin			
60.	Azoxystrobin			
61.	Emamectin benzoate			
Total		20000	10000	30000

Intermediate chemicals

Sr. No.	Intermediate Chemicals	Mt/Annum
1	Mono Chloro acetic acid	7000
2	IDA	6000
3	PMIDA	4000
4	CMAC	600
5	MPBD	600
6	CCMP	500
7	CMMA	300
8	Triazoles	1000
Total		20000

To control the air emissions, stack of adequate height will be provided. All process stacks are equipped with appropriate scrubbing system. Effluent generation will be 240 m³/day and treated in ETP. The main source of the industrial wastewater generation will be from process and utilities. Dilute quantity of wastewater will be

disposed off into GIDC drainage after treatment in existing ETP. The Entire process waste water will be incinerated in the incinerator. Utility and dilute washing water will be taken into ETP plant which consist primary, secondary & tertiary treatment. Treated effluent will be disposed off into GIDC drainage. Domestic effluent will be disposed off through soak pit. ETP sludge will be sent to TSDF. Used oil will be sent to authorized recycler/re-processors. Process waste will be disposed off through incineration.

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

1. Executive summary of the project
2. Justification of the project
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. 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
8. Promoters and their back ground.
9. Regulatory framework
10. A map indicating location of the project and distance from severely polluted area
11. Project location and plant layout.
12. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified industrial area should be included necessarily.
13. Infrastructure facilities including power sources.
14. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location along with photographs and 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.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
18. Details of the total land and break-up of the land use for green belt and other uses.
19. List of products along with the production capacities.
20. Detailed list of raw material required and source, mode of storage and transportation.
21. Manufacturing process details along with the chemical reactions and process flow chart.
22. A report on monitoring of stacks with reference to dioxine/furane emissions from incinerators.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.

24. 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.
25. 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, HCl, Cl₂ including HC and VOCs 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.
26. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
27. Name of all the solvents to be used in the process and details of solvent recovery system.
28. Design details of ETP, incinerator, if any along with control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
29. Details of water and air pollution and its mitigation plan
30. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
31. An action plan to control and monitor secondary fugitive emissions from all the sources.
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. Air quality modelling for proposed plant.
33. Permission from Competent Authority for the drawl of 54 m³/day water from the public water supply. Water balance chart including quantity of effluent generated recycled and reused and discharged.
34. Action plan for 'Zero' discharge of effluent should be included.
35. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
36. 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 management of fly ash generated from boiler should be included.
37. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
38. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
39. Risk assessment for storage for chemicals/solvents. Hazard management plan for toxins.
40. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
41. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
42. 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.
43. Details of occupational health programme.
 - i. To which chemicals, workers are exposed directly or indirectly.
 - ii. Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.

- iii. What measures company has 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.
44. 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.
 51. 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.
 52. 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. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment and item-wise details along with time bound action plan should be prepared and incorporated.
 54. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
 55. 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 is not required as the unit is located in the notified industrial area.

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

6.5.48 Proposed Cement manufacturing (Grinding) unit at Village: Rajgarh, District: Patiala, Punjab by M/s Asian Fine Cement Pvt. Ltd. - **regarding TORs.**

The project authorities along with their consultant (M/s CPTL Enviro Tech, Chandigarh) 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 stand alone cement grinding units are covered under Category 'B' as per para 3(b) of the Schedule of the EIA notification 2006, but due to applicability of general condition, project site falls within 10 km radius of the inter-state boundary, the proposal has been appraised at the Central level.

M/s Asian Fine Cement Private Limited have proposed to establish a 1.50 MTPA stand alone Grinding Ball unit at village Rajgarh, Tehsil Rajpura, District Patiala, Punjab. The land requirement for the project is 52710 m². 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. Total cost of the project is Rs. 177.65 crores. The power requirement is 7.5 MW which will be met from M/s PSPCL. D.G set of 1000 KVA will be installed as a standby power. The Ghaggar river is located at a distance of 2 km from the project site. The water requirement is 25 m³/day. The raw materials required are Clinker, Gypsum and Fly ash.

To control the air emissions, bag filters and cyclone separator will be provided. Water will be required only for domestic and dust suppression purposes. Used oil will be sold to registered recyclers.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
5. 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.
6. 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.
7. 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.
8. 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.
9. Details and classification of total land (identified and acquired) should be included.
10. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
11. A list of industries containing name and type in 10 km radius shall be incorporated.
12. 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".
13. Manufacturing process details for the cement grinding ball mill should be included.
14. Mass balance for the raw material and products should be included.
15. Energy balance data for all the components should be incorporated.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
17. 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.
18. 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.
19. Vehicular pollution control and its management plan should be submitted.
20. 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.

21. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
22. Air quality modeling for all the plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm³ should be included.
23. 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.
24. Ambient air quality monitoring 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
 - 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.
25. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
26. One season data for gaseous emissions other than monsoon season is necessary.
27. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
28. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used 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.
29. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
30. 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.
31. 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.
 32. A note on the impact of drawl of water on the nearby River during lean season.
 33. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
 34. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
 35. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
 36. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
 37. 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.
 38. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
 39. 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.
 40. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
 41. 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.
 42. 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.
43. 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.
 44. Total capital cost and recurring cost/annum for environmental pollution control measures.
 45. 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.
 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.

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 Punjab Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the MoEF 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.

6.5.49 Bulk drug manufacturing unit at Village Veliminedu, District Nalgonda, Andhra Pradesh by **M/s ELBS Pharma Ltd. - regarding extension of validity of Environmental Clearance**

Environmental Clearance to the above proposal was accorded by MoEF vide letter no. J-11011/687/2007-IA II (I) dated 7.1.2008. The PP vide letter dated 19.12.2012 requested MoEF for extension of validity of EC for another term as the validity of the EC will expire on 6.1.2013. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the reasons hampering construction activities with consequent delay in execution of the project.

- i. After the grant of EC, Andhra Pradesh Pollution Control Board (APPCB) has kept a moratorium on Nalgonda district and refused to issue Consent to Establishment
- ii. M/s ELBS Pharma Private Limited along with other industries filed a W.P. 32577 & 33400 of 2010 in the Hon'ble High Court of Andhra Pradesh against the moratorium imposed by the APPCB
- iii. The Hon'ble High Court of Andhra Pradesh vide order dated 11.3.2011 disposed of the W.P. 32577 & 33400 of 2010 and directed the APPCB to receive the applications of the petitioners for consent, process the same on the touchstone of policy/rules/law and pass appropriate orders expeditiously.
- iv. Subsequently, APPCB issued CTE vide order no. 266/PCB/CFE/RO-NLG/HO/2011/2271 on 24.10.2011.
- v. Thereafter, the proponent initiated the construction activities of the factory.

Further, the proponent submitted that there will be no change in the product slate and pollution load as per the EC accorded by the Ministry on 7.1.2008.

The Committee recommended the project proposal to extend the validity of environmental clearance for another 5 years subject to following additional specific condition:

- i. Products and production capacity shall remain same.
- ii. Bag-filter shall be provided to the boiler.
- iii. No effluent shall be discharged outside the factory premises and Zero effluent discharge concept shall be adopted.
- iv. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water shall be recycled/reused within factory premises.
- vi. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

6.5.50 Proposed 16.5 MTPA Iron Ore Beneficiation Plant with Nos. Of satellite Grinding satations, 4.0MTPA Pelletization Plant at Village Kumundi, Dist. Keonjhar, Odisha by **M/s Bhushan Steel Ltd. - regarding TORs.**

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

6.5.51 Proposed expansion of Baliapal Ferro-Chrome Plant at Village Balipal, District jaipur, Odisha by **M/s B.C. Mohanty & Sons Pvt. Ltd. - regarding TORs.**

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

6.5.52 Proposed expansion of Distillery Unit of existing 30 to 75 KLPD with Modernization at District Solapur, Maharashtra by **M/s Vithal Corporation Ltd. - regarding TORs.**

The project authorities along with their consultant (M/s Ultra Tech Environmental Consultancy & Laboratory) 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 the Distillery Units (30 KLPD and above) are listed at S.N. 5(g) of Schedule of EIA Notification, 2006 as Category 'A' and have to be appraised at the Central level.

M/s Vithal Corporation Limited have proposed to expand the distillery from 30 KLPD to 50 KLPD at Vitthalrao Shinde nagar, post Mhaisgaon, Taluka Madha, District Solapur, Maharashtra. No forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. The existing distillery got Consent to Operate from Maharashtra Pollution Control Board in 2006. No court cases/litigation is pending against the project. The proposed project will be located within the existing plant premises itself. No additional land is required for the proposed expansion. The Sina river is located at a distance of 4km from the project site. Project cost is Rs. 9.5 crores. Rs. 1.5 crores is earmarked towards the environmental pollution control measures. The power requirement is 280 KVA which will be met from MSEDCL. The water requirement is 400 m³/day. The raw materials required are molasses (20769 TPA), sulphuric acid (2 TPA), nutrients (2 TPA) and Turkey Red Oil (4.5 TPA).

To control air emissions, bag filters will be provided. The effluent generated will be treated in the ETP. Spent wash will be treated in Bio-methanation plant. Used oil will be sent to registered recyclers.

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

1. Executive summary of the project.
2. Justification of the project
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. 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. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
8. Detailed break-up of the land area along with latest photograph of the area.
9. Present land use based on satellite imagery and details of land availability for the project along with supporting document.
10. Details of site and information related to environmental setting within 10 km radius of the project site.
11. A copy of lease deed or allotment letter, if land is already acquired.
12. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
13. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
14. Details of proposed products along with manufacturing capacity.
15. Number of working days of the distillery unit.
16. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
17. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
18. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO₂ emission. Stack height should be based on maximum sulphur content in the coal. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
19. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
20. 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.
21. 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 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.
22. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
23. An action plan to control and monitor secondary fugitive emissions from all the sources.
24. Details of the use of steam from the boiler.
25. Ground water quality around proposed spent wash storage lagoon and the project area.
26. Details of water requirement, water balance chart for grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
27. Fresh water requirement should be restricted upto 10 KI/KI of alcohol for molasses/grain based distillery
28. Permission of withdrawal of water from competent authority.

29. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) along with utility wastewater including CPP and scheme for achieving zero discharge.
30. Spent wash generation due to alcohol production. Details of the spent wash treatment for molasses/grain based distillery.
31. Capacity for spent wash holding tank and action plan to control ground water pollution.
32. Dryer shall be installed to dry DWGS.
33. Layout for storage of rice husk/biomass.
34. Details of solid waste management including management of boiler ash.
35. Green belt development as per the CPCB guidelines.
36. List of flora and fauna in the study area.
37. Noise levels monitoring at five locations within the study area.
38. 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.
39. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
40. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
41. Alcohol storage and handling area fire fighting facility as per norms.
42. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
43. 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.
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. Details of occupational health surveillance programme.
46. Details of socio-economic welfare activities.
47. 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.
48. Action plan for post-project environmental monitoring.
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.

50. 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.
51. 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.
52. 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.
53. Total capital cost and recurring cost/annum for environmental pollution control measures.
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. 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 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 MoEF 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.

6.5.53 Proposed Steel manufacturing unit Uttam Steel Mills Talwara Road, District Fatehgarh Sahib, Punjab by M/s Rasik Industries. - regarding TORs.

The project authorities along with their consultant [M/s Envirotech (India) Chandigarh] 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 activity is covered under Category (B) and listed at S.No.3(a) of the Schedule of the EIA notification 2006. However, the project site falls within 10km radius of the Critically Polluted Area – Mandi Gobindgarh. Hence, the project falls under Category 'A' and has to be appraised at the Central level.

M/s Rasik Industries have proposed to expand their steel manufacturing unit at village Talwara, Tehsil Mandi Gobindgarh, District Fategarh Sahib, Punjab. The existing plant is located in an area of 7.5 acres. The additional land requirement for the proposed expansion is 5.5 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. The power requirement for the proposed expansion is 14000 KW which will be met from M/s PSPCL. D.G set of 500 KVA is proposed as a standby power. The water requirement after the proposed expansion is 37m³/day which will be sourced from the tube well. The raw materials required are MS/CI scrap, sponge/pig iron, ferro alloys, steel ingots and billets. Project cost is Rs. 40 crores. Rs.98 lakhs and Rs.14.5 lakhs is earmarked for the capital cost and recurring cost per annum towards the environmental pollution control measures.

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

S.No.	Product details	Existing (MTD)	Proposed Expansion (MTD)	Total (MTD)
1.	Ingots, Billets, Blooms	Nil	400	400
2.	TMT Bars, Flats, Strip	335	Nil	335

To control the air emissions, stack of adequate height will be provided. Greenbelt development will be done all along the plant boundary. The domestic effluent generation is 10 m³/day which will be treated in the STP. The treated effluent will be used for gardening and dust suppression. Used oil will be sent to registered recyclers.

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 raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
15. 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. 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 steel plant and Captive Power Plant 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 the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
58. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
59. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
60. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
62. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
63. Occupational health:
 - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
 - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - c. Annual report of health status of workers with special reference to Occupational Health and Safety.

- d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
- e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
- 64. Plan for the implementation of the recommendations made for the steel plant in the CREP guidelines must be prepared.
- 65. Corporate Environment Policy
 - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 66. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
- 67. A note on identification and implementation of Carbon Credit project should be included.
- 68. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 69. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
- 70. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 Punjab Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

6.5.54 Proposed Cars Assembly project & power train expansion project at Tapukara industrial Area, District Alwar, Rajasthan by M/s Honda Cars India Ltd. - regarding TORs.

The project authorities along with their consultant (M/s EQMS India Private Limited, New Delhi) 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 activity is covered under Category (B) and listed at S.No.3(a) of the Schedule of the EIA notification 2006. However, the project site falls within 10km radius of the inter-state boundary (Haryana –Rajasthan: 5km). Hence, the project falls under Category 'A' and has to be appraised at the Central level.

M/s Honda Cars India Limited have proposed to expand their Aluminum melting from 20,000 TPA to 30,000 TPA, Propane storage from 50MT to 100 MT and power back up from 4.9 MW to 37.3 MW at plot no SPL-1, Tapukara Industrial Area, Tehsil Tijara, District Alwar, Rajasthan. The land requirement for the proposed expansion is 5,39,000 m². 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. The power requirement for the proposed expansion will be met from centralized 132 KV power receiving station. The water requirement after the proposed expansion is 526 m³/day which will be sourced from bore well. The other industrial area located in the study area are Khuskera Industrial area (2 km), Chopanki Industrial area (7km) and Bhiwadi (8km).

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

S.No.	Product details	Existing	Proposed Expansion	Total
1.	Aluminum melting (Tons per annum)	20000	10000	30000

2.	Propane storage (MT)	50	50	100
3.	Power back up	4.9	32.4	37.3

The propane storage will be equipped with automatic sprinkler system for bullet cooling. Gas leakage system will be provided for safety purpose. Adequate ducted exhaust system will be installed to ensure effective smoke/fume extraction. All the treated wastewater will be reused in the process.

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. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
6. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
7. A copy of Gazette Notification issued by the State Government indicating location of the project in notified industrial area should be included necessarily.
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. 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.
13. 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.
14. Details and classification of total land (identified and acquired) should be included.

15. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land 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. 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 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 including proposed power plant 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 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 steel plant and Captive Power Plant on the ambient air quality shall be assessed.
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 viz. fly ash etc. 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 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.
55. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
56. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
57. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
58. 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. Occupational health:
 - i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what

- measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
- ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
 - iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
 - iv. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
 - v. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
61. Plan for the implementation of the recommendations made for the steel 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 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. 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) 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 is not required as the unit is located in the notified industrial area.

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

6.5.55 Proposed Active Pharmaceutical Ingredients and Formulations manufacturing unit at Village: Zuzuvadi, District: Krishnagiri, Tamil Nadu by **M/s Quest Healthcare Pvt. Ltd - regarding TORs.**

The project authorities along with their consultant [M/s ABC Techno Land India Private Limited] 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 (Bulk drug intermediates) Industries 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 (Tamil Nadu & Karnataka) and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s Quest Healthcare Private Limited have proposed to establish a Active Pharmaceutical Ingredients and Formulations Manufacturing Unit (Total Capacity – 41 MTPA) at Plot 81 A, SIPCOT-I Industrial Area, Village Zuzuwadi, Taluk Hosur, Krishnagiri District, Tamil Nadu. Total plot area is 16023.32 m². 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. The water bodies located in the study area are – SIPCOT Pond (0.75km), Santhapuram lake (1.4km), Chinnar river (1.7km) and Ponnaiyar river (7.4km). The power requirement is 4000 KVA which will be met from M/s Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO). Also, 3 Nos of D.G sets of 1500 KVA capacity each and 1 Nos D.G set of 500KVA are proposed as a standby power. The water requirement is 192 m³/day which will be sourced from SIPCOT water supply. Total project cost is Rs. 4840 lakhs.

Following are the details of the proposed product details.

S. No	APIs and Formulations	Production capacity (Ton/annum)
1	Doripenem	1.0
2	Ertapenem	3.0
3	Faropenem	1.0
4	Imipenem	4.5
5	Cilastatin	4.5
6	Meropenem	24.0
7	Panipenem	1.0
8	Sulopenem	1.0
TOTAL		40

To control air emissions, stack of adequate height will be provided. The wastewater generation is 92.7 KLD [Domestic: 29 KLD; Trade effluent: 63.7 KLD]. The trade effluent will be treated in the ETP with UF and RO. The high polluting stream will be treated in the MEE & Dryer. The process residue will be disposed off in TSDF. Used oil will be sold to registered recyclers.

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 the proposed plant area.
4. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
5. Promoters and their back ground.
6. Regulatory framework
7. A copy of Gazette Notification issued by the State Government indicating location of the project in notified industrial area should be included necessarily.
8. A map indicating location of the project and distance from severely polluted area
9. Project location and plant layout.
10. Infrastructure facilities including power sources.
11. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
12. Project site location along with site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
13. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project along with supporting document.
14. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
15. Permission, if any, from the State Forest Department
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products along with the production capacities.
18. Detailed list of raw materials required and source, mode of storage and transportation.
19. Manufacturing process details along with the chemical reactions and process flow chart.

20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. 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.
22. 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 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.
23. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
24. Details of VOC monitoring system in the working zone environment, if any.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, 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 NAAQES Standards notified by the Ministry on 16th September, 2009.
29. An action plan 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 for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
32. Action plan for 'Zero' discharge of effluent shall be included.
33. Treatment of phenol in the effluent, if any.
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. Action plan for the disposal of fly ash generated from boiler shall be included.
36. Explore the possibility to use fuel other than wood.
37. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
39. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
40. A write up on "Safe Practice" followed for hazardous chemicals handling, storage, transportation and unloading to be submitted.
41. A write up on "Treatment of workers affected by accidental spillage of hazardous chemicals.
42. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
43. An action plan to develop green belt in 33 % area
44. 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.

45. 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 has 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.
46. Details of occupational health surveillance programme.
47. Socio-economic development activities shall be in place.
48. 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.
49. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
50. 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.
51. 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.
52. 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.
53. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment and item-wise details along with time bound action plan should be prepared and incorporated.
54. Total capital cost and recurring cost/annum for environmental pollution control measures.
55. 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.
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- 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 is not required as the unit is located in the notified industrial area.

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

6.6.0 Reconsideration

- 6.6.1 Proposed Greenfield project of 250 TPD pulp plant, 250 TPD paper plant along with 10 MW co-generation power plant at industrial growth center, Matia, District Goalpara, Assam, **M/s Kohinoor pulp & Paper Pvt. Ltd. Amendment in EC.**

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

- 6.6.2 Expansion of Ferro alloys capacity from 0.1 MTPA to 0.1725 MTPA by installation of 1X45 MVA Submerged Electric Arc Furnace & 4 MW Gas based Power Plant at MEL Chandrapur in Maharashtra **by M/s Chandrapur Ferro Alloy Plant [Formerly M/s Maharashtra Elektros melt Limited] – regarding Reconsideration for Environmental Clearance**

The above proposal was considered in the 2 meeting of the Reconstituted Expert Appraisal Committee meeting held during 29-31st October, 2012. The Committee sought the following additional information for reconsideration:

- i. Documents regarding change in the name of the company from M/s Maharashtra Elektros melt Limited to M/s Chandrapur Ferro Alloy Plant
- ii. Authenticated map showing the location of the plant and Tadoba Tiger Reserve along with comments from Chief Wildlife Warden. A copy of application submitted to NBWL.
- iii. Permission/NOC from the Archaeological Survey of India as a number of temples are located within 10 km distance

- iv. Confirmation on the total production capacity as 0.1725 TPA or 0.1772 TPA
- v. Revised layout plan incorporating the rain water harvesting and revised green belt.
- vi. Rechecked data on AAQ.
- vii. Copy of the original Public Hearing proceedings

The above information was submitted by the proponent to MoEF vide letter dated 11.2.2013 and also been circulated to all the Committee members. The Committee noted that the requisite additional information submitted by the proponent are found to be adequate 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. The raw material storage shall be covered.
- 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. Leach ate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.
- vi. The total water requirement for proposed expansion shall not exceed 4080 m³/day. 'Zero' effluent discharge shall be strictly followed and no wastewater should be discharged outside the plant 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 Fe-Si and Si-Mn 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 and Forests.
- x. 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.
- xi. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 21st April, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xii. As proposed, green belt should be developed in at least 33 % of the project area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xiii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiv. The company shall provide housing for 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.

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	P
f	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	P
9.	Dr. S.D. Attri	Member	A
10.	Dr. Antony Gnanamuthu	Member	P
11.	Prof. C. S. Dubey	Member	A
12.	Shri Niranjana Raghunath Raje	Member	P
MOEF Officials :			
13.	Dr. V.P.Upadhyay	Member Secretary	
14.	Shri A.N. Singh	Scientist 'C'	
15.	Shri Sundar Ramanathan	Scientist 'C'	