MINUTES OF 4th RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY) MEETING HELD DURING 8th – 9th JANUARY, 2013

VENUE: Tagore Hall, Scope Convention Centre, Scope Complex, Lodhi Road, New Delhi 110 003.

TIME 10.30 A.M.

4.0 Opening Remarks of the Chairman

At the outset, Chairman welcomed the members of the Expert Appraisal Committee (Industry). The Committee observed two minutes silence for the sudden demise of its member Shri Shiban Raina. Thereafter, agenda items were taken up for discussion. The deliberations held and decisions taken are as under.

4.1 Confirmation of the Minutes of the 3rd reconstituted Expert Appraisal Committee (Industry) held during 3rd – 5th December, 2012.

The minutes of the 3rd Reconstituted Expert Appraisal Committee (Industry) held during 3 – 5th December, 2012 were confirmed.

8th January, 2013

4.2.0 Consideration of the Projects:

4.2.1 Expansion of Steel Plant alongwith CPP (12 MW) at Sy. No. 1A to 1D, 4,5,6,7 & 8, village Haruvanahalli, TQ Hospet, District Bellary, Karnataka by M/s Rosvar Iron & Power Private Ltd – regarding (TOR to EC)

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

4.2.2 Exploratory Drilling of Oil Well R-JAG-A1 (Indara # I), NELP VI Block GV-ONN-2004/1 at Village Indara, District Mau, Uttar Pradesh by M/s Oil and Natural Gas Corporation Limited(ONGCL) - regarding (TOR to EC)

The project authorities and their consultant (M/s Pollution Control Research Institute, Haridwar) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Term of References (ToRs) awarded during 20th Expert Appraisal Committee (Industry -2) held during 3-4th March, 2011 for preparation of EIA/EMP. The ToR was awarded on 29.3.2011. 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 Oil and Natural Gas Corporation Limited (ONGCL) have proposed for the Exploratory Drilling of one oil well as R-JAG-A1 (Indara # I), NELP VI Block GV-ONN-2004/1 at Village Indara, District Mau, Uttar Pradesh for exploration of hydrocarbon. Co-ordinates of the location are Latitude 26°00'29.98"N, Longitude 83°37'45.90"E. The land requirement for the drilling site would be 4.52 acres. Water based mud will be used for the drilling operation. The exploration Block GV-ONN-2004/1 was awarded to M/s ONGC with 100% equity participation of

ONGC.The Block falls in Azamgarh, Mau, Jaunpur and Gazipur Districts of the Uttar Pradesh covering an area of 8354 Sq. Km. PSC was signed on 2nd March, 2007 and PEL was granted to ONGC w.e.f 11th December, 2007. No National Park/Wildlife Sanctuary exists within 10km radius of the project site. Total cost of the project is Rs. 50.00 Crores. Following will be the coordinates for the Block GV-ONN-2004/1:

Point	Latitude			Longitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec
A	26	03	30.00	83	56	0.00
B	26	10	0.00	83	52	0.00
C	26	23	9.16	83	22	11.89
D	26	39	56.00	82	46	54.00
E	26	12	25.00	82	23	5.00
F	25	59	0.00	82	33	54.00
G	25	46	56.00	83	30	25.00
A	26	03	30.00	83	56	0.00

Exploratory drilling will be temporary and a short duration activity and includes site preparation, well foundation, rig building, drilling and restoration of the well site.This activity takes 11-12 months under normal conditions. The depth of the well would be 3500 m. If exploratory drilling is successful, M/s ONGCL may go for developmental activities for which separate application for environmental clearance will be submitted. Electric type rig will be deployed for undertaking drilling in the Block. The power requirement will be met through 4 Captive DG sets (1200KVA). For this purpose Diesel (6-8KLPD) will be used.

Ambient air quality monitoring has been carried out at 8 locations during March – June, 2012 and the data submitted indicated: PM_{10} (65-92 µg/m^3), RSPM (28-34 µg/m^3), SO_2 (6-8 µg/m^3), NO_x (7-14 µg/m^3) and NMHC (0.09-0.18 ppm) and are within the permissible limits. AAQ modeling study indicates that the maximum incremental GLCs for NOx would be 0.59 µg/m^3. The resultant concentrations are within the NAAQS. Emissions will be generated from D.G. sets and also from the wells if hydrocarbon is produced. To minimize impact of emissions from DG sets, stack height will be kept as per CPCB norms. Water spraying will be done at site to reduce the spreading of dust particles. Noise control measures like acoustic hood, silencers and enclosure etc. will be provided. PPEs (ear plugs and ear muffs) will be used in noise prone areas.

Total water requirement will be 25 m^3/day for drilling and met from tube well tankers. Water based mud will be used. Wastewater generation would be 15-20 m^3/day. This will be treated in mobile effluent treatment plant (ETP) and then recycled.

Drill cuttings (200-250 m^3) will be generated during drilling. Drill cuttings will be water washed and disposed in impervious lined pit at site. Cuttings will be dried and then covered with top layer of soil. Oil sludge will be collected in oil pit during production testing. Spent oil will be sold to authorized recyclers / re-processors.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Uttar Pradesh Pollution Control Board on 12.10.2012. The issues raised in the public hearing were regarding socio-economic development of area, employment issues, environmental effect on local area, treatment of effluent generated during drilling etc. In response, project proponent committed that they will undertake the CSR activities

for socio-economic development in the area, employment will be given in 3rd/4th grade as per the Central and State Government Rules, Effluent treatment will be done by mobile Effluent Treatment Plant.

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. Approach road should be made pucca to mitigate generation of suspended dust.

ii. Ambient air quality shall 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 PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, CH_4, HC, Non-methane HC etc.

iii. Mercury shall be analyzed in air, water and drill cuttings twice during drilling period.

iv. The company shall 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 25 m^3/day and prior permission should be obtained from the Competent Autority.

vi. The company shall 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 Lucknow.

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 H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H_2S 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 Lucknow.

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 Lucknow.

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 Lucknow.

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 and circulate the environmental policy.

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.

4.2.3 Expansion of Fatty Amines & Its Derivatives at Block No. 1723, Village Tundav, Tehsil Savli, District Vadodara, Gujarat by M/s Indo Amines Ltd. - (TOR to EC)

The project authorities and their consultant (M/s Kadam Environmental Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures as per the Terms of Reference (TORs) awarded during the 29th Meeting of the Reconsituted Expert Appraisal Committee (Industry-2) held during 17-18th November, 2011 for preparation of EIA/EMP. The ToR was awarded on 13th December, 2011. 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 Indo Amines Ltd. has proposed for expansion of fatty amines & its derivatives at Block No. 1723/24, Village Tundav, Tehsil Savli, District Vadodara, Gujarat. Forests land is not involved. Total plot area is 22,977.75 m^2 and expansion will be carried in the existing area. The Nandesari GIDC and Ankleshwar GIDC are located at 11.90 km and 99.46 km distance respectively. There are no national parks and wildlife sanctuary /reserve forests within 10 km. Project cost is Rs. 6.0 Crores. Rs. 59 Lakhs and Rs. 21.7 Lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures. Rs. 7.25 Lakhs is earmarked for CSR activities. Following are the details of the existing and proposed products:

S.No.	Name of Products	Existing Production (MT/Month)	Proposed Expsnsion (MT/Month)	Total (MT/Month)
i.	Fatty Amines	100	500	600
ii.	Specialty Chemicals	160	1200	1360
iii.	Quaternary Ammonium Compounds	20	20	40
iv.	Indo coat	50	50	100
	Total	**330**	**1770**	**2100**

Total power requirement is 15 MW which will be met from Madhya Gujarat Vij Company Limited (MGVCL). D.G.sets (1x200 KVA and 1x500 KVA) will be used as a standby arrangement. Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during winter season of 2011-2012 and submitted data indicates as PM_{10} (61-92 µg/m^3), SO_2 (8-16.5 µg/m^3) and NO_x (15.1-22.7 µg/m^3). Adequate stack height will be provided for propoer dispersion from the D.G sets and boilers.The flue gas stacks will be equipped with bag filters along with a sulphur removal system.

Total water requirement from ground water source will be increased from 22.5 m^3/day to 48.1 m^3/day. Total wastewater generation will be 14 m^3/day. Domestic effluent will be treated with the help of septic tank and soak pit. RO reject and process generated water will be treated in ETP and treated water will be reused for irrigation. 'Zero' liquid discharge will be adopted. ETP sludge will be sent to M/s NECL, Nandesari. Used oil, distillate residue/ salt and spent nickel will be sold to approved recyclers/ vendors. Green belt will be developed in 7044.36 m^2.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 6th June, 2012. The

issues raised in the public hearing were regarding dust generation, air pollution, permanent employment and construction of road etc which were addressed in the 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) Adequate stack height should be provided to the coal fired thermic fluid heater for dispersion of gaseous emissions.

ii) Ambient air quality should be monitored 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 PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, CH_4, HC, Non-methane HC etc.

iii) Adequate scrubbing system should be provided to process vents to control process emissions. 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 GPCB.

v) Total fresh water requirement from ground water source should not exceed 48.10 m^3/day and prior permission should be obtained from the Competent Authority.

vi) Industrial effluent generation shall not exceed 14 m^3/day. Effluent shall be treated in ETP Treated effluent shall be recycled/reused within factory premises.

vii) No effluent should be discharged outside the factory premises and zero discharge of the effluent should be implemented.

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 33 % of the total land. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

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.

xii) Boiler 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.

xiii) 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 submitted to the Ministry's Regional Office at Bhopal.

Implementation of such program should be ensured accordingly in a time bound manner.

4.2.4 Setting up of Grain/Molasses Based (30 KLPD) Distillery Plant at Village Kirna, Taluka Mungeli, District Bilaspur Chhattisgarh by M/s Aegist Beverages Private Limited- regarding (TOR to EC)

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

4.2.5 Proposed Modernization of existing Coke Over Plant by installing a Coal Washery (25 TPH or 60,000 TPA) at Dag No. 14,15,19,20 of Patta No. 36, Village Ambher, Jorabhat, Taluk Sonapur, District Kamrup (M), Assam by M/s R.P. Associates Pvt. Ltd. - regarding ToR to EC

The project authorities and their consultant (M/s Kalyani Laboatories Pvt Limited, Bhubaneshwar) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 30th Meeting of the Expert Appraisal Committee (Industry- 1) held during 28-29th November, 2011 for preparation of EIA/EMP report. The ToR was awarded on 22nd December, 2011 for preparation of EIA/EMP report. All the Coke Oven Plants < 2,50,000 & $\underline{\geq}$ 25,000 Tonnes/Annum are covered under Category (B) as per para 4(b) of the Schedule of the EIA notification 2006, but due to applicability of general condition of EIA notification, 2006 as the project falls within the inter-state boundary of Assam and Meghalaya, the proposal has been appraised at the Central level.

M/s R.P. Associates Pvt. Ltd. have proposed for modernization of existing Coke Oven Plant by installing a Coal Washery (25 TPH or 60,000 TPA) at Dag No. 14,15,19,20 of Patta No.36, Village Ambher, Jorabhat, Taluk Sonapur, District Kamrup (M), Assam. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area are present within 10 km radius. No new land will be acquired for the proposed modernization and 0.0136 ha of the existing project area of 1.6454 ha will be utilized. The total cost of the project will be Rs. 83.84 Lakhs. Rs. 15 Lakhs and Rs. 3.8 Lakhs will be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures. Rs.5.50 Lakhs earmarked for the CSR activities.

The existing plant is a Low Ash Metallurgical Coke (LAMC) Oven with an installed capacity of 40,095 MTPA and was installed in the year 2004. To improve the quality of end product, the company is proposing to install a coal washing facility (25 TPH or 60,000 TPA).To manufacture 40,095 MTPA of coke (finished product) 70,400 MTPA of raw coal will be required considering a yield of 57%. Out of 70,400 MT, 42,000 MT washed coal will be used and balance 28,400 MT unwashed coal will be used for blending. To produce 42,000 MT of washed coal 60,000 MT of raw coal will be required. The incoming unwahed coal is sourced from private mine owners located in jayanta hills, Meghalaya at a distance of 240km from the project site and will be transported by the road. The technology used for the coal washing is wet process technology. About 18,000 TPA of rejects would be sold to steel plants for power generation.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during Februray – April, 2012 and submitted data indicates as PM_{10} (49.8-58.2 µg/m^3), $PM_{2.5}$ (24.9-29.5 µg/m^3) (SO_2 (4.4-8.6 µg/m^3) and NO_x (9.4-17.3 µg/m^3). AAQ modeling study indicates that the maximum incremental GLCs for PM_{10} would be 12.04 µg/m^3. The resultant concentrations are within the NAAQS. Adequate water sprayed at transfer points, transportation of coal will be done by closed trucks or tarpaulin cover and green belt will be cevloped along the boundary of the project area and around storage areas.

Water requirement is 10 m^3/day which will be sourced from tube well inside the plant premises. Total make up water requirement is 4 m^3/day. No industrial waste water will be generated due to proposed project and plant would operate on a zero discharge basis. The effluent from the plant will be taken through a separate drain and discharged into settling ponds. There will be a set of 2 settling ponds. The effluent from the plant will be discharged to first set of pond and the clear water will be recycled. Settled sludge will be dewatered in a filter press in to dry flakes.The settling pond will be constructed with suitable impervious lining to prevent percolation into ground water.

Middling and washery rejects of 6,000 TPA and 18,000 TPA respectively will be generated from the proposed plant. Middling with 15 % ash will be blended with raw coal or unwashed coal and rejects will be sold to brick manufacturers & steel plants for power generation. Sludge from settling tank (5-7 tons/day) will be sold out.

The Committee noted that no public hearing / consultation is required due to no increase in the project area, no increase in existing coke oven production capacity, only to improve the quality of final coke product, raw coal washing unit will be installed and washed coal will be charged in the oven, zero-discharge of wastewater will be followed, no increase in air pollution etc.

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) Ambient air quality should be monitored 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 PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, CH_4, HC, Non-methane HC etc.

(ii) The raw coal, washed coal and washery rejects shall be stacked properly at earmarked site(s) within stockyards fitted with wind breakers/shields. Adequate measures hall be taken to ensure that the stored minerals do not catch fire.

(iii) Hoppers of the coal crushing unit and washery unit shall be fitted with high efficiency bag filters and mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.

(iv) All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned with mechanical sweepers.

(v) Green belt should be developed in 33 % of the total land. Green belt shall be developed all along the periphery of the site, along the areas such as the washery unit, crushing unit, and stockyard.

(vi) Trucks engaged for mineral transportation outside the washery shall be optimally loaded and covered with tarpaulin with no spillage en route. The trucks shall be properly maintained and emissions shall be below notified limits. Facilities for parking of trucks carrying raw coal shall be created within the Unit.

(vii) Rejects will be sold to brick manufacturers & steel plants for power generation.

(viii) Records of quantum and ash content of raw coal being washed, and clean coal and coal rejects produced from every batch of washing shall be maintained

(ix) The Washery unit shall be a zero-discharge facility and no wastewater shall be discharged from the washery into the drains/natural watercourses. Recycled water shall be used for development and maintenance of green belt and in the Plant Operations.

(x) Heavy metal content in raw coal, and washed coal shall be analysed once in a year and records maintained thereof.

(xi) Total fresh water requirement from ground water source should not exceed 10 m^3/day and prior permission should be obtained from the concerned Authority.

(xii) All the recommendations made in the risk assessment report should be satisfactorily implemented.

(xiii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

(xiv) 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 submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

4.2.6 Expansion of existing ferro alloys plant at village- pankphal, Dist. Jajpur, Orissa by M/s Misrilall Mines Pvt. Ltd. – regarding ToR to EC

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

4.2.7 Drilling for On-shore Oil & Gas Exploration At Cauvery Basin Block-CY-ONN-2005/1 at Thanjavur, District Thiruvarur, Tamil Nadu by M/s GAIL- regarding (TOR to EC)

The project authorities and their consultant (M/s Senes Consultants India Private Limited) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Term of References (ToRs) awarded during 20th Expert Appraisal Committee (Industry -2) held during 3-4th March, 2011 for preparation of EIA/EMP report. The ToR was awarded on 26th May, 2011. All the On-shore & offshore 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 GAIL (India) Limited has proposed for the drilling for On-shore Oil & Gas Exploration at Cauvery Basin Block-CY-ONN-2005/1 in Thanjuvur and Thiruvarur district of Tamil Nadu. Total block area is 946 sq.km. The Production Sharing Contract for the block was signed on 22nd December, 2008 and the Petroleum Exploration License was made effective from 3rd

March, 2010. As per the Product Sharing Contract (PSC), M/s GAIL (India) Limited will carry out drilling in 3 exploration wells in phase I and one exploratory well in phase II. Location of drilling wells will be finalized based on interpretation results from 3D seismic survey. Thiruvarur is at 22.7 km distance from the block. 11.6 sq. km forest land is exists within the Block. Udayamarthandapuram bird sanctuary and part of Mangrove Research Forests (part of point Calimere Wildlife & Bird Sanctuary – Ramsar site) are located within the block area. Total cost of the project is Rs. 60 Crores. Following will be the co-ordinates of the block CY-ONN-2005/1:

Point	Latitude	Longitude
A.	10°20'00.00"	79°10'41.57"
B.	10°20'51.00"	79°10'41.57"
C.	10°34'49.00"	79°19'38.42"
D.	10°39'57.00"	79°19'12.13"
E.	10°40'29.50"	79°25'45.55"
F.	10°30'44.60"	79°26'35.00"
G.	10°31'22.76"	79°35'00.00"
H.	10°22'30.88"	79°35'00.00"
I.	10°22'45.00"	79°27'30.00"
J.	10°20'00.00"	79°27'30.00"
A.	10°20'00.00"	79°10'41.57"

Land of about 120m x120m will be acquired on temporary lease basis. Exploratory drilling will be temporary and short duration activity and includes Drilling will be carried out for 90-120 days. The depth of the exploratory well will be 1000 m – 2200 m. The site, if abandoned will be restored in accordance with the regulation. Cell pit (2 x2 x 2.5m) will be installed for well head and BOP. Electric land rig will be used. The power requirement will be met through 4 Captive DG sets of 500KVA each for the drilling activities and 1x100 KVA DG set will be used for the ligtening and other emergency requirements. For this purpose HSD (4-5KLD) will be used.

Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated: PM_{10} (66.5-129.7 µg/m^3), SO_2 (8-16.4 µg/m^3), NO_x (9.3-16.5 µg/m^3) and NMHC (<1 ppm). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 0.67 µg/m^3, 2.8 µg/m^3 and 21.08 µg/m^3 with respect to PM_{10}, SO_2 and NO_x respectively. Emissions will be generated from D.G. sets and also from the wells if hydrocarbon is produced. To minimize impact of emissions from DG sets, Water sprinkling and periodic maintenance of equipment will be done. Provision of adequate stack height for DG sets & flare as per CPCB norms will be provided. Use of acoustically treated DGs and machineries will be used.

Total water requirement for drilling operations will be 40-50 m^3/day. Waster based mud will be used as drilling operation. Domestic sewage will be treated in sewage treatment system. Wastewater generation would be 20 m^3/day. This will be treated in mobile effluent treatment plant (ETP) and then recycled.

Drill cuttings (300-400MT) will be generated during drilling. Drill cuttings will be water washed and disposed HDPE lined pit. Used oil will be sold to authorized recyclers / re-processors.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Tamil Nadu State Pollution Control Board on 15th June, 2012 at Pattukottai, Thanjavur district and on 27th June, 2012 at Mannarkudi, Thiruvarur district. The issues raised in the public hearing were impact of drilling activities on agriculture productivity, employment opportunity, compensation for land, rain water contamination measures etc, which are addressed in the 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. No drilling shall be undertaken within 10 km radius of the Udayamarthandapuram bird sanctuary and Calimere wildlife & bird sanctuary.

ii. Natural drainages/nallahs inside the block area should not be disturbed and waste water should not be discharged into any drainage or water body.

iii. Approach road should be made pucca to mitigate generation of suspended dust.

iv. 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 PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, CH_4, HC, Non-methane HC etc.

v. Mercury should be analyzed in air, water and drill cuttings twice during drilling period.

vi. 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.

vii. Total water requirement should not exceed 40 m^3/day and prior permission should be obtained from the Competent Authority.

viii. 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.

ix. 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.

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 H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H_2S 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 Bangalore.

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 Bangalore.

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 Bangalore.

xxiii. 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.

xxiv. Company should have own Environment Management Cell having qualified persons with proper background.

xxv. Company should prepare and circulate the environmental policy.

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.

4.2.8 Cement Grinding Unit (4.0 MTPA) under "Ash Utilization Plant" within the premises of 3x660 MW Thermal Power Plant at Village Jodh Khansemra, Tehsil Bara, District Allahabad in U.P. by M/s Prayagraj Power Generation Company Limited. - regarding (TOR to EC)

The project authorities and their consultant (M/s Vimta Labs, Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during 35th Meeting of the Expert Appriasal Committee (Industry -1) held on 26-27th April, 2012 for preparation of EIA/EMP report. The ToR was awarded on 22.5.2012. All the stand alone cement grinding units are covered under Category 'B' as per para 3(b) of the Schedule of the EIA notification 2006, but due to the location of project site within 10 km of interstate boundary, the proposal has been appraised by the Expert Appraisal Committee (Industry) in the Ministry.

M/s Prayagraj Power Generation Company Limited have proposed for 4.0 MTPA Cement Grinding Unit under "Ash Utilization Plan" within the premises of 3x660 MW Thermal Power Plant at Village Jodh Khansemra, Tehsil Bara, District Allahabad in Uttar Pradesh. The environmental clearance for the 3x660 MW Thermal Power Plant was accorded on 8.9.2009. In order to productively utilize fly ash from the power plant, 4.0 MTPA Cement Grinding Unit is proposed to be set up. The total land requirement is 20.0 ha which is part of 773.10 Ha of land available within the power plant and is under possession. No additional land is proposed to be acquired. No ecologically sensitive areas such as National Park/Sanctuary/Biosphere Reserve/Historical monuments, defence installations, etc. exist within 10 km radius of the plant site. There is no litigation/pending case against the proposal. Cost of project is Rs. 450.0 crores. Rs. 54 crores has been earmarked for the environment protection measures.

Two sets of high pressure roller press with ball mills would be installed in the grinding unit to produce Portland Pozzolona Cement. The main raw material clinker will be sourced from Jaypee group's existing plants at Rewa / Bela / Sidhi / Dalla. Gypsum will be sourced from Rajasthan. Proposed grinding unit requires about 30 MW of power which will be sourced from

3x660 MW power plant. 700 m^3/day of water is required for the proposed project, which will be sourced from the water allocated for the thermal power plant from River Yamuna. No additional allocation of water is required.

Ambient air quality monitoring has been carried out at 8 locations during March to May 2012 and the data submitted indicated: PM_{10} (10.3-32.3 µg/m^3), $PM_{2.5}$ (2.6-9.1 µg/m^3), SO_2 (86.7-13.5 µg/m^3) and NO_x (8.5-15.8 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs for PM_{10} would be 1.8 µg/m^3. Enclosures and dust extraction system will be provided in raw material unloading area, storage section and packing section. Bag filters will be provided at at all transfer points for dust extraction. Closed belt conveyors will be provided for transferring raw material. Clinker will be stored in silos.

There will be no waste water generation and the domestic wastewater will be treated in the sewage treatment plant. No solid waste will be generated. Sludge from the STP will be used as manure. Used lube oil will be disposed off through authorized vendors.

The Committee noted that the project proposal is exempted from public hearing as per Para 7(II) of EIA Notification 2006 due to no additional land and water allocation requirement, use of energy efficient technology, no clinker manufacturing at the proposed site, no sensitive area within 10 km. radius, 'zero' effluent discharge, utilization of all the solid waste in the process itself including utilization of fly ash etc. The public hearing for the Thermal Power Plant was held on 30.5.2008.

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

- Values of $PM_{2.5}$ needs to be rechecked as the values reported are low. $PM_{2.5}$ parameter shall be monitored for a one month period and the data shall be submitted
- Disaster management plan for the cement grinding unit
- Possible impact on the Reserve Forests area due to the operation of cement grinding unit and power plant

4.2.9 EC for proposed mini cement plant at vill Lachmanpur, Distt. Burdwan, West Bengal by M/s Top Tech Cement Co. Pvt .Ltd - regarding EC.

The above proposal was considered in the 29th Meeting of the Expert Appraisal Committee (Industry-1) held during 24-25th October, 2011. The Committee noted that the presentation is not up to the mark and the data regarding AAQ, water quality and noise levels. The proposal will be reconsidered on receipt of requisite data.

The proponent has submitted the data regarding AAQ, water quality and noise levels. The Committee found the information submitted is adequate 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/Nm^3 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 Bhubaneshwar, West Bengal 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. Asphalting/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 ground water requirement for the cement plant shall not exceed 5 m^3/day and necessary permission for the drawl shall be obtained. All the treated wastewater should be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.

viii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.

ix. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process used for cement manufacturing. Spent oil and batteries should be sold to authorized recyclers / reprocessors only.

x. Green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.

xi. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneshwar. Implementation of such program should be ensured accordingly in a time bound manner.

4.2.10 EC for the proposed expansion project of polyester chips, Polyester filament yarns and new bopet film product with Captive Power Plant at Village Jalwa, Distt. Surat, Gujarat by M/s Garden Silk Mills Ltd.- regarding (TOR to EC)

The project authorities and their consultant (M/s En-vision Enviro Engineers Ltd., Surat) gave a detailed presentation on the salient features of the project and proposed environmental protection measures as per Terms of References (TORs) awarded during the 18th Meeting of the Expert Appraisal Committee-1 (Industry) held during 24-25th January 2011 for preparation of EIA/EMP report. The ToR was awarded on 11th March, 2011. The project is covered under Category 'A' as per para 5(d) of the Schedule of the EIA notification 2006 and appraised at the Central level.

M/s Garden Silk Mills Limited has proposed for expansion of Polyster Stable Fibre and Captive Power Plant (CPP) at Village Jolwa, Taluka Palsana, District Surat, Gujarat. Proposed expansion project is located outside the Notified Industrial Area. The total land requirement for the proposed plant is 36395.4 m^2(3.63 Ha). The power requirement will be met from the CPP. The total cost of the project will be Rs. 277.3 Crores. Rs.6 Crores and Rs.95 Lakhs will be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures. The existing and the proposed configuration are given below:

S.N.	Name of Products	Existing (MTPA)	Proposed (MTPA)	Total (MTPA)
1.	Polyester Chips	3,33,524	--	3,33,524
2.	Polyester Filament Yarn (PFY)	--	--	--
a.	Partially Oriented Yarn (POY)	2,28,192	--	2,28,192
b.	Fully Drawn Yarn (FDY)	97,484	--	97,484
3.	**Poly Staple Fiber (PSF)**	--	1,08,000	1,08,000
Total (TPA)		**6,59,200**	**1,08,000**	**7,67,200**
4.	**By-Products**			
a.	Degraded Polymer (Oligomer)	39	10	49
5.	Electric Power			
a.	N. G. Based Captive Power Plant			
	1. Phase – I & II (**MW/ HR)**	13.49 (2 x 6.745)	--	13.49 (2 x 6.745)
	2. Phase – III (**MW/ HR**)	8.4	--	8.4
6.	Coal Based Power Plant	18	21	39 MW

Environmental clearance to the existing plant was accorded by MoEF vide letter no. J-11011/1048/2007-IA II (I) dated 7.4.2008, 25.4.2008, 12.3.2009 and J-11011/124/2009-IA II (I) dated 10.6.2009. RO, Bhopal had sent the certified compliance report. The Committee found the compliance of EC conditions to be satisfactory.

Ambient air quality monitoring has been carried out at 6 locations during March to May, 2011 and the data submitted indicated: PM_{10} (52-92 µg/m^3), SO_2 (20.2-33.8 µg/m^3) and NO_x (30.2-39.46 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 3.25 µg/m^3, 6.02 µg/m^3 and 2.17 µg/m^3 with respect to PM_{10}, SO_2 and NO_x respectively. The unit will install Electro Static Precipitator to control air pollutants. The stacks will be attached to the air pollution control equipments to disperse the air pollutants to the satisfactory levels. Preventive maintenance of air pollution control equipment will be done regularly. A thick greenbelt is developed all around the plant boundary to act as noise attenuator. Water sprinkling will be done to control the dust emissions.

Total water requirement for the proposed expansion will be 3291 m^3/day, which will be met through Canal water. The wastewater generation is 1350.6 m^3/day which will be treated in the effluent treatment plant. All hazardous wastes will be handled carefully and stored in scientifically designed and constructed hazardous waste storage area within the premises. The empty containers of hazardous raw materials and Used/spent oil will be sent to GPCB registered dealer. The ETP sludge shall be sent to TSDF site for disposal through covered vehicle and process waste shall be sold to end-users.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 17th June 2012. The issues raised in the public hearing were regarding employment opportunity, CSR activities etc which are addressed in the 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. The gaseous emissions from the coal fired heater shall be dispersed through stack of height as per the prescribed standards and emissions shall conform to the prescribed standards.

ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.

iii. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB should be followed.

iv. The total water requirement shall not exceed 3291m^3/day and permission shall be obtained to draw the canal water from the State irrigation department.

v. The process effluent shall be treated in the effluent treatment plant. The treated effluent shall be treated in the RO plant. The RO rejects along with ETP treated water shall be discharged through the pipeline and ultimately conveyed into the deep Arabian Sea.

vi. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.

vii. Risk & Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.

viii. As proposed, green belt shall be developed in 33 % of the total land area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

ix. Occupational health surveillance of the workers should be carried out as per the prevailing Acts and Rules.

x. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

xi. The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

4.2.11 EC for the proposed extended Coke Oven Plant (22500 TPA to 45000 TPA), Beneficiation Coal Washery Plant (66000 TPA), Briquette Plant (16500 TPA) and Captive Power Plant 6MW at Village Biswasdih, P.O. Gadi Srirampur, District Girdih, Jharkhand by M/s Maa Anjani Industries. - regarding TORs

The project authorities and their consultant (M/s.Anacon Laboratories Pvt. Ltd., Nagpur) 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 Coke Oven Plants < 2,50,000 & $\geq$ 25,000 Tonnes/Annum are covered under Category (B) as per para 4(b) of the Schedule of the EIA notification 2006, but due to absence of SEIAA/SEAC for Jharkhand, the proposal has been appraised at the Central level.

M/s Maa Anjani Industries proposes to expand its Coke Oven Plant from 22500 TPA to 45000 TPA along with a Captive Power Plant of 6 MW, Coal Washery of 66,000TPA and Briquette Plant of 16500 TPA at village Biswasdih, District Giridh, Jharkhand. The land requirement for the project will be 14.5 acre. The existing plant is located in an area of 2 acres which is within the 14.5 acre area. No Forest land is involved. No National Park, Wildlife Santuary within 10 km radius of the prject site. No court cases/litigation is pending against the project. The raw material required are raw coal – 1,20,000 TPA and coal slurry – 18,000 TPA. The power requirement is 495 HP which will be met from the captive power plant. The water bodies located in the study area are rivers (Ushri, Barakar and Khandoli dam). The south, East and North East part of study area comprises with protected forest.

To control air pollution, Electro Static Precipitators, Multicylone Bag Filters will be installed. To control fugitive emissions water sprinkling system will be installed at various locations. Material Handling system i.e. Belt Conveyors, Transfer points, Feeders, Hoppers, Junction points will be equipped with Bag Filters & Cyclones for de-dusting. All conveyors will be covered and will have water fogging system for dust suppression. The water requirement is 110

KLD which will be met from the ground water. Washery effluent will be generated and it will be treated with sludge thickener. Treated wastewater will be recycled in the process. Zero discharge norms will be adopted. Washery reject will be the main solid waste and it will be utilized in power plant as a fuel and briquette production.

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. Copies of coal linkage documents
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. 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.
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. 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. 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 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/Nm^3 should be included. Cumulative impacts of cement plant, Captive Power Plant and mines located at a distance of 2.0 km on the ambient air quality shall be assessed.
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 $20^{o}C$-50 ^{o}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. 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 heath 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.
63. <u>Corporate Environment Policy</u>
    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.

64. 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.
65. A note on identification and implementation of Carbon Credit project should be included.
66. Total capital cost and recurring cost/annum for environmental pollution control measures.
67. 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.
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.

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 State Environmental Impact Assessment Authority 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.

4.2.12 EC for the proposed 5.0 MTPA integrated cement clinkerisation plant, 8.0 MTPA cement grinding unit, 100 MW Captive power plant and 7.0 MTPA captive lime stone mine with mining lease area of 997.08 ha. At Gollapalli Village, Myalavaram

Mandalam of Kadappa (YSR) District, Andhra Pradesh by M/s ACC Ltd.- regarding TORs.

The project authorities and their consultant (M/s Vimta Labs, Hyderabad) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP 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.

M/s ACC Limited proposed to set up Integrated Cement Clinkersation Plant – 5.0 MTPA, Cement grinding unit – 8.0 MTPA, Coal based Captive Power Plant of 100 MW at villages Gollapali, Vaddirala and G-Uppalapadu, Mylavaram Mandal, Kadapa, Y.S.R. district, Andhra Pradesh. M/s ACC Limited also proposed for the 7.0 MTPA captive lime stone mine with mine lease area of 997.08 Ha at Mylavaram Mandal, Kadapa, Y.S.R. district, Andhra Pradesh for which MoEF granted ToR for mining project vide letter no. J-11015/133/2012-IA.II (M) dated 30th October, 2012.

The land requirement for the project is 275.028 acres. 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.4200 crores. Dhodiyan Reserve Forests and Malamidikambala Dinne Reserve Forests are located at 8.0 km South West and 14 km South West of the project site. The nearest river is Penneru River flowing at 12km south of the project site. The water requirement is 3600 m^3/day. The coal requirement for the cement plant and power plant is 0.88 MTPA and 1.06 MTPA respectively which will be sourced from Singareni Coalfields (SCCL) in Andhra Pradesh. Lime stone requirement will be met from the captive mine. The power requirement is 100 MW which will be met from the captive power plant.

To control air pollution, high efficiency/state of art air pollution control equipment will be installed to control particulate matter <50 mg/Nm^3.Stack heights will be designed for wider dispersion of gaseous emissions as per the CPCB guidelines. Raw material handling section would be provided with dust suppression (DS)/dust extraction (DE) systems.Greenbelt development all along the plant and colony boundary. Domestic waste water will be treated in STP and reused. CPP will have air cooled condenser. Waste water from CPP will be treated in ETP and reused. No solid waste will be generated from the cement plant operation. Sludge from the STP will be used as manure. Fly Ash from the CPP will be 100% utilised in cement plant for PPC manufacturing

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 cement plant, captive power plant and mine 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/Nm^3 should be included. Cumulative impacts of cement plant, Captive Power Plant and mines located at a distance of 2.0 km on the ambient air quality shall be assessed.
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 ^{o}C-50 ^{o}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. <u>Corporate Environment Policy</u>
    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 Andhra Pradesh Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

4.2.13 EC for proposed 2 x 1,25,000 TPA calcined Petroleum Coke Plant at Village Kalaghar, PO marshaghai, Kendrapara, Odisha by M/s Subhag Properties Private Ltd. regarding TORs

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

4.2.14 EC for proposed Titanium Dioxide slag Plant 1,00,000 TPA at Ramannapetta (Gudimetla) (V), Chandarlapadu (M) Krishna District, Andhra Pradesh by M/s Satyavathi Minderal and Metals Ltd. - regarding TORs

The project authorities and their consultant (M/s Ramky Enviro Engineers 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 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 Satyavathi Minderal and Metals Limited have proposed to establish a Titantium Dioxde Slag Plant – 100,000 TPA at Survey No's: 415,416, 428/2,429, 431,432/1, 433, 434 and 437 (part), Ramannapeta (Gudimetla) Village, Chandarlapadu Mandal, Krishna District, Andhra Pradesh. Total land requirement is 100.27 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.879 crores. Rs. 87.9 crores and Rs. 0.88 crores are earmarked towards capital cost and recurring cost/annum for pollution control measures.The product mix and bye-products details are as below:

Titanium Dioxide Slag - 100000 TPA	
Product mix	
Titanium dioxide slag (TiO_2 purity +85.4%)	32200 TPA
Synthetic Rutile (TiO_2 purity +95.5%)	30000 TPA
Pigment grade Titanium dioxide (TiO2 purity +99.5%)	30000 TPA
By-products	
Pig Iron	55000 TPA
$FeCl_2$	7000 TPA
Na_2SO_4 + Other Salts Predominately $FeSO_4$	39000 TPA
Un reacted Hydrochloric Acid and Sulphuric Acid is recycled back to the process	

Gudimetla Reserve Forests and Venkayapalem RF are located at 0.05 km South West and 2.15 km West of the project site respectively. The nearest river is Krishna River located at 1 km west of the project site. The power requirement is 20 MW which will be met from the A.P. Transco Limited. D.G.set of 3x1000 KVA will be used as stand by during power failure. The water requirement is 273 m^3/hr which will be sourced from Krishna river. The raw materials required for this project are: IImentite fines (1,80,000 TPA), Bituminuous/semi bituminous coal (60,000 TPA), Dolomite (1745 TPA), HCL (4375 TPA), NAOH (22440 TPA), H_2SO_4 (27060 TPA), Brine (8910 TPA), heating fluid (200 TPA) and sundry materials (under 1000TPA). The process route followed in the proposed project will be - Ilmenite pre-treatment i.e. pre-reduction of ilmenite fines in rotary kiln, cooling to 800^{O}C in rotary cooler followed by magnetic separation in a magnetic separator and Ilmenite up-gradation i.e. smelting of the hot pre-reduced magnetic fraction of ilmenite fines to produce titanium dioxide slag and pig iron. Further processing i.e. production of synthetic rutile from the leaching plant and production of pigment grade titanium dioxide via hydrothermal process from the pigment plant.

Boiler emissions will be passed through bag filter and vented through stack meeting CPCB standards. DG set is provided with stack meeting CPCB standards. Wastewater from auxiliary units will be collected in common holding basin and after necessary treatment in ETP used for slag cooling and gardening to attain zero discharge. Solid waste from titanium slag would be collected and stored separately in a storage yard & Un burnt or contaminated oil would be collected and stored in drums for disposal to authorized purchaser.

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. 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. Studies for titanium slag material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
18. Manufacturing process details all the plants should be included.
19. Mass balance for the raw material and products should be included.

20. Energy balance data for all the components should be incorporated.
21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
22. 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.
23. 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.
24. Vehicular pollution control and its management plan should be submitted.
25. A write up on use of high calorific hazardous wastes from all the sources and commitment regarding use of hazardous waste should be included.
26. 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.
27. 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.
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.
29. Air quality modeling for all the proposed plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm^3 should be included. Impact on the near by forests shall be assessed.
30. 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.
31. 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.
32. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
33. One season data for gaseous emissions other than monsoon season is necessary.

34. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer 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.
37. Ground water modelling showing the pathways of the pollutants should be included
38. Column leachate study for all types of stockpiles or waste disposal sites, at 20 ^{o}C-50 ^{o}C should be conducted and included.
39. 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.
40. 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.
41. A note on the impact of drawl of water on the nearby River during lean season.
42. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
43. 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.
44. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
45. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
46. 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.
47. 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.
48. 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.
49. 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.
50. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
51. 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.

52. 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.
53. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
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. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
56. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. 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. <u>Corporate Environment Policy</u>
    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. Total capital cost and recurring cost/annum for environmental pollution control measures.
61. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
62. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

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

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Andhra Pradesh Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

4.2.15 EC for the proposed green field cement plant with a capacity of 3.00 million tons per annum of clinker, 7.0 millions tons per annum of Blended Cement at Mogla village, Chitapur Taluk, Gulbarga District, Karnataka by M/s JSW Cement Ltd. - regarding TORs

The project authorities and 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 Terms of Reference 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.

M/s JSW Cement Limited have proposed to set up a Greenfield Cement Plant with a production capacity of 3.0 MTPA of Clinker and 7.0 MTPA of Cement at Mogla village, Chitapur taluka in Gulbarga district of Karnataka.

The land requirement for the project is 250.03 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.2036 crores. Rs. 260 crores and Rs. 53 crores are earmarked towards capital cost and recurring cost/annum for pollution control measures. Rs. 20 crores is earmarked for the CSR related activities. The water bodies located in the study area are Kagna river (4.5km), Benithora river (5.5km) and Ivni Halla stream (10km). The water requirement is 3500 m^3/day which will be sourced from Kagna river. The power requirement is 67 MW which will be met from the Gulbarga Electricity Supply company/Karnataka Power Transmission Corporation Limited. The raw materials required are Limestone, Bauxite, Iron Ore, Gypsum, Slag, Fly ash and Coal.

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. 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 the 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/KSPCB for recycling.

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 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/Nm^3 should be included. Cumulative impacts of cement plant, Captive Power Plant and mines located at a distance of 2.0 km on the ambient air quality shall be assessed.
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 ^oC-50 ^oC 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 Karnataka State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

4.2.16 Agrochemical manufacturing project (4000 MT/Year) at Plot No. Z-12/1 (SEZ-Part-1), Survey No.: 402/p, 404/p, 407/p, 417/p, 486/p, 487/p, 488, 489, 490, 491, 492/p, Dahej SEZ, Bharuch, Gujarat by M/s Indofil Industries Limited - regarding TORs

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

4.2.17 EC for the proposed 60 TPD stand alone clinker grinding unit by M/s Jai Cement Industries at Plot No. G-96-97, RIICO Industrial Area, Deeg, Tehsil Deeg, District Bharatpur in Rajasthan. - 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. The stand alone cement 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 and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s Jai Cement Industries proposed to establish a 60 TPD stand alone clinker grinding unit at Plot No. G-96-97, RIICO Industrial Area Deeg, Tehsil Deeg, District Bharatpur in Rajasthan. The land requirement for the project is 3000 m^2 (0.741 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.74 lakhs. Rs. 1.66 lakhs and Rs. 0.66 lakhs are earmarked towards capital cost and recurring cost/annum

for pollution control measures. The power requirement is 200 KVA which will be met from M/s Jaipu Vidyut Vitran Nigam Limited. The water bodies located in the study area is Sawan Bhadon Bhawan which is 3 km from the project site. The water requirement is 3 m^3/day which will be met from RIICO water supply. The raw materials required are Clinker, Gypsum and Fly ash.

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 unit 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/Nm^3 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. <u>Corporate Environment Policy</u>
    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 Rajasthan Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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

4.2.18 EC for the proposed Integrated Steel Plant and Power Plant, located at Village: Tilai & Murpar, Tehsil: Akaltara, Distt. Janjgir-Champa, Chhatisgarh by M/s Sarda Energy & Minerals Ltd. - regarding TORs.

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

4.2.19 EC for proposed project to manufacture PVC stabilizers, Metalloic Stearate and specialty polymer Additives at Plot No. 2816, GIDC Notified Area, Sarigam, Taluka Umargam, District Valsad, Gujarat by M/s Kalpataru Organics Pvt. Ltd. - regarding TORs.

The project authorities and their consultant (M/s Unistar Environment and Research Labs Pvt Limited, Vapi) 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'. 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. Kalpataru Organics Pvt. Ltd. have proposed to manufacture PVC stabilizers, Metallic Stearate and specialty polymer Additives (10250 MTPM) at Plot No. 2186, GIDC Notified Area, Sarigam, Taluka Umargam, District Valsad, Gujarat. Total land requirement is 25227 m^2 (6.27 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.9 crores. Rs. 30 lakhs and Rs. 14.5 lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures.The products details are as below:

S.No.	Name of the products	Production capacity (MTPM)
1.	PVC Stabilizers (Di basic lead phathalate, Neutral lead Stearate, Basic Lead Stearate, One Pack Stabilizers-Flakes etc)	1900.00
2.	Metallic Octoates & Naphthanates	1000.00
3.	Metallic Stearates	1000.00
4.	EpoxidisedSoyabean Oil	750.00
5.	Plasticizers (DI Butyl Phthalate, Di OctylAdipate, DI Octyl Sebacate, Polymeric Plasticizer, Benzoate)	1000.00
6.	Organic Esters (Butyl Stearate, Octyl Stearate, Stearyl Stearate, Glycerol Mono Stearate, Butyl Oleate)	500.00
7.	PVC Stabilizers (by mixing, blending and packaging)	1000.00
8.	Formulated waxes (by mixing, blending and packaging)	300.00
9.	PVC Compounds (by mixing, blending and packaging)	500.00
10.	Flame Retardants (by mixing, blending and packaging)	300.00
11.	Inorganic products (Litharge, Zinc Borate, Tri basic lead Sulphate , Di basic Lead Phosphite)	2000.00
	Total	**10250.00**

The power requirement is 700 KVA which will be met from the Dakshin Gujarat Vij Co. Limited. The water requirement is 155 m^3/day which will be sourced from GIDC water supply. The raw materials required are PVC stabilizers, Metallic Octoates, Metallic stearates, Soya bean oil, plasticizers, organic esters, formulated waxes, flame retardants and inorganic products.

To control the air emissions, adequate stack height will be provided. To control the fugitive emissions during manufacturing activities the fume extraction system followed by water scrubber will be provided. The waste water generation is 57 m^3/day and will be treated in adequate effluent treatment plant and will be discharged into underground drain and finally to the Arabian Sea. The ETP waste will be sent to will be sent to TSDF through SWEMCL, Sarigam for SLF. The used oil and spent oil shall 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 the syenthetic chemicals unit 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 proposed for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm^3 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. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.

33. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1;10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
34. 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.
35. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
36. 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.
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 & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
39. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
40. 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.

41. <u>Corporate Environment Policy</u>
    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.
42. 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.
43. Total capital cost and recurring cost/annum for environmental pollution control measures.
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.

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.

4.2.20 EC for proposed expansion project to manufacture synthetic organic compounds at Plot No. C1B/3226 & 3227, notified industrial estate, GIDC Sarigam, Distt Valsad, State Gujarat, GIDC Notified Area, Sarigam, Taluka Umargam, District Valsadm Gujarat By M/s Krishna Industries.- regarding TORs.

The project authorities and their consultant (M/s Unistar Environment and Research Labs Pvt Limited, Vapi) 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'. 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. Krishna Industries proposed to expand the manufacturing of synthetic organic compounds at Plot. No. C1B/3226 & 3227, notified industrial estate, GIDC Sarigam, Di: Valsad, State: Gujarat. Total land requirement is 1634 m^2 (0.40 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.1.05 crores. Rs. 15 lakhs and Rs. 11 lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures.The products details are as below:

S.No.	Name of the product	Existing (TPM)	Proposed (TPM)	Total (TPM)
1	Di Calcium Phosphate	20.00	0.00	20.00
2	DCP based formulation products	30.00	0.00	30.00
3	Organic Azo Pigments (Red, Yellow, Orange)	0.00	100.00	100.00
4	Synthetic Organic Dyes Direct Yellow, Direct Red, Direct Brown, Direct Orange, Direct Violet, Direct Black, Direct Blue, Direct Green, Acid Yellow, Acid Orange, Acid Red, Acid Brown, Acid Black, Acid Blue)	0.00	25.00	25.00
	Total	**50.00**	**125.00**	**175.00**

The power requirement is 100 KVA which will be met from the Dakshin Gujarat Vij Co. Limited. The water requirement is 150.90 m^3/day which will be sourced from GIDC water supply. The raw materials required are organic red pigment, organic yellow pigment, organic orange pigment and synthetic organic dyes.

To control the air emissions, adequate stack height will be provided. To control the fugitive emission during manufacturing activities the fume extraction system followed by water scrubber will be provided. The waste water generation is 135.50 m^3/day and will be treated in adequate effluent treatment plant. The ETP waste will be sent to will be sent to TSDF through SWEMCL, Sarigam for SLF. The used oil and spent oil shall 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. 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 syenthetic 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/Nm^3 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 heath 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 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. 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.

4.2.21 Chemical Manufacturing Unit (Chlorinated Parafin Plasticzer) Chlorinated Paraffin (19200 MTA) and Hydrochloric Acid (38400 MTA) at PACL Campus, Naya Nangal, District Ropar, Punjab-140125 by M/s Flow Tech Chemicals Pvt. Ltd.- regarding TORs.

The project authorities and 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 Reference for preparation of EIA/EMP report. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A'. and appraised at Central level.

M/s Flow Tech Chemicals Pvt. Ltd have proposed to manufacure Chlorinated Paraffin (19200 MTA) and Hydrochloric Acid (38400 MTPA) at Punjab Alkalies & Chemicals Limited (PACL) Campus, Industrial Area, Naya Nangal, District Ropar, Punjab. Total land requirement is 12,000 m^2 (2.96 acres). Green belt will be developed in 4200 m^2 of the area. 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.47.50 lakhs. Rs. 8 lakhs and Rs. 1 lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures.The products details are as below:

S.No.	Name of the product	Total (MTPA)
1	Chlorinated Paraffin	19200
2	Hydrochloric Acid	38400

The power requirement is 200 KWH which will be met from the Punjab State Power Corporation Limited. D.G. set of 100 KVA will be used as a stand by arrangement. The water requirement is 90 m^3/day which will be sourced from tube well. The raw materials required are liquid chlorine, water and epoxy plasticizers.

To control the air emissions, adequate stack height will be provided. Chlorine sensing device will be installed in CP plant for sensing concentration of chlorine gas in ambient air. All workers shall be provided with Personal Protection equipment like Face Mask, gum boots, helmets, ear plugs, goggles & first aid box. The wastewater generated will be treated in the Effluent Treatment Plant. The used oil and spent oil shall 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 the syenthetic chemicals unit 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 proposed for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm^3 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. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
33. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1;10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
34. 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.
35. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
36. 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.
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 & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
39. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
40. 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.
41. <u>Corporate Environment Policy</u>
    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.

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

4.2.22 EC for Proposed Bulk Drugs unit at Village Phirour, District Fatehgarh Sahib, Punjab by M/s Viva Drugs 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 Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) of the EIA notification 2006 under category 'A' and appraised at Central level.

M/s. Viva Drugs Private Limited proposed to expand the manufacturing of bulk drugs at Village Phirour, District Fatehgarh Sahib, Punjab. Total land requirement is 2.2 acres. 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.3.5 crores. Existing plant is a solvent formulation unit for manufacturing tablets and capsules and now the company is going for backward integration for manufacturing bulk drugs and intermediates with a capapcity of 15-20 TPA. The products details are as below:

Name of the products	**Total (TPA)**
• Atenolol, • Atorvastatin calcium, • Diclofenac sodium • Mefenamic acid • Losartan Potassium • Clopidogrel bisulfate • Fexofenadine HCl • Terbinafine hydrochloride & Fluconazole • Nitazoxanide	15-20

The power requirement is 100KVA which will be met from the Punjab Power Corporation Limited. The industrial water demand for the proposed expansion will be 22.0 KLD and domestic water demand will be 4.0 KLD.

To control the air emissions, adequate stack height will be provided. To control the fugitive emissions during manufacturing activities the fume extraction system followed by water scrubber will be provided. The waste water generated will be treated in adequate effluent treatment plant. The used oil and spent oil shall 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 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 syenthetic 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/Nm^3 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 solid/hazardous waste generation, storage, utilization and disposal should be covered.
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. 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 heath 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 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 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.

4.2.23 EC for proposed 45 KLPD molasses based distillery and 18 MW co-generation Power Plant at Village: Mangrul, District Yavatmal Maharashtra by M/s Deccan Sugar 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.

4.2.24 EC for Proposed expansion Production Capacity for the Manufacturing of Resins at Village Mahiyal, District Sabarkanta, Gujarat by M/s Sterling Iam Ltd. - regarding TORs.

The project authorities and their consultant (M/s Anand Consultants) 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 outside the notified industrial area/estate are listed at S.N. 5(f) of the EIA Notiifcation, 2006 under category 'A' and appraised at Central level.

M/s Sterling Iam Ltd have proposed to expand its manufacturing unit by producing Urea Formaldehyde Resin and Melamine Urea Formaldehyde Resin at Block No. 123, Ujedia Road, Village: Mahiyal, Taluka: Talod, District: Sabarkantha-383 215, Gujarat. Total land requirement is 3.63 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.37 lakhs. Rs. 19 lakhs and Rs. 16.67 lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures.The products details are as below:

S.No.	Name of the product	Existing (MT/Month)	Proposed (MT/Month)	Total (MT/Month)
1	Melamine Urea Formaldehyde Resin	--	200	200
2	Melamine Formaldehyde Resin	200	100	300
3	Phenol Formaldehyde Resin	200	800	1000
4	Urea Formaldehyde Resin	--	1000	1000

The power requirement is 275 KVA which will be met from the Uttar Gujarat Vij Company Limited. The industrial water demand for the proposed expansion will be 43.7 m^3/d which will be met from bore well. The wastewater generation is 6.16 m^3/d.

To control the air emissions, adequate stack height will be provided. The waste water generation will be treated in adequate effluent treatment plant. The used oil and spent oil shall 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 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 syenthetic 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/Nm^3 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 heath 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 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 (QCl) / 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.

4.2.25 Expansion of Fe-Mn Plant from 0.0504 MTPA to 0.06 MTPA, Sinter Plant – 0.06 MTPA, at Joda, District Keonjhar Odisha by M/s TATA Steel Ltd. – for revised TORs.

The above proposal was considered by the Expert Appraisal Committee-1 (Industry) in its 32nd meeting held on 27th - 28th January, 2012 and the ToR was accorded by the Ministry vide letter no. J-11011/3/2012-IA-II(I) dated 14th February, 2012 for the manufacturing of following products:

S.No.	Products	Capacity (MTPA)		
		Existing	Proposed	Total
1	Fe- Mn Plant	1x9MVA Submerged Arc Furnace	1x9MVA furnace transformer will be replaced by 1x10 MVA furnace transformer	1 x10 MVA
		1x15MVA (0.0504 MTPA)	1x15MVA (0.076 MTPA)	1x15MVA (0.076 MTPA)

S.No.	Products	Capacity (MTPA)		
		Existing	Proposed	Total
2	Mn-Sinter	--	0.030 MTPA	0.030 MTPA

Now, project proponent desired following amendment in the product mix:

S.No.	Products	Capacity (MTPA)		
		Existing	Proposed	Total
1.	Fe- Mn Plant	1x9MVA	1x9MVA furnace transformer will be replaced by 1x12 MVA furnace transformer	1 x12 MVA
		1x15MVA (0.0504 MTPA)	1x15MVA (0.060MTPA)	1x15MVA (0.060MTPA)
2.	Mn-Sinter	--	0.050 MTPA	0.050 MTPA
3.	Si- Mn	--	New 2 x 18 MVA furnace (0.06 MTPA)	2 x 18 MVA furnace (0.06 MTPA)

The Committee recommended the project for the amendment in the product mix as mentioned above with the following additional ToRs:

i. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
ii. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included
iii. 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.
iv. 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.
v. Corporate Environment Policy
    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.

vi. 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 heath 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.

4.2.26 E.C. for Proposed surface production facilities – Two Nos in CB-ONN-2003/2 at District Bharuch, Gujarat by M/s Gujarat State Petroleum Corporation Ltd-regarding TORs

The project authorities and their consultant (M/s Detox Corporation 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 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 facilties – Two Nos in CB ONN-2003/2 block at Bharuch District, Gujarat. The block falls in Ankleshwar, Jhagadia, Hansot, Valia and Vagra Talukas. GSPC has obtained the Environmental Clearance for drilling of total 24 wells in CB ONN-2003/2 block vide MoEF letter No. J-11011/180/2008-IAII (I) dated 8th September 2008. Public Hearing for the block was conducted on 17th January 2008 at Bharuch. Out of the 24 wells, M/s GSPC has drilled 15 wells.

The proposed two surface facilties falls in (Ank #21 and Ank# 40S) Ankleshwar Taluka of Bharuch district. The details of these two surface facilties 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/Longtitude	Survey No	Location	Area	Production
1.	ANK#21:SURFACE PRODUCTION FACILITY	Latitude : 21°39'6.07"N Longitude : 72º59'44.05" E	85/2	Diwi village, Bharuch district	18256 m^2	Crude oil: 3-5 SCM/day, Water: 1-3 SCM/day and Gas: 90-150 SCM/day
2.	ANK#40	Latitude :	99/3,	Diwa	21686	Crude oil

S.No.	Facility name	Latitude/Longtitude	Survey No	Location	Area	Production
	S:SURFACE PRODUCTION FACILITY	21°38'15"N Longitude : 72º58'8.2" E	100/1, 100/2, 100/4, 102/2, 269	village, Bharuch district	m^2	:6-7 SCM /day, Water: 3-4 SCM/day and Gas: 180-200 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 ANK#21 and ANK#40 production facility as a stand by 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 ANK#21 and ANK#40 is 1.05-3.05 KLD and 3.05-4.05 KLD respectively. The oily cotton waste will be dispoed 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 existing and proposed plant 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 alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
12. Project site location alongwith 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 alongwith the production capacities.
17. Detailed list of raw material 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 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 PM_{10}, SO_2, NOx 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 alongwith 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. 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. 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.

4.3.0 Any Other Item

4.3.1 EC for Sponge Iron Plant (16,500 TPA to 99,000 TPA) and installation of Ferro Alloy Plant (2 X 6 MVA; 30,000 TPA) and Captive Power Plant (15 MW; 7.5 MW CFBC) at village Sankara, Bhumaria, Tehsil Simga; P.O. Tilda, District Raipur, Chhattisgarh by M/s Uday Sponge & Power Private Ltd. reg. extension of validity of TOR.

Terms of Reference to the above proposal was accorded by MoEF vide letter no. J-11011/145/2010-IA II (I) dated 19.7.2010. The Project Propenent (PP) vide letter dated 7.7.2012 requested MoEF for extension of validity of ToR by a period up to three years. The PP also made a presentation before the Committee.

It was submitted by the proponent that the Public Consultation was delayed by Chhatisgarh Environment Conservation Board (CECB) as CECB are not considering the proposal of expansion of Sponge Iron Plant in that area.

After detailed deliberations, the committee recommended for the extension of validityof TOR by a period of one year w.e.f from 19.7.2012 subject to the specific and general environmental conditions.

4.3.2 Grass Root Refinery Cum Petrochemical Complex of 15 MMTPA for unloading Crude Oil at Dist. Cuttack, Orissa by M/s IOCL. - regarding extension of validity of EC.

Environmental Clearance to the above proposal was accorded by MoEF vide letter no. J-11011/70/2007-IA II (I) dated 6.7.2007. The PP vide letter dated 25.6.2012 requested MoEF for extension of validity of EC for another term. 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 commissioning of the refinery.

i. Modification in Front End Engineering Design (FEED) due to deferment of petrochemicals
ii. Delay in construction of CPP by BHEL
iii. Interim stay imposed by the Hon'ble Odisha High Court on construction activities at Haldia-Patha area on Mahanadi
iv. Delay in getting clearance on ROW for laying raw water pipeline in Cuttack
v. Delay in supply of crtical equipment, pipe fittings & flanges from required vendors
vi. Unfavorable law and order situation at Paradip site
vii. Shortage of skilled manpower for construction at the Paradip site
viii. Delay in receipt of forest clearance for South Jetty
ix. Delay in receipt of Forest Clearance for coastal raod cum surge protection

After detailed deliberations, the committee recommended for the extension of validityof EC by a period of five years w.e.f from 6.7.2012 subject to the specific and general environmental conditions.

4.3.3 Proposed Steel and Power Plant at Village Kesda, Tehsil Simga, District Raipur in Chattisgarh by M/s Krishna Iron Steel & Power Pvt. Ltd. - regarding extension of validity of TOR.

Terms of Reference to the above proposal was accorded by MoEF videletter no. J-11011/510/2010-IA II (I) dated 15.12.2010. The PP vide letter dated 4.10.2012 requested MoEF for extension of validity of ToR by a period up to two years. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the reasons for seeking extension of validity of ToR:

i. Total land proposed in ToR was 70.2 acres duly considering the future expansion.
ii. Presently, 39.75 acres of land is in possession of the management and same is adequate for the establishment of the proposed project.
iii. Khasra nos. of 39.75 acres of land are 409, 411, 412/1, 412/2, 413, 415, 416, 417, 418, 419, 420, 422, 423, 424, 425/1, 425/2, 426, 427, 428, 429, 430, 431, 432, 436, 438, 446, 447, 449/2, 449/3, 451, 455, 759, 766, 790/1.
iv. Presently the file for Public consultation is pending with Regional Office of Chattisgarh Energy Conservation Board (CECB), Raipur,

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year w.e.f from 15.12.2012 subject to the specific and general environmental conditions and the land for the proposed project will be 39.75 acres instead of 70.2 acres.

4.3.4 Proposed 100 MVA (1,65,000 MTPA) capacity High Carbon Ferro Chrome Plant at Village Kolathapanji, PS Gurudhijhatia, Tehsil Athagarh, District Cuttack in Orissa by M/s Cronimet Alloys India Ltd - regarding extension of validity of TOR.

Terms of Reference to the above proposal was accorded by MoEF vide letter no. J-11011/544/2010-IA II (I) dated 29.12.2010. The PP vide letter dated 9.10.2012 requested MoEF for extension of validity of ToR by a period up to one year. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the reasons for seeking extension of validity of ToR:

i. Public Hearing could not be held on the scheduled date of 3.12.2011 due to Panchayat Raj Elections.
ii. The 2nd rescheduled Public Hearing could not be conducted on 30.3.2012 as the Collector, Cuttack deferred the Public Hearing stating the reason as "*more participation of panchayat raj institutions and villages required".*
iii. The 3rd rescheduled Public Hearing could not be conducted on 27.6.2012 due to prevailing Law and Order situation in the locality.
iv. Revised Public Hearing dated is yet to be finalized by the Odishs State Pollution Control Board.

Further, the PP submitted that the company name has changed from M/s Cronimet Alloys India Limited to M/s Metkore Alloys and Industries Limited. To this effect, the PP submiited the certificate obtained from Registrar of Companies, Andhra Pradesh.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year w.e.f from 29.12.2012 subject to the specific and general environmental conditions and the name of the company in the ToR letter shall be mentioned as M/s Metkore Alloys and Industries Limited.

4.3.5 Exploratory Drilling (on-land) in Cambay Oil and Gas Exploration (On-land) CB-ONN-2009/5 in Ahmedabad & Mehsana, Gujarat by M/s National Thermal Power Corporation Ltd – regarding extension of Validity of TOR.

Terms of Reference to the above proposal was accorded by MoEF videletter no. J-11011/446/2010-IA II (I) dated 15.12.2010. The PP vide letter dated 29.11.2012 requested MoEF for extension of validity of ToR by a period up to one year. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the reasons for seeking extension of validity of ToR:

i. Draft EIA report for the proposed project has been prepared and submitted to Gujarat Pollution Control Board for conducting Public Hearing
ii. Ahmedabad Public Hearing was conducted on 14.9.2012.
iii. Mehsana Public Hearing was proposed on 5.10.2012 and 20.11.2012, but due to Acharsahinta (Election) PH was postponed by the District Collector.
iv. GPCB informed that PH can be conducted after extension of validity of ToR.

After detailed deliberations, the committee recommended for the extension of validityof TOR for a period of one year w.e.f from 15.12.2012 subject to the specific and general environmental conditions.

4.3.6 Proposed Integrated Cement Plant – Clinker 2.4 MTPA, Cement 4.0 MTPA, CPP 44 MW, Waste Heat Recovery Power Generation 10MW along with Limestone Mine (283.585ha, 3.6MTPA) at village Kachavaram & Inuparajupalli, Mandal Karempudi. District Guntur in Andhra Pradesh by M/s Shree Cement Limited - - regarding extension of validity of TOR.

Terms of Reference to the above proposal was accorded by MoEF vide letter no. J-11011/563/2010-IA II (I) dated 31.12.2010. The PP vide letter dated 20.11.2012 requested MoEF for extension of validity of ToR by a period up to one year with a increase of waste heat power generation from 10 to 20 MWH and to mention the survey number in the ToR letter for conduct of Public Hearing. The PP also made a presentation before the Committee.

It was submitted by the proponent that the Public Hearing could not be conducted because of the PH docuements were not accepted by the Regional Officer, Gantur, Andhra Pradesh Pollution Control Board due to unavalibility of land documents and survey number not mentioned in the ToR letter. The survey number details submiited by the proponent is given below:

S.No.	Facility	Total land (ha)	Survey Nos

1.	Integrated Cement Plant [Clinker: 2.4MTPA, Cement: 4MTPA, CPP: 44MW, Waste Heat Recovery Power Generation: 10 MW]	100.49	645-647, 650, 652-658, 898-902, 910-920, 922-925, 930-946, 963
2.	Limestone Mine [3.6MTPA]	283.585	677-682, 699-721, 724-731, 734-735, 741-752, 755-756, 759-762, 764, 861, 863-867, 871-898, 905-907, 977-1006, 1008, 1010-1025, 1038-1041, 1048
3.	Residential Colony	42.30	660-665, 691-694, 696, 699-702,876-877, 896.

After detailed deliberations, the Committee recommended for the extension of validity of TOR for a period of one year w.e.f from 31.12.2012 subject to the specific and general environmental conditions. The Committee also recommended for the following amendment in the ToR:

- Waste heat power generation capacity shall be mentioned as 20 MW instead of 10 MW
- Survey number for plant, mine and residential colony shall be specified.

4.3.7 Alumina Refinery (1.5MTPA), Smelter Plant (2,50,000TPA) along with Captive Power Plant (90MW) at Mandal Makavarapallem, District Vishakapatnam, Andhra Pradesh by M/s Anrak Aluminum Limited (AAI) – Amendment in Environmental Clearance regarding.

Environmental Clearance to the above proposal was accorded by MoEF vide letter no. J-11011/813/2007-IA II (I) dated 16.10.2008. The PP vide letter dated 31.12.2012 requested MoEF for the amendment in the EC conditions. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the amendments proposed by them:

Approved capacity as per the EC dated 16.8.2008	Amendment sought
Steam Boilers: 3 x 160 TPH Boilers (Fuel: Indian Coal/ Coke) Cogeneration power: 90MW	Steam Boilers: 3x315 TPH Boilers (- 2 operating + 1 Standby) (Fuel: 70% Imported Coal + 30% Pet Coke) Cogeneration power Mode A - Refinery in operation: 90 -150 MW Mode B – Refinery not in operation: 150 MW

AAL submitted that the project is through by 90% and is expected to be commissioned in couple of months. The application for Consent for Operation was already submitted to the

Andhra Pradesh Pollution Control Board. AAL informed that there is no increase in pollution load due to the aforesaid proposed amendment.

AAL submitted that the total steam requirement for the process is 600 TPH, which they will not be able to meet with the proposed boilers of 3x160 TPH. Now, AAL proposed to install 3x315 TPH boilers, with 2 boilers running any time and one as stand by. The stand by boiler is essential because each of the Operating Boiler is required to be out for a month every year for statutory inspection and also for any break down etc., which the process cannot take suddenly for a long time. Each boiler can produce 75 MW of power generation in power mode which the refinery is in non/ contained operations. AAL also proposed to change their fuel configuration with 70 % pet coke and 30% imported coal. Lime injection has been proposed, so that minimum 90% Sulphurdioxide is captured and the SO_2 emission levels are reduced. The comparison of the emission levels for the EC accorded and present proposal is as below.

Details	Accorded in EC dated 16.10.2008	Amendment/Corrigendum of EC requested
Fuel	Indian Coal/Coke	Blend Fuel (70 % Pet Coke + 30 % Imported Coal)
Carbon %	36.20	79.08
Hydrogen %	1.70	3.19
Oxygen %	6.00	3.07
Sulphur %	0.50	4.31
Nitrogen %	0.60	0.80
Moisture %	10.00	4.18
Ash %	40.00	5.32
GCV (kcal/kg)	3500	7400.00
Fuel Consumption, t/day	1542	1168 743 t/day (pet coke)+424 t/day (imported coal
Stack Height, m	105	105
Stack Dia, m	3	3.0
Flue gas temperature, ^oC	150	150
Flue gas Velocity, m/sec	25	24
Particulate Matter, gm/sec	5.99	5.88
Sulphur Dioxide, gm/sec	214	11.65 (with capture efficiency of 90%)
Oxides of Nitrogen, gm/sec	44.9	44.1

The water requirement of the plant will remain same as per the permitted water balance based on which EC was accorded. This is because of return of recovery of 90 % of the steam as “Good Quality” condensate to the Co-Gen Plant and increase of Cycles of Concentration of condensate cooling water. The plant adopts a “Zero Discharge” concept, almost more than 80% of the waste water generated would be used back in the Alumina Refinery with the rest being used for dust suppression &Green Belt. There is no “Hazardous waste” generated in the Alumina Refinery. Fly Ash, Bottom Ash from the Co-Gen Plant and Red Mud from the Alumina Refinery are the major solid waste generated. The fly ash and bottom ash would be used in Cement Plants for which necessary arrangements have already been made. Regarding Red Mud, AAL introduces the “Pressure filtration” technology and intend to dry the mud to 75% solids (< 25% moisture), so that it can be comfortably transported and immediately used in the

Cement Grinding units as it is a good substitute for the "Laterite + Bauxite+ Iron Ore" combination used in the Cement Plant.

After detailed deliberations, the Committee recommended for the amendment in the EC as referred above subject to compliance of the specific and general environmental conditions.

4.3.8 Expansion cum modernization in Paper & Paper Board from 1,20,000 TPA to 2,60,000 TPA and Pulp from 1,10,000 BDTPA (bone dry tones per annum) to 2,00,000 BDTPA and CPP from 20 MW to 55 MW by replacement of some of the old machineries within existing mill area at Village Chandili, District Rayagada, Orissa by M/s J K Paper Limited regarding Amendment in EC.

Environmental Clearance to the above proposal was accorded by MoEF vide letter no. J-11011/172/2010-IA II (I) dated 20.4.2011. The PP vide letter dated 11.08.2012 requested MoEF for the amendment in the EC conditions. The PP also made a presentation before the Committee.

It was submitted by the proponent following are the amendments proposed by them:

Product	Unit	Accorded in EC dated 20.4.2011	Amendment requested
Paper/Board	TPA	2,60,000	3,00,000
Chemical hardwood pulp	BD TPA	2,00,000	2,20,000
Water drawl	m^3/day	31,960	40,000
Power	MW	55	55

It was submitted by the PP that after long technical discussions with technology suppliers, testing of the company's raw material in their laboratories and taking reference of similar technology running at other places in India and abroad with similar raw material, the company finalized the technology with higher cooked pulp yield with same chemicals and raw material consumption. The Guaranteed yield committed by the equipment & technology supplier is 47%. Based on the increased pulp yield, pulp production that can be made with same raw material has been re-evaluated. It is estimated that with same quantity of Raw Material (566667 ADMT), as projected in EIA report during environmental clearance dated 20.4.2011, the PP is able to produce 220,000 BDTA pulp per annum, 20,000 more than planned, with the same amount of chemicals consumption as previously estimated.

No additional area will be acquired. Greenbelt will comprise of approximately 40% of the total area. The total cost of the project has increased from Rs. 1424 crores in 2010-11 to Rs. 1653 crores at present due to cost escalation, even though no new machinery or infrastructure is proposed. The capital and recurring cost towards environment protection measures envisaged during earlier environmental clearance was Rs. 323.5 crores, which shall remain unchanged. Due to the increased pulp production, the water drawl is increased from 31,960 m^3/day to 40,000 m^3/day. This increase in water consumption is with in the permission available with the proponent.

The PP submitted that there will be no change in Raw Material & chemicals consumption to produce more pulp, therefore there will be no increase in pollution load. However, increase in water consumption will result in increasing in overall effluent volume. Effluent volume will increase from 25194 m^3/day to 34000 m^3/day. The effluent will be treated in the Effluent Treatment Plant and the treated effluent will be used for sprinkling, gardening and plantations.

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

9th January, 2013

4.4.0 Consideration of the Projects:

4.4.1. **Expansion of Bulk Drug Unit (2551.5 MTPA to 3322.0 MTPA) at Village Sejavta, District Ratlam, M.P. by M/s Ipca Laboratories Ltd. - regarding EC.**

The project authorities and their consultant (J.M. Environet (P) Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 24th and 30th Meetings of the Expert Appraisal Committee (Industry) held during 22nd-23rd June, 2011 and 15th-16th December, 2011 respectively for preparation of EIA/EMP report. All the Synthetic Organic Chemical located outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level. The Committee exempted proposed project from public hearing as per 7(ii) of EIA Notification, 2006 as public hearing for the existing unit was carried out on 24th October, 2007 as per EIA Notification, 2006.

M/s IPCA Laboratories Limited has proposed for expansion of Bulk Drugs Unit at Village Sejavata, Tehsil Ratlam, District Ratlam, Madhya Pradesh. Jammar River and Kurel River are located at a distance of 7.5 Km and 9.5 Km respectively. No reserve forests/wildlife Sanctuary/protected forests are located within 10 Km. Sambharkho protected forest is located at a distance of 9.5 Km. Total existing plant area is 40.47 ha. and no additional land is required for the proposed project. Total project cost is Rs. 221.65 Crore. Rs. 16.0 Crore and Rs. 5.6 Crore are earmarked towards capital cost and recurring cost per annum for pollution control measures. Following products will be manufactured:

S. N.	Products	Existing Capacity	Additional Capacity	Total
Bulk Drugs				
1	Synthetic Drug API (TPA)	2551.5	670.5	3222
Formulations				
2	Tablets (Million Nos. /Year)	800	1300	2100
3	Injections (Million Nos. /Year)	20	Nil	20
4	Liquid Orals (KL/Year)	2500	800	3300
5	Dry Syrup (Million Nos. /Year)	Nil	1.5	1.5
6	Ointment (TPA)	Nil	150	150
R&D Products				

7	R & D Products (TPA)	Nil	05	05
Steroids & Hormones				
8	Steroids & Hormonal products (TPA)	Nil	41.391	41.391

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during October 2011- December 2011 and submitted baseline data indicates range of PM_{10} (44.6–80.2 ug/m^3), $PM_{2.5}$ (16.8–36.3 ug/m^3), SO_2 (5.9 – 9.7 ug/m^3) and NO_2 (10.20-24.3 ug/m^3). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed expansion is 0.60 µg/m^3 for SPM. The resultant GLCs are within the NAAQS.

Scrubbers (10 nos.) have been provided to the process vents. Venturi scrubbers with caustic solution have been provided to process vent to control HCl emissions. All the reactor vessels are connected with primary and secondary condenser with circulation of brine and chilling in order to prevent emission of volatile solvent. Multi-cyclone is provided to the existing boiler. Fresh water requirement will be increased from 1050 m^3/day to 1475 m^3/day. Permission for ground water abstraction of 786 m^3/day water is obtained from CGWA vide letter no. 21-4(27)/NCR/CGWA/2008 dated 26th November, 2008 is submitted and balance 800 m^3/day water will be sourced from municipal supply. Industrial wastewater generation will be increased from 525 m^3/day to 620 m^3/day after expansion. Existing effluent treatment plant is based on primary treatment, secondary treatment and tertiary treatment facilities including RO. Now, project proponent has proposed to segregate the industrial effluent based on High TDS/COD and Low TDS/COD effluent streams. Out of which, high TDS/COD effluent stream (80 m3/day) will be treated through steam stripper followed by multiple effect evaporator (MEE). Low TDS/COD effluent stream (540 m^3/day) will be treated in ETP followed by RO. Domestic effluent (140 m^3/day) will be treated in STP. Bottom and fly ash is being sent to brick manufacturing unit. Spent caustic and spent scid will be sold as by product. Incinerator ash, evaporation salt and ETP sludge will be sent to Madhya Pradesh Waste Management Project, Pitampura. Spent oil and spent catalyst will be sent to authorized recyclers. Spent organic solvents will be incinerated. Greenbelt will be developed in 14.76 ha. DG sets (3 x 1000 KVA + 1x395 KVA) have been installed in the existing premises. DG sets (1x1600 KVA + 1 x 1000 KVA) will be installed additional as standby arrangement. Coal (50 TPD), pet coke (35 TPD), LSHS/FO (800 LPD), LDO (1000 LPD) and HSD (600 LPD) will be used as fuel.

The Committee deliberated upon the compliance status report dated 17th December, 2012 submitted by the Ministry's Regional Office at Bhopal on the conditions stipulated in the existing environmental clearance. It was noted that the Company has full-fledge ETP with 495 KLD. Treated water is utilized for in-house gardening/horticulture purpose. Zero discharge is maintained with the help of reverse osmosis and evaporation plants. Solvent is recovered upto 95 %. Secondary condensers are provided with chilled brine solution. Sensor for VOC monitoring were not installed. However, the project proponent ensured that sensor for VOC monitoring will be installed. Project proponent also committed that online AAQMS will be installed shortly. Project proponent also committed to upload the compliance report on the website. The Committee was satisfied with the response of the project proponent.

After deliberations, the Committee desired following additional information:

1. 20 m distance to be maintained from high tension wire line.
2. Revised greenbelt layout plan.
3. Evacuation plan for the existing and proposed to be submitted.
4. Project proponent has to submit time frame for following:
    a). Installation of sensor for VOC monitoring.
    b). Installation of online ambient air quality monitoring station.
    c). Uploading of six monthly compliance report.

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

4.4.2. Expansion of Fertilizer Plant at Sy. No. 20/4 K.M. Stone, Indore-Ujjain Road, Dharampuri, Village Rajoda, Tehsil Sanwer, District Indore, Madhya Pradesh by **M/s Rama Phosphotes Ltd. - regarding EC.**

The project authorities and their consultant (Enkay Enviro Services) 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 19th–20th August, 2010 for preparation of EIA/EMP. All the Chemical Fertilizer Plants excluding SSP are listed at S.N. 5(a) as per EIA Notification dated 14th September, 2006 and 1st December, 2009 under Category 'A' and appraised at the Central level.

M/s Rama Phosphates Ltd. have proposed for the expansion of Fertilizer Plant at # 20/4 K.M. Stone, Indore-Ujjain Road, (Dharampuri) Village Rajoda, Tehsil Sanwer, Indore, Madhya Pradesh. Total plant area is 88,505 m^2. Proposed expansion will be carried out in the existing campus and no additional land will be required. No national park/wildlife sanctuary/ reserve forest is located within 10 km from the project site. Khan River is located at a distance of 5 km. Total cost of the project for expansion is Rs. 18 Crore. Rs. 2.90 Crore and Rs. 0.30 Crore are earmarked towards capital cost and recurring cost/annum for pollution control measure. Following products will be manufactured:

S.N.	Items	Existing Capacity (TPA)	Proposed Capacity (TPA)	Total Capacity (TPA)
1.	Single Super Phosphate	1,50.000	1,00,000	2,50,000
2.	Sulphuric Acid	1,00,000	--	1,00,000
3.	NPK	-	60,000	60,000
4.	GSSP	-	2,50,000	2,50,000
5.	Sulphur D.P. (85%)	--	5,000	5,000
6.	Borometed SSP	--	25,000	25,000
	TOTAL	**--**	**--**	**6,90,000**

Rock phosphate (1,40,000 MTPA) will be sourced from Rajasthan State Mines & Minerals, Udaipur. Sulphur will be purchased from petroleum producing companies. Boron will be imported from Argentina. Sulphuric acid manufacturing is based on the double conversion & double absorption contact process known as DCDA process.

Ambient air quality monitoring was carried out at 7 locations during Post monsoon season 2011 and submitted baseline data indicates that ranges of concentrations of PM_{10} (38.9 µg/m^3 to 81.5 µg/m^3), $PM_{2.5}$(19.3 µg/m^3 to 40.5 µg/m^3), SO_2(4.6 µg/m^3 to 9.9 µg/m^3) and

NO_x(10.8 µg/m^3 to 19.6 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 12.2 µg/m^3, 10.9 µg/m^3 and 7.8 µg/m^3 with respect to PM_{10}, SO_2 and NO_x respectively. The resultant concentrations are within the NAAQS. Cyclone, dust collector and wet scrubber are installed in the existing grinding unit. Multi-cyclone, cyclone dust collector (2 nos.) will be attached to GSSP/NPK plant. Caustic scrubber, acid mist plant alongwith stack of 50 m height have been provided to H_2SO_4 plant. Dust collector bag system and cyclone separator will be provided in sulphur DP plant. Four stage scrubbing unit will be provided to SSP plant. Online HF monitor is installed for regular monitoring of fluorine in the stack.

Total water requirement from water tanker supply will be increased from 290 m^3/day to 366 m^3/day after expansion. No groundwater will be abstracted. Industrial effluent generation will be increased from 20 m^3/day to 30 m^3/day after expansion. Entire effluent will be recycled/reused within process. Domestic wastewater will be treated in STP. Sulphur sludge residue (170 TPA) and acid tank sludge will be reused in the process. Wet scrubber sludge will be reused in the process. Used oil (0.150 TPA) will be used as a lubricant. Spent catalyst (V2O5; 2.5025 TPA) will be sent to TSDF. Silica sludge (134 TPA) will be reused in the process.

Green belt will be developed in 38,720.9 m^2. Acoustic enclosures will be provided to D.G. sets. Power requirement (2000 KW) will be met from M.P. P.K.V.V.L.. D.G. set (1x1000 KVA) is installed. Coal based furnace has been installed. Project proponent informed that unit was established prior to EIA Notification, 2006. So no environmental clearance has been obtained for the existing unit. Consent to operate has been renewed on 4th June, 2012. Compliance report to the condition stipulated in the Consent has been submitted.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the MP Pollution Control Board on 20th April, 2012. The issues raised were regarding wastewater generation, number of trees, local employment, air emissions, contamination due to wastewater discharge, depletion of ground water etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After deliberations, the Committee desired following additional information:

1. Stack emission data for SO_2 for the existing plant to be provided after recalibration of the monitoring kit.
2. Fluoride levels in the ground water.
3. Detailed health status of the workers and OHS plan.
4. Detailed water balance including input of water, water losses and output.
5. Documentary proof regarding source of water supply of existing unit is water tanker.
6. Details of handling and disposal of H_2SiF_6 liquor and separation of SiO_2 in existing unit and proposed expansion.
7. Explore the possibility by converting Sodium silico fluorosis to H_2SiF_6.

The proposal is deferred till the desired information is submitted and site visit is conducted by the Sub-committee of EAC. The above information shall be provided with the uploading of minutes on the website.

4.4.3. Expansion of Distillery unit from 30 KLPD to 100 KLPD at Gat no. 487/488/A/2 & 488A/3 at Herwad, Tal Shirol Distt Kolhapur, Maharashtra by **M/s Karan Sugars Pvt. Ltd. - regarding EC.**

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

4.4.4. Manufacture of Pharmaceutical Bulk Drugs & Herbal Extracts (40.1 MTPM) at Plot No. 769/3/B &C, Jhagadia GIDC, Taluka Jhagadia, District Bharuch, Gujarat by **M/s Chaitanya Life Science Pvt. Ltd. - regarding EC.**

The project authorities and their consultant (Unistar Environment & Research Labs 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. All the Bulk Drug units located in notified industrial area are listed at S.N. 5(f) under Category 'B' but categorized under Category 'A' and apprised at the Central level due to location of the project within 10 km of critically polluted area viz. Ankleshwar, Gujarat.

M/s Chaitanya Life Science Pvt. Ltd. have proposed for the manufacture of Pharmaceutical Bulk Drugs & Herbal Extracts (40.1 MTPM) at Plot No.769/3/B & C, Jhagadia GIDC,Taluka Jhagadia, District Bharuch, Gujarat. Total plot area is 5,231 sq.m. Ankleshwar is located at a distance of 9.8 km. Total cost of the project is Rs. 1.65 Lakhs. No national park/wildlife sanctuary is located within 10 km. River Narmada is flowing at a distance of 7 km. Following products will be manufactured:

S.N.	Products	Proposed Capacity (MTPM)
A	**Synthetic Organic Chemicals**	
1-a	Oxyclozanide	10.0
2-a	Guaifenesin	10.0
2-b	Oxcarbamazepin	
2-c	Fluconazole	
2-d	Proganil HCI	
2-e	Gabapentine	
3-a	Lornoxicam	50
3-b	Glimipride	
3-c	Nicaradapine	
3-d	Repaglinide	
4-a	Donepezil Hydro Chloride	2.0
4-b	Cilastozol	
5-a	Captopril	0.5
(B)	**Herbal Extracts**	
6-a	Methoxsalen	100
6-b	Calcium Sennosides (20-25%	
7-a	Calcium Sennosides (60-80%)	1.5
7-b	Thiocolchicoside	
7-c	5-Hydroxytryptopham	
8-a	Resiprine	1.0
8-b	Colchicine	

8-c	Hysoscine butylbromide	
9-a	Yohimbine HCL	0.1
9-b	10 DAB III	
9-c	Quinine Sulphate	
	Total	**40.1**
(C)	**By Products**	
1	Herbs (Organic Fertilizer / Boiler Fuel)	2000.0
2	Sodium Bi Sulphite	25

Ambient air quality monitoring was carried out at 6 locations during October 2011 – December 2011 and submitted baseline data indicates that ranges of concentrations of PM_{10} (58 µg/m^3 to 139 µg/m^3), $PM_{2.5}$ (25 µg/m^3 to 74 µg/m^3), SO_2 (13 µg/m^3 to 42 µg/m^3) and NO_x(18 µg/m^3 to 46 µg/m^3)respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.72882 µg/m^3, 0.70431 µg/m^3 and 0.20843 µg/m^3 with respect to PM_{10}, SO_2 and NO_x respectively. The resultant concentrations are within the NAAQS.

Multicyclone alongwith stack of 20 m height will be provided to natural gas/LDO/agro waste fired boiler and thrmic fluid heater. Adequate scrubbing system will be provided to the process vents to control process emissions viz. HCl and SO_2. Total fresh water requirement from GIDC water supply will be 33.6 m^3/day. Industrial effluent generation will be 24 m^3/day. Industrial wastewater will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. Treated effluent will be discharged into GIDC underground drainage system, which conveyed to FETP and ultimately leads to deep sea for final disposal through Narmada Clean Tech. Limited. Process waste and ETP sludge will be sent to Treatment Storage Disposal Facility (TSDF) for hazardous waste. Waste oil and spent catalyst will be sold to authorized recyclers/re-processors. Green belt will be developed in 800 m^2 out of total plant area of 5231 m^2. Power (60 KVA) will be sourced from DGVCL. D.G. set (1x65 KVA) will be installed. Diesel (10 LPH), Natural Gas (200 m3/day), LDO (180 LPD) and Agro waste (0.5 MTPD) will be used as fuel.

The Committee noted that no public hearing / consultation is required due to project being located in notified GIDC Jagadia as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006.

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 agro waste fired boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/GPCB guidelines.

ii) The levels of PM10, SO2, NOx, VOC 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 SO_2. 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 GPCB.

v) Total fresh water requirement from GIDC water supply shall not exceed 33.6 m^3/day and prior permission shall be obtained from the competent Authorities.

vi) As proposed, industrial effluent generation shall not exceed 24 m^3/day. Effluent shall be treated in ETP. Treated effluent shall be conveyed to FETP and ultimately leads to deep sea for final disposal through a separate conveyance pipeline of GIDC after conforming to the standards prescribed for the effluent discharge and obtaining permission from the GPCB. No process effluent shall be discharged in and around the project site. Water quality of treated effluent shall be monitored regularly and monitoring report shall be submitted to the GPCB. Domestic wastewater should be treated in STP. Water quality of treated effluent shall be monitored regularly.

vii) Treated effluent shall be passed through guard pond. Online continuous pH meter, TOC analyzer and flow meter shall be installed to monitor the treated water quality.

viii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

ix) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.

x) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge and process inorganic should be disposed off to the TSDF.

xi) 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.

xii) 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.

xiii) 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.

xiv) As proposed, green belt should be developed in 800 m^2 out of total plant area of 5231 m^2.

xv) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

4.4.5. Modification of the existing Molasses based Distillery unit (40 KLPD) by installing Grain Based Distillery (40 KLPD) and expansion of Bottling capacity from 20,000 cases/day to 28,000 cases/day at Village Jahri, District Sonepat, Haryana by **M/s Frost Falcon Distilleries Ltd.-regarding EC.**

Project proposal was considered in the 22nd *Expert Appraisal Committee (Industry-2) meeting held during* 29th– 30th April, 2011 *and the* Committee desired following information:

1. Is there any other ban imposed by the Hon'ble Supreme/High Court for distillery units in Haryana?
2. A write up regarding current status of Court case, status of the project, Hon'ble Supreme Court directives, CPCB directions issued, any restriction on the quantity of alcohol to be manufactured and Minutes of the Committee meetings held.
3. A copy of letter from CPCB/ direction of Hon'ble Supreme Court to switch over to grain based from molasses.
4. A copy of the 'Terms of Reference' awarded by the Ministry.
5. Cover letter of public hearing issued by the Haryana Pollution Control Board.
6. Soft copy of the Public Hearing/Consultation Report.
7. Soft copy of the EIA/EMP Report.
8. Reasons for collecting data during October-November, 2009 prior to consideration of the proposal for 'TORs' in December, 2009.
9. Reasons for change in plot area from 25 acres to 12.5 acres.
10. Clarification whether grain-based distillery unit (40 KLD) is in addition to the existing molasses based distillery unit (40 KLD)? or molasses based distillery unit will be replaced by grain based distillery unit.
11. Permission for the drawl of 472 m^3/day ground water.

Project proponent vide letter dated 3rd April, 2012 submitted the above mentioned additional information.

Decision dated 14th December, 2011 of court case CWP No. 14582 of 2007 in the High Court of Punjab and Haryana at Chandigarh has been submitted. The pending case is now disposed off. Unit has upgraded molasses based distillery by commission of decanter, MEE and screw mixer system under the supervision of CPCB/SPCB to achieve zero discharge. The same will be utilized for grain based distillery. A copy of CPCB dated 14th March, 2011 enclosing minutes of meeting on "Zero effluent discharge in Distilleries in Haryana" held on 24.02.2011 is submitted. Project proponent confirmed the capacity of the grain based distillery will be 40 KLPD. The grain based distillery is less water polluting as compared to molasses based. Fresh water requirement will be 327 m^3/day and met from ground water source.

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

i. Distillery unit should be based on Grain based only and no Molasses based distillery unit shall be operated.

ii. Bag filter alongwith stack of adequate height should be provided to coal/rice husk fired boiler to control particulate emission within 50 mg/Nm^3.

iii. Pucca approach road to project site should be constructed prior to commencing construction activity of the main distillery so as to avoid fugitive emissions.

iv. Total fresh water requirement from ground water source shall not exceed 327 m^3/day for distillery unit and prior permission should be obtained from Central Ground Water/State Ground Water Authority.

v. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.

vi. Spent wash generation shall not exceed 6 Kl/Kl of alcohol. Spent wash shall be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. Spentlees, effluent from bottle washing, utilities and cogeneration unit shall be treated in effluent treatment plant (ETP) and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/reuse.

vii. Spent wash should be stored in impervious lagoon with HDPE lining as per CPCB guidelines and should be kept in proper condition to prevent ground water pollution. Storage capacity of spent wash lagoon should be for 5 days.

viii. No effluent from distillery should be discharged outside the premises and Zero effluent discharge concept should be adopted.

ix. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area should be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored.

x. No storage of wet cake should be done at site. An additional dryer should be installed so that at any time wet cake is not sold then wet cake should be converted into dry cake by operating additional dryer.

xi. Boiler 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.

xii. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be

strengthened and the regular medical test records of each employee should be maintained separately.

xiii. Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.

xiv. As proposed, green belt should be developed in 17199.4 m^2 out of 50,585.71 m^2. and plantation shall be done as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around the proposed distillery to mitigate the odour problem.

xv. All the commitment made regarding issues raised during the public hearing/consultation meeting held on 4th October, 2010 shall be satisfactorily implemented.

xvi. At least 5 % of the total cost of the project should be earmarked towards the environment social commitmentbased on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Chandigarh. Implementation of such program should be ensured accordingly in a time bound manner.

xvii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to being 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.

4.4.6. Molasses based Distillery (30 KLPD), sugar (2500 MTPD) and Cogeneration Plant (12 MW) at Survey No. 222, 223, 224, Village Najik Babulgaon, Post Rakshi, Taluka Shevgaon, District Ahmednagar, Maharashtra by **M/s Gangamai Industries and Construction Ltd.- regarding EC.**

1. The Committee noted that clarification needs to be obtained from the State 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 supervised and presided over the entire public hearing process.
2. The Committee noted that the consultant who prepared the EIA report is not accredited by QCI/NABET and deferred the proposal.

4.4.7. Exploratory Drilling of 9 wells in 2, 649 sq. km. of DS –ONN- 2004/1 Block at District Dhule & Jalgaon, Maharashtra by **M/s Geo Global Resources (Barbados) Inc.- 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 10th Meeting of the Expert Appraisal Committee (Industry) held during 29th- 30th April,

2010 for preparation of EIA/EMP. 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 Geoglobal Resources (Barbados) Inc. (GGR) have proposed for eexploratory drilling of 9 Wells in area of 2,649 sq. Km of DS-ONN-2004 block in Dhule and Jalgaon Districts of Maharashtra. Geoglobal signed the PSC for the block with Govt. of India on 2nd March, 2007. Petroleum Exploration License (PEL) to start the exploration activities in the block was given to M/s Geoglobal Resources on 07.06.2007. The block boundary falls in the interstate boundary between Maharashtra & Madhya Pradesh and Aner dam wildlife sanctuary lies within the block boundary. However, Aner Dam wildlife sanctuary is located at a distance of 10.52 Km from the neares proposed well. Major rivers pass through block (distances from nearest well: Tapi-3.28 km; Buray river-2.4 km; Panjhra river-2.15 km). Protected and reserved forest lies within the block boundary. No well will be drilled in the forest area. At the time of TOR award, three proposed wells were located within a distance of 10 Km from Aner Dam Wildlife Sanctuary. Further, project proponent revaluated the drilling programme and shifted two proposed wells (i.e. DS4-04 and DS4-10) outside the 10 Km radius from the Aner Dam WLS. One proposed well, namely DS4-09 has been dropped from drilling programme because location well was within the 10 Km radius around the Aner Dam WLS. Coordinates of proposed nine wells are as given below:

S.N.	Well No.	Latitude (N)	Longitude (E)
1	DS4-01	21^{O}18'50.58"	74^{O}45'41.43"
2	DS4-02	21^{O}24'13.86"	74^{O}49'05.24"
3	DS4-03	21^{O}12'58.93"	74^{O}51'55.52"
4	DS4-05	21^{O}14'01.97"	75^{O}'11'16.31"
5	DS4-06	21^{O}09'34.20"	74^{O}56'48.22"
6	DS4-07	21^{O}07'01.78"	74^{O}06'22.61"
7	DS4-08	21^{O}09'03.99"	74^{O}48'18.33"
8	DS4-10	21^{O}18'09.00"	74^{O}54'07.14"
9	DS4-04	21^{O}12'58.48"	74^{O}04'11.63"

Geoglobal intends to drill wells to a depth upto 500-2000 m. Total project cost is Rs. 80 Crore.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 12 locations during summer season, 2010 and submitted data indicates as PM_{10} (18–55 ug/m3), SO_2 (8.0 – 14.9 ug/m3) and NOx (10-18.33 ug/m3). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 0.188 µg/m^3, 11.7 µg/m^3 and 18.4 µg/m^3 for SPM, SO_2 and NOx respectively. The resultant GLCs are within the NAAQS.

The flare stack height will be approximately 9 m above the ground level. Total water requirement from Ground water source will be 20 m^3/day per well. Effluent generation will be 5 m^3/day and stored in HDPE lined pit. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' discharge concept will be adopted. Drilling well will generate drill cutting (125 MT) and drilling mud (24 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 (150 l/hr) will be used in DG sets during drilling operation. Blow-out-preventer (BOP) will be provided

to present 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 Gujarat Pollution Control Board on 13rd March, 2012. The issues raised during public hearing were procedure for land acquisition, transportation of heavy vehicles, location of Well no. DS4-08, compensation for crop, source of water, air and water pollution due to drilling etc.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 6th March, 2012. The issues raised during public hearing were benefits of the project, exact location of the proposed well, maintenance of surrounding area, invitation to local MLA/MP's, Disaster Management Plan, depth of well etc. The Committee noted that the Sub Div. 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.

4.4.8. Bulk Drug Manufacturing Unit (22.85 MTPM) at Plot No. 29P, Raichur Growth center Industrial Area, village Chicksugar, district Raichur, Karnataka by **M/s Jayanth Life science Pvt. Ltd.- regarding EC.**

The project authorities and their consultant (Right source Industrial Solutions 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 30th Meeting of the Expert Appraisal Committee (Industry) held during 15th–16th December, 2011 for 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' and appraised at State level. However, applicability of general condition due to project location within 10 Km from interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

M/s Jayanth Life Science Pvt. Ltd. has proposed for bulk drugs man Manufacturing Unit (22.85 MTPM) at Plot No. 29P, Raichur Growth Centre Industrial Area, Village Chicksugar, District Raichur, Karnataka. Interstate boundary is located within 10 km. Total plant area is 8910 m^2. Krishna River is flowing at a distance of 7.6 km. Total cost of project is Rs. 5.21 Crore. Rs. 97 Lakhs and Rs. 12.5 Lakhs are earmarked toward capital cost and recurring cost/annum for pollution control measures. Following products will be manufactured:

S.N.	Products	Quantity (TPM)
1.	Pantoprazole Sodium	1.50
2.	Rabeprazole sodium	1.50
3.	Loratadine	1.35

4.	Telmisartan	1.00
5.	Montelukast Sodium	2.00
6.	Duloxetine HCl	1.00
7.	Lamotrigine	5.00
8.	Omeprazole	1.50
9.	Atorvastatin Calcium	5.00
10.	Ramipril	1.50
11.	Aripiprazole	1.50
	Total	**22.85**

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 7 locations during March, 2012 to May, 2012 and submitted baseline data indicates that ranges of concentrations of PM_{10} (59.78 µg/m^3 to 62 µg/m^3), $PM_{2.5}$ (26 µg/m^3 to 33.08 µg/m^3), SO_2 (5.45 µg/m^3 to 8.07 µg/m^3) and NO_x (7.854 µg/m^3 to 9.2 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.817 µg/m^3, 3.317 µg/m^3 and 4.430 µg/m^3 with respect to PM_{10}, SO_2 and NOx. 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, SO_2 and NH_3. All the solvent storage tanks will be connected with the vent condensers with chilled water circulation. Total fresh water requirement from KIADB water supply will be 32.65 m^3/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 (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 3118.50 m^2 out of total plant area of 8910.00 m^2. Power (500 KVA) will be sourced from SEB. D.G. set (1x500 KVA + 1x 100 KVA) will be installed. Coal will be used as fuel in boiler.

The Committee noted that no public hearing / consultation is required due to project being located in notified Raichur Growth Centre Industrial Area as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006.

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

i) Bag filter shall be provided to the boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/KSPCB guidelines.

ii) The levels of PM10, SO2, NOx, VOC, NH3 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. Two stage scrubber with chilled water media should be provided to process vents to control NH3. 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 KSPCB.

v) Total fresh water requirement from KIADB water supply shall not exceed 32.65 m^3/day and prior permission shall be obtained from the competent Authorities.

vi) Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS 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 KSPCB 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 3118.50 m^2 out of total plant area of 8910.00 m^2.

xiii) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

4.4.9. Grain based Distillery Unit (Ethanol Plant, 120 KLPD) alongwith Captive Power Plant (5.0 MW) at Sy. No. 4,5,6,7 village Nadipalle, Mandal Pusapatirega, District Vizianagaram, Andhra Pradesh by **M/s Veda Biofuel Pvt. Ltd. - regarding EC**.

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 as per Draft Terms of References (TORs) awarded during the 32nd Meeting of the Expert Appraisal Committee (Industry) held during 16th–17th February, 2012 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 Veda Biofuel Pvt. Ltd. have proposed for the Grain based Distillery Unit (Ethanol Plant, 120 KLPD) alongwith Captive Power Plant (5.0 MW) at Sy. No. 4, 5, 6, 7, Village Nadipalle, Mandal Pusapatirega, District Vizianagaram, Andhra Pradesh. Total plant area is 25 acres. No national park/wildlife sanctuary/biosphere reserves is located within 10 km. Kumili RF is located at a distance of 6.3 Km. River Champavati is flowing at a distance of 0.6 Km. Total cost of the project is Rs. 120.09 Crores. Plant will be operated for 330 days in a year. Following products will be manufactured:

S.N.	Product	Phase # 1	Phase # 2	Total
1	Rectified Spirit (RS) / Extra Neutral Alcohol (ENA) /Ethanol (fuel ethanol or Anhydrous alcohol (AA)/ Industrial Alcohol	60 KLPD	60 KLPD	120 KLPD
2	Power for Captive Consumption	2.5 MW	2.5 MW	5 MW

Grains (maize, corn, Sorghum grain, non-human consumed broken rice and other starch based grains etc.) from local area, Indian coal (224 TPD) from Singareni Collieries Ltd/ imported coal (174 TPD) from Indonesia via Vishakhapatnam port/ Biomass (338 TPD) from local areas.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 7 locations during March, 2012 to May, 2012 and submitted baseline data indicates that ranges of concentrations of PM_{10} (24.6 µg/m^3 to 37.2 µg/m^3), SO_2 (6.3 µg/m^3 to 9.8 µg/m^3) and NO_x (7.6 µg/m^3 to 12.2 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.2

µg/m^3, 1.5 µg/m^3 and 0.9 µg/m^3 with respect to PM_{10}, SO_2 and NOx. The resultant concentrations are within the NAAQS. Bagfilter alongwith stack height of 55 m will be provided to coal/biomass fired boiler (2x 28 TPH).

Total fresh water requirement from the ground water source will be 1232 m^3/day. Spent wash (464 m^3/day) will be passed through centrifuge decanter for separation of solid. The part of thin slop from centrifuge will be recycled to process. The remaining slop will be concentrated through multi-effect evaporator (MEE) to form DWGS to achieve zero discharge. DWGS will be passed through dryer to form DDGS. DDGS will be sold as cattle feed and yeast sludge will be added to the wet cake. Storage capacity of spent wash holding tank will be for 5 days. Fly ash will be sent to brick manufacturers/cement plant. Used oil will be sent to authorized recyclers/re-processors.

Green belt will be developed in 8.5 acres out of 25 acres. Total power requirement will be 1600-2200 KW which will be sourced from APSEB as well captive sources. Biomass (150 TPD)/coal (100 TPD) will be used as fuel for boiler.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Andhra Pradesh Pollution Control Board on 26th September, 2012. The issues raised during public hearing were local employment, CSR activities, fire safety, pollution control measures, wastewater discharge, extraction of water from River Champavathi etc. The Committee noted that the District Revenue Officer has supervise 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 AP 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.

4.4.10. Expansion of Bulk Drugs Unit (166.62 to 393.381 MTPM) at Plot No. E-7, E-8 & E-9 MIDC Industrial Area, Village Chikalthana, Tehsil & District Aurangabad, Maharashtra by **M/s Harman Finochem Ltd.- regarding EC.**

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 as per Draft Terms of References (TORs) awarded during the 29th Meeting of the Expert Appraisal Committee (Industry) held during 17th–18th November, 2011 for 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' and appraised at State level. However, applicability of general condition due to project location within 10 Km from critically polluted area, proposal is appraised at Central Level.

M/s Harman Finochem Ltd has proposed for expansion of bulk drugs unit (166.62 to 393.381 MTPM) at Plot No E-7, E-8 & E-9 MIDC Industrial Area, Village Chikalthana, Tehsil & District Aurangabad, Maharashtra. Aurangabad is identified as critically polluted area. Moratorium was lifted from Aurangabad (Maharashtra) vide Ministry's OM dated 15th February,

2011. Total plant area is 7.55 acres. Total cost of project is RS. 2.09 Crore. Rs. 153.5 Lakhs and Rs. 16.00 Lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures. No national park/wildlife sanctuary is located within 10 Km from the project site. Following products will be manufacturing:

S.N.	Product	Capacity		
		Existing (TPA)	Proposed (TPA)	Total after expansion (TPA)
1	Allopurinol	100	100	200
2	Bisoprolol hemifumerate	4.5	4.8	9.3
3	Colchicine	0.2	2	2.2
4	Cyclobenzaprine Hydrochloride	0.5	1.5	2.0
5	Fenofibric acid	0.5	3.0	3.5
6	Glycopyrrolate	0.05	2.8	2.85
7	Metformin Hydrochloride	1800	2400	4200
8	Methadone Hydrochloride	0.5	2.4	2.9
9	Methylphenidate Hydrochloride	0.5	3.5	4
10	Methylphenobarbital	0.5	1.2	1.7
11	Oxiconazole Nitrate	0.5	6	6.5
12	Oxybutynin Hydrochloride	1	6	7
13	Phenobarbitone	42	96	138
14	Phenobarbitone Sodium	0.5	4	4.5
15	Phenytoin sodium	16	48	64
16	Riboflavine 5 Phosphate Sodium	30	30	60
17	Tilidine Hydrochloride Hemihydrate	--	2	2
18	Tolterodine Tartrate	--	6	6
19	Xipamide	2	2	4
20	Ketamine Hydrochloride	0.3	--	0.3
	Total	**1999.55**	**2721.2**	**4720.75**

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during November, 2011 to January, 2012 and submitted baseline data indicates that ranges of concentrations of PM_{10} (29 µg/m^3 to 65 µg/m^3), $PM_{2.5}$ (12 µg/m^3 to 36 µg/m^3), SO_2 (7 µg/m^3 to 22 µg/m^3) and NO_x (8 µg/m^3 to 26 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.37 µg/m^3, 1.9 µg/m^3 and 0.13 µg/m^3 with respect to SPM, SO_2 and NOx. The resultant concentrations are within the NAAQS. Adequate stack height has been provided in the existing furnace oil fired boilers (2 TPH & 4 TPH). No additional utilities are required for the expansion. Scrubbing system will be provided to the process vents to control process emissions viz. HCl and SO_2. Fresh water requirement from MIDC water supply will be increased from 70 m^3/day to 265 m^3/day. Industrial effluent generation will be increased from 12.71 m^3/day to 90.71 m^3/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. Sewage will be treated in STP. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Green belt will be developed in 2.87 acres out of 7.55 acres. Inorganic & evaporation salt and ETP sludge will be sent to Treatment Storage Disposal Facility (TSDF) for hazardous waste. Stripper distillate will be sent to cement industries for co-incineration. Fly ash will be sold to brick manufacturers. Waste oil and used batteries will be sold to authorized recyclers/re-processors. DG Set (250 KVA + 1010 KVA) will be installed.

The committee deliberated upon the compliance of CFO order no. BO/ZOPAMS/RO-AD/EIC No. AD-5930-10/R/CC-31 dated 10th March, 2011 issued by the Maharashtra Pollution Control Board and have satisfactorily been responded by the project proponent

The Committee noted that no public hearing/consultation is required due to project being located in notified MIDC Industrial area as per Section 7 (i), III Stage (3), Para (i)(b) of EIA Notification 2006.

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) The levels of PM10, SO2, NOX, VOC and HCl shall be monitored in ambient air.

ii) 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.

iii) 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 MPCB.

iv) Total fresh water requirement from MIDC water supply shall not exceed 265 m^3/day and prior permission shall be obtained from the competent Authorities.

v) 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.

vi) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.

vii) 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.

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 MPCB 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) 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.

x) As proposed, green belt should be developed in 2.87 acres out of 7.55 acres.

xi) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

4.4.11. Expansion of Synthetic Organic Chemical (Bulk Drugs & Drugs Intermediates 11.0 MTPM to 37.0 MTPM) Manufacturing Unit at Survey No. 47, Hadmtala Industrial Area, Rajkot Gondal Highway, Taluka Kotda Sangani, District Rajkot, Gujarat by **M/s Sam Finechem Limited - regarding EC.**

The project authorities and their consultant (Envisafe Environment 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 12th Meeting of the Expert Appraisal Committee (Industry) held during 15th-16th July, 2010 for 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 Sam Finechem Ltd. have proposed for expansion of Synthetic Organic Chemical (Bulk Drugs & Drugs Intermediates 11.0 MTPM to 37.0 MTPM) Manufacturing Unit at Sy. No. 47, Hadmtala Industrial Area, Rajkot Gondal Highway, Taluka Kotda Sangani, District Rajkot, Gujarat. Project area is 21,138 m^2. No protected area notified under the wildlife (Protection) Act 1972 & Eco sensitive area is located within 10 km. Rampara vadi Wildlife sanctuary is located at a distance of 50 Km. Naranka reserved forest is located 6.4 Km (NE). River Gondal is flowing

at a distance of 6.26 Km. Total cost of the project is Rs. 5.00 Crore for expansion. Rs. 1.75 Crore and Rs. 1.14 Crore are earmarked towards capital cost and recurring cost per annum for pollution control measures. Following products and by-products will be manufactured:

S. N.	Name of Existing Products	Capacity (MTPM)
1.	N-Methyl-4-Piperidone	**5.0**
	N-Benzyl-4-Piperidone	
	N-Ethyl-4-Piperidone	
	N-Methyle-4-Hydroxy Piperidine	
	N-Methyle-4-Chloro Piperidine	
	N-Carbethoxy-4-Piperidone	
2.	4-Amino 1,2,4 Triazole	**5.0**
	3-Amino 1,2,4 Triazole	
	1,2,4 Triazole	
3.	Alfa Alfa Di Methyl Para Bromo Phenyl acetic acid Methyl ester	**1.0**
	Total	**11.0**

Product Code	Name of Products after Proposed expansion	Capacity (MTPM)	Batch Size (Kg)	No. of Batches / Month
[A] Derivatives of Piperidones				
A-1	N-Methyl-4-Piperidone	10.0	500	11
A-2	N-Benzyl-4-Piperidone		200	11
A-3	N-Ethyl-4-Piperidone		200	91
A-4	N-Propyl-4-Piperidone		50	33
A-5	N-Iso Propyl-4-Piperidone		250	50
A-6	N-IsoButyl-4-Piperidone		250	33
A-7	N-Phenyl ethyl-4-Piperidone		50	11
A-8	1,3 Di methyl Piperidone		25	286
A-9	1-Acetyl-4 Piperidone		25	333
A-10	4 Piperidone		5	91
A-11	4 Piperidone Hydro chloride		25	91
A-12	Piperidone Mono Hydrate Hcl		50	500
A-13	4 Piperidone ethylen ketal		100	91
A-14	N-BOC-4 Piperidone		50	167
A-15	N-Carbethoxy-4-Piperidone		500	20
A-16	N-Boc-4-Carbethoxy Piperidone		50	111
[B] Derivatives of Piperidines				
B-1	N-Methyle-4-Hydroxy Piperidine		180	**56**
B-2	N-Methyle-4-Chloro Piperidine		750	13
B-3	4-Hydroxy Piperidine		60	167
B-4	N-Carbethoxy-4-Hydroxy Piperidine		170	59
B-5	N-Carbethoxy-4-ChloroPiperidine		120	83
B-6	4-ChloroPiperidine		30	333
B-7	4-Amino N-Benzyl Piperidine		180	56

B-8	4-Hydroxy N-Benzyl Piperidine	10.0	100	100
B-9	4- Benzamido Piperidine		50	200
B-10	4-Amino N-Carbethoxy Piperidine		180	56
B-11	4-Amino N-Methyl Piperidine		75	133
B-12	4-T-Boc-Amino Piperidine		65	154
B-13	N- Boc-4-Hydroxy Piperidine		50	200
B-14	N- Boc-4-Amino Piperidine		35	286
B-15	4-Piperidiono Piperidine		25	400
B-16	4-Choloro Piperidine HCL		40	250
B-17	4-(-4-CholoroPhenyl)-4-HydroxyPiperidine		500	20
B-18	4-(-4-BromoPhenyl)-4-Hydroxy Piperidine		5	2000
B-19	4-Phenyl-4-Hydroxy Piperidine		5	2000
B-20	4-Phenyl Piperidine		5	2000
B-21	1-Amino Piperidine		50	200
B-22	1-Methyl-4-PiperidineDi Phenyl Hydroxy acetate		180	56
B-23	(1-Methyl-4-Piperidine)3-[2[(3-Chloro Phenyl)ethyl]-2-Pyridinyl] Methanone		115	87
B-24	1-Butanon-4-[4-(4-Chloro Phenyl)-4- Hydroxy -1-Piperidinyl-1-(-4-Fluoro Phenyl)		150	67
[C] Derivatioves of Triazoles				
C-1	4-Amino 1,2,4 Triazole	5.0	1400	4
C-2	3-Amino 1,2,4 Triazole		500	10
C-3	1,2,4 Triazole		400	13
C-4	1[(2,4 Di Fluoro Phenyl)-1-2(1-H) 1,2,4 Triazolyl Ethanone		150	25
C-5	Epxoy Mesylate		120	33
[D] Fexofinadine Derivatives				
D-1	Alfa Alfa Di Methyl Phenyl acetic acid methyl ester	3.0	500	17
D-2	Alfa Alfa Di Methyl Phenyl acetic acid		250	18
D-3	Alfa Alfa Di Methyl Para Bromo Phenyl acetic acid		250	18
D-4	4-(-4-Chloro-1-Oxo Butyl)2,2 Di methyl Phenyl acetic acid		170	17
D-5	[2-[2,6, doichloro phenyl) Amino]Phenyl acetoxy acetic acid		300	10
D-6	2-Tert Butoxy-2-oxo-ethyl{2-[2,6 di chloro phenyl) amino]phenyl acetate		250	12
D-7	2-Chloro acetic acid butyl ester		100	30
D-8	Di Benzo Suberone		100	30
D-9	Di Benzo Suberenone		100	30
D-10	Fex-10		200	15
[E] Derivatives of Loratidine Intermediates & others				
E-1	Nitro Pyridine N Oxide	2.0	150	13
E-2	2-Amino Pyridine		150	13
E-3	2-Bromo Pyridine		150	13
E-4	3[2(3-Chloro Phenyl) Ethyl]-2-Cyno Pyridine		250	8
E-5	3[2(3-Chloro Phenyl) Ethyl] Pyridine 2 Carboxy acid		250	8

E-6	Iso Nicotinic acid		50	40
E-7	8-Chloro Azatidine		250	8
E-8	Keto loratadine		250	8
[F] Haloperidol Intermediates				
F-1	4-Chloro-4-Fluoro Butyrophenone	2.0	100	20
[G] Ranozaline Intermediates				
G-1	N-(2,6 Di methyl phenyl)-2- (Piperazinyl) acetamide		50	20
G-2	N-(2,6 Di methyl phenyl)-2- Chloro acetamide	1.0	50	20
[H] Demperidone Intermediates				
H1	5-Chloro1-(-4 Piperidinyl)-2- Benzimidazolone		250	8
H2	3-(3-Chloro Propyl)-2,3 Di hydo1-H-Benzimidazolone	2.0	50	40
[I] Other Bulk Drug Intermediate & Chemicals				
I-1	1,3,5 Tri Methoxy Benzene		50	40
I-2	2,6 Di bromo aniline	2.0	25	80
I-3	Selenic Anhydride		40	50
I-4	2-Nitro ethanol		100	20
	Total	37.0	--	--

List of byproducts after proposed expansion:

S. N.	Name of By-products	Capacity (MTPM)
1.	Hydrochloric Acid	55.76
2	Sodium Hypo Sulphite	36.84
3	Liquid Ammonia	14.25
4	Hydrobromic Acid	22.30
5	Sodium Bromide	2.11
6	Dimer of N-(2,6 Di methyl phenyl)-2-(Piperazinyl) acetamide	0.90

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during October, 2010 to December, 2010 and submitted baseline data indicates that ranges of concentrations of PM_{10} (19 µg/m^3 to 60 µg/m^3), SO_2 (20 µg/m^3 to 60 µg/m^3) and NO_x (22 µg/m^3 to 50 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.1269 µg/m^3, 0.0609 µg/m^3 and 0.152 µg/m^3 with respect to SPM, SO_2 and NOx. The resultant concentrations are within the NAAQS. Cyclone separator alongwith stack height of 31 m has been provided in the existing biomass fired boilers (2 nos.) and thermic fluid heater. Scrubbing system will be provided to the process vents to control process emissions viz. HCl, HBr, NH_3 and SO_2. Fresh water requirement from ground water source will be increased from 23.4 m^3/day to 61.4 m^3/day. Industrial effluent generation will be increased from 6.3 m^3/day to 51 m^3/day. Industrial wastewater will be treated in ETP followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Green belt will be developed in 7033 m^2 out of 21,138 m^2. Inorganic & evaporation salt and ETP sludge will be sent to Treatment Storage Disposal Facility (TSDF) for hazardous waste. Spent carbon and distillation residue will be sent to common incineration facilities. Fly ash will be sold to brick manufacturers. Waste oil

and used batteries will be sold to authorized recyclers/re-processors. Agriculture waste (9.6 TPD) and HSD (100 LPH) will be consumed. DG set (500 KVA) will be installed as standby arrangement.

A copy of the 'NOC' issued by Gujarat Pollution control Board vide letter no. PC/NOC/CCA-RJ-680 dated 10th April, 2006 and consent order no. 9345 dated 06th September, 2007 and authorization issued vide GPCB's letter no PC/CCA-RJ-680/26431 are submitted. The Committee deliberated on the compliance of the conditions stipulated in the consent to operate.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 24th May, 2011. The issues raised during public hearing were effluent discharge outside the premises, cattle dies by drinking of effluent, ground water contamination, employment etc. The Committee noted that the Deputy Collector & Sub Divisional Magistrate 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 Gujarat 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 supervised 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.

4.4.12. Hydrocracker Unit (Euro 4 and Euro 3 MS) and Diesel by revamp and setting up Continuous Catalytic regeneration reformer at Mahul, District Kurla, Mumbai by **M/s Bharat petroleum corporation Ltd. - regarding EC.**

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 as per Draft Terms of References (TORs) awarded during the 34th Meeting of the Expert Appraisal Committee (Industry) held during 13th -14th April 2012 for preparation of EIA/EMP. All the Petroleum Refinery Plants are listed at S.N. 4(a) under Category 'A' and appraised at the Central level.

M/s Bharat Petroleum Corporation Ltd. has proposed for installation of new Continuous Catalytic Regeneration Reformer (CCR) within the existing premises of BPCL Mumbai Refinery, by which CCR capacity will increase from 0.9 MMTPA to 1.2 MMTPA. Mumbai refinery is situated in an area of 454 acres. The land available within the existing refinery premises will be utilized for proposed project facilities. CCR facilities will be installed in a plot area 243x110 m^2. Total project cost is Rs. 1827 Crores. Arabian sea is located at a distance of 2 km. Environmental clearance for CCR capacity (0.9 MMTPA) was granted by the Ministry vide letter no. J-11011/180/2008-IA II(I) dated 28th April, 2008.

Ambient air quality monitoring was carried out at 5 locations during March 2011 – May 2011 and submitted baseline data indicates that ranges of concentrations of PM_{10} (55 µg/m^3 to 71 µg/m^3), $PM_{2.5}$ (23 µg/m^3 to 33 µg/m^3), SO_2 (11.2 µg/m^3 to 19.2 µg/m^3) and NO_x(20.1 µg/m^3 to 35.5 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the

maximum incremental GLCs after the proposed increase in capacity would be 0.18 µg/m^3 with respect to NO_x. The resultant concentrations are within the NAAQS. As proposed, new demountable flare hydrocarbon flare of 670 MT/Hr will be installed and flare discharges after burning of the gases will be released at an elevation of 125 m above the grade level. The total SO_2 emissions from the refinery is maintained the stipulated limit of 12 TPD. Low NOx burner and online analyzer for continuous monitoring of stack emissions (SO_2 and NOx) will be provided in CCR heaters. Raw water requirement for the proposed new facilities will be 4995 m^3/day. Effluent generation from CCR unit will be 129 m^3/day. Effluent will be treated in the existing ETP having capacity of 5760 m^3/day. Treated effluent will be recycled/reused in existing cooling tower. As proposed, Catalyst sludge platinum and Ni-Mo will be sent to authorized recyclers/re-processor. Alumina catalyst will be sent to TSDF.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 25th September, 2012. The issues raised were regarding publicity about public hearing, area required for proposed unit, traffic congestion, CSR initiatives, impact of new project, 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 satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

i. M/s BPCL shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R. 186(E) dated 18th March, 2008.

ii. Continuous on-line stack monitoring for SO_2, NOx and CO of all the stacks shall be carried out. Low NOx burners shall be installed.

iii. Fugitive emissions of HC from product storage tank yards etc. must be regularly monitored Sensors for detecting HC leakage shall be provided at strategic locations. Leak Detection and Repair programme shall be implemented to control HC/VOC emissions.

iv. SO_2 emissions after expansion from the plant shall not exceed 12 TPD. Sulphur recovery units shall be installed for control of H_2S emissions.

v. As proposed, record of sulphur balance shall be maintained at the Refinery as part of the environmental data on regular basis. The basic component of sulphur balance include sulphur input through feed (sulphur content in crude oil), sulphur output from Refinery through products, byproduct (elemental sulphur), atmospheric emissions etc.

vi. Total water requirement for the proposed project shall not exceed 4995 m^3/day and prior permission shall be obtained from the competent authority. Industrial effluent generation from CCR unit shall be 129 m^3/day and treated in the effluent treatment plant. Treated effluent shall be recycled/reused within the factory premises. Domestic sewage shall be treated in sewage treatment plant (STP).

vii. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.

viii. The membership of common TSDF should be obtained for the disposal of hazardous waste. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Bhopal. Chemical/inorganic sludge shall be sent to treatment storage disposal facility (TSDF) for hazardous waste. Spent catalyst shall be sent to authorized recyclers/re-processors.

ix. Green belt shall 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. Thick greenbelt with suitable plant species shall be developed around unit. Selection of plant species shall be as per the CPCB guidelines.

x. All the issues raised and commitment made during the public hearing/consultation meeting held on 25th September, 2012 shall be satisfactorily implemented. Accordingly, provision of budget to be kept.

4.4.13. Grain Based Distillery Unit (40 KLD) alongwith Power Plant (1.2 MW) at Village Didee, Tahsil Bhind, District Bhind, Madhya Pradesh by **M/s Gwalior Distilleries Ltd. - regarding EC.**

The project authorities and their consultant (Creative Enviro Services, Bhopal) 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 29th Meeting of the Expert Appraisal Committee (Industry) held during 17th-18th November, 2011 for preparation of EIA/EMP. All cane juice/non-molasses based distilleries (≥ 30 KLD) are listed at S.N. 5 (g) under category 'A' and appraised at Central level.

M/s Gwalior Distilleries Ltd. has proposed for Distillery Unit (40 KLD) alongwith Power Plant (1.2 MW) at Sy. No. 1134,1136, 1329, 1138/1 1138/3, 1137, 1328, 1326, 1327, Village Didee, Tehsil & District Bhind, Madhya Pradesh. Distillery will be operated for 300 days in a year. Total project cost is Rs. 61.85 Crores. Rs. 6.80 Crores and 19.22 lakhs are earmarked towards capital cost and recurring cost per annum for environment management. Total plant area is 14.665 acres (59350 m^2). No ecological sensitive areas (Wildlife sanctuaries) are located within 10 km. Reserve Forest Didee, Protected Forest Didee, RF, Kankora Reserve Forest, Protected Forests are located at 0.5 Km,, 1.5 Km, 2.5 Km and 7 km respectively. Kunwari River and Khevr Nadi are flowing at a distance of 1.5 km and 3.75 km respectively.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during December, 2011-March 2012 and submitted baseline data indicates range of PM_{10} (30–176 ug/m^3), SO_2 (7.8 – 41.3 ug/m^3) and NO_x (10.2-56.90 ug/m^3). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 0.27 µg/m^3, 3 µg/m^3 and 4.07 µg/m^3 for SPM, SO_2 and NOx respectively. The resultant GLCs are within the NAAQS.

Bagfilter alongwith stack height (35 m) will be provided to the rice husk/coal fired boiler. Fresh water requirement from ground water source will be 400 m^3/day. Spent wash from grain based distillery will be treated in decanter and then concentrated in MEE to concentrate the solids to 35-38 % and then taken to a dryer alongwith wet cake from decanter to concentrate the solids to 90 % to form DDGS. DDGS will be sold as cattle feed. No effluent will be discharged

outside the factory premises. Fly ash will be sent to brick manufacturers/cement. DDGS will be used as cattle feed. Used oil will be sent to the authorized recycler/re-processors. Green belt will be developed in 25201.57 m^2. Power requirement will be 920 KW and sourced from cogeneration power plant (1.2 MW) and MP state electricity board. DG set (500 KVA) will be installed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the M P Pollution Control Board on 6th June, 2012. The issues were raised regarding local employment, drinking water supply, pollution control measures, wastewater treatment, air pollution control measures etc. As regard to employment, the project proponent responded that about 150 direct and 150-200 indirect employment will be generated and local people will be benefited. Regarding drinking water facilities, project proponent informed that drinking water facilities at nearby villages namely, Didee, Shanker nagar, Jawaharpura, Dinpura, Kashi ka pura and Kankura. Besides, Rs. Five lakhs per annum will be provided for the need base programme through gram panchayat. The Project proponent committed that no untreated or treated effluent will be discharged from the plant premises. Bagfilter and other air pollution control measures shall be provided to boiler stacks and various material transfer points. Proper greenbelt will be developed in 25201 m2 of land. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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

i. Distillery unit should be based on Grain based only and no Molasses based distillery unit should be operated.

ii. Bag filter alongwith stack of adequate height should be provided to coal/rice husk fired boiler to control particulate emission within 50 mg/Nm^3.

iii. Pucca approach road to project site should be constructed prior to commencing construction activity of the main distillery so as to avoid fugitive emissions.

iv. Total fresh water requirement from ground water source should not exceed 400 m^3/day for distillery and cogeneration unit and prior permission should be obtained from Central Ground Water/State Ground Water Authority.

v. Water consumption should be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.

vi. Spent wash generation should not exceed 6 Kl/Kl of alcohol. Spent wash should be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. DWGS will be sent to dryer to form DDGS. Spentlees, effluent from bottle washing, utilities and cogeneration unit should be treated in effluent treatment plant (ETP) and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/reuse.

vii. As proposed no spent wash storage lagoon will be provided.

viii. No effluent from distillery and co-generation power plant should be discharged outside the premises and Zero discharge should be adopted.

ix. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area should be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored.

x. No storage of wet cake should be done at site. An additional dryer should be installed so that at any time wet cake is not sold then wet cake should be converted into dry cake by operating additional dryer.

xi. Rice husk/Coal storage should be done in such a way that it does not get air borne or fly around due to wind.

xii. Boiler 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.

xiii. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.

xiv. Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.

xv. As proposed, green belt should be developed in 25201.57 m^2 out of 59350 m^2. and plantation shall be done as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around the proposed distillery to mitigate the odour problem.

xvi. All the commitment made regarding issues raised during the public hearing/consultation meeting held on 6th June, 2012shall be satisfactorily implemented.

xvii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise social responsibility based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

xviii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to being 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.

4.4.14. Sugar Plant (5000 TCPD), Distillery (45 KLPD) and Cogeneration Power Plant (34 MW) at S.F. Nos. 76/2-17, 77/1,2,4-8, 10, 80/2, 80/6, 80/7,80/9-12, 105/1&2, 106/1, 107, Village Madikechilur, Tehsil & District Shimoga, Karnataka by **M/s R. K. Powergen Pvt. Ltd.** (Formerly known as **M/s R.K. Cogen and Distilleries Private Limited.) - regarding EC.**

The project authorities and their consultant (Environmental System Consultants & Ambiente Lab Solutions 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 22nd Meeting of the Expert Appraisal Committee (Industry) held during 29th– 30th April, 2011 for preparation of EIA/EMP. All the Distillery plants are listed at S.N. 5(g) under Category 'A' and sugar plant (< 5000 TCD) at S.N. 5(j) under Category 'B'. Proposal is appraised at the central level as per integrated projects for distillery, sugar and co-generation power plant.

M/s R. K. Powergen Pvt. Ltd. have proposed for the Sugar Plant (5000 TCPD), Distillery (45 KLPD) and Cogeneration Power Plant (34 MW) at S.F. Nos. 76/2-17. 77/1,2, 4-8, 10, 80/2, 80/6, 80/7, 80/9-12, 105/1&2, 106/1, 107, Village Madikechilur, Tehsil & District Shimoga, Karnataka. Village Madi Kechulur is at 1.1 km. with 1,058 persons. Total plot area is 18.82 ha (46.50 acres). Survey Nos 105, 106 and 107 have been declared section 4 as per Karnataka Forest Act 1963 and have been called Haramghatta State Forest Extension Block. No. R&R issues are involved. Total cost of the project is Rs. 367.23 Crores. Rs. 10.00 Crores and Rs. 2.00 Crores have been earmarked towards capital cost and recurring cost/annum for environment pollution control measures. Distillery will be operated for 220 days in a year. Shettihalli wildlife sanctuary is located at a distance from the project site in the southwest and its buffer area is at 7 to 9 Km. The buffer area of Badra Wildlife Sanctuary is located at a distance of 12-15 Km. Therefore, the project site is not located within 10 Km distance of wildlife sanctuary. The Deputy Conservator of Forest, Wildlife Division, Shimoga has issed the NOC for the project vide letter no. Sl. No. B5:No Objection: 2010-11 dated 18.01.2011 as the site is away by 21 Km from the Wildlife area. No national park/biosphere reserve/elephant corridor/historical monuments is located within 10 km. Tungbhadra River drain is flowing at a distance of 2 km. Distillery will be operated for 220 days in a year. The Govt. of Karnataka vide cane allocation order no. C1 46 SGF 04 (Part-I) dated 25.09.2008 has allotted 89 villages in Honnali Taluk. 44 villages in Bhadravathi taluk, 121 villages in ShikaripuraTaluka and 40 villages in Honnali Taluk for the project. Power plant will be operated for 320 days. Bagasse based power plant operation duration of 185 days (season). For offseason, coal will be imported from Indonesia.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during October 2011 – December, 2011 and submitted baseline data indicates that ranges of concentrations of PM_{10} (13 µg/m^3 to 46 µg/m^3), $PM_{2.5}$ (7 µg/m^3 to 25 µg/m^3), SO_2 (6.0 µg/m^3 to 9.0 µg/m^3) and NO_x (3.0 µg/m^3 to 10.0 µg/m^3)respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 0.08 µg/m^3, 2.31 µg/m^3 and 2.42 µg/m^3 with respect to PM_{10}, SO_2 and NO_x respectively. The resultant concentrations are within the NAAQS. ESP alongwith stack height of 72 m will be provided to bagasse/coal fires boiler. Fresh water requirement from River Thungabhadra will be 3120 m^3/day. Spent wash will be concentrated in MEE and concentrated spent wash will be incinerated in incineration boiler (10 TPH) to achieve zero effluent discharge.

Effluent from sugar unit will be treated in ETP. Sewage will be treated in sewage treatment plant. Bagasses based fly ash will be mixed with filter cake and used as manure. Fly ash from coal will be sent to cement industries. Greenbelt will be developed in 99960 m^2 out of 288200 m^2. DG set (2 x1500 kVA) will be installed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board on 7th June, 2012. The issues were raised regarding adequate treatment system, payment to sugar cane grower, financial assistance to road development in the village area, responsibility of cutting and transportation done by the unit 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:

I. ESP alongwith stack of adequate height shall be provided to bagasse/coal fired boiler to control particulate emission within 50 mg/Nm^3.

II. Company shall follow good management practices viz. collection of waste yeast sludge from fermentation section in a closed system and proper disposal, reduced volume of effluent by adopting strategic approaches, closed drains carrying spent wash to the treatment units; minimization of fugitive emissions from anaerobic treatment; proper collection & handling of excess sludge generated from the anaerobic & aerobic treatment units; minimum retention of treated & untreated spent wash in the lagoons; effective composting of the spent wash by controlled effluent spraying through mechanical system to avoid spillages & over application, blending of sludge in correct proportion with press mud; and properly finished compost and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.

III. Pucca approach road to project site should be constructed prior to commencing construction activity of the main distillery to avoid fugitive emissions.

IV. Total fresh water requirement from River Thungabhadra shall not exceed 3120 m^3/day and prior permission for drawl of water should be obtained from the concerned authorities. No ground water should be used.

V. Spent wash generation from molasses should not exceed 8 Kl/Kl. Spent wash from molasses based distillery shall be concentrated in MEE and sent to an incinerator boiler for incineration to achieve zero effluent discharge. Spentlees, effluent from utilities and cogeneration unit should be treated in effluent treatment plant (ETP) and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/ reuse.

VI. Spent wash should be stored in impervious lagoon with HDPE lining as per CPCB guidelines and should be kept in proper condition to prevent ground water pollution. Storage capacity of spent wash lagoon should be for 5 days.

VII. Wastewater generation from the sugar unit should not exceed 100 litres per tonne of cane crushed. Effluent from sugar unit should be treated in the effluent treatment plant.

VIII. As proposed, no effluent from sugar, distillery and co-generation power plant should be discharged outside the premises and Zero discharge should be adopted.

IX. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area should be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids should be monitored.

X. Baggase storage should be done in such a way that it does not get air borne or fly around due to wind.

XI. Boiler 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. Bagasse ash and coal ash should be stored separately.

XII. Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.

XIII. Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.

XIV. All the issues raised during the public hearing/consultation meeting held on 7th June, 2012 should be satisfactorily implemented.

XV. At least 5 % of the total cost of the project should be earmarked towards the environment social commitment based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.

XVI. The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to being 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.

XVII. Green belt should be developed in 33 % of plot area to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO. Thick green belt with suitable plant species should be developed around the proposed distillery to mitigate the odour problem.

4.4.15. Drilling Activities of On-Shore Oil & Gas exploration at Cambay Basin, Block-CB-ONN-2005/7 in Vadodara and Bharuch Districts, Gujarat by **M/s Indian Oil Corporation Limited - regarding EC.**

The project authorities and their consultant (Sense Consultants 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 25th Meeting of the Expert Appraisal Committee (Industry) held during 28th-30th July, 2011 for preparation of EIA/EMP. All the projects related to offshore and onshore Oil and Gas exploration, development and production projects are listed in Para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at centre level.

M/s Indian Oil Corporation Ltd. have proposed for onshore exploratory drilling of 11 wells at Cambay Basin, Block-CB-ONN-2005/7 in Vadodara and Bharuch Districts of Gujarat. This block falls in two districts with major part Vadodara and small portion is in Bharuch. No forest land is involved. Narmada River is flowing within the block. Dhadhar River (7.6 km) and Vishwamitri River (9.00 km) are located. Cost of project is Rs. 310.00 Crore. No forest land is involved. No national park/ wildlife sanctuary/ reserve forest is located within 10 km from the proposed wells.

Ministry of Petroleum & Natural Gas (MoPNG), Govt. of India awarded exploration block CB-ONN-2005/7 to Indian Oil Corporation Ltd. during seventh round of bidding under New Exploration Licensing Policy (NELP). A Production Sharing Contract (PSC) was signed between the Government of India (Gol) and Indian Oil Corporation Limited (IOCL) on 22nd December, 2008. The proposed block CB-ONN-2005/7 spreads across as area of 199 sq. km. in Vadodara and Bharuch districts in the State of Gujarat. As per the Production Sharing Contract (PSC) signed the project will involve drilling of 10 exploration wells of 2000 m depth each in Phase-1 & one exploration well of 800 m depth in phase-2 within licensed area of 199 km^2. Following are the coordinates of the block:

Point	Latitude	Longitude
A	21°57'16.00"	73°01'26.00"
B	21°57'16.00"	73°00'14.00"
C	21°58'42.00"	73°00'17.00"
D	22°00'40.00"	73°04'22.00"
E	21°59'32.00"	73°05'00.00"
F	22°02'00.00"	73°05'00.00"
G	22°02'10.00"	73°05'00.00"
H	22°02'10.00"	73°07'20.00"
I	21°59'52.00"	73°07'20.00"
J	21°59'52.00"	73°11'43.00"
K	21°54'00.00"	73°14'50.00"
L	21°54'00.00"	73°08'02.00"
M	21°54'00.00"	73°05'50.89"

N	21°56'52.00"	73°04'47.00"
O	21°58'2.42"	73°03'8.74"

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 12 locations during May, 2011 and submitted baseline data indicates that ranges of concentrations of PM_{10} (36 µg/m^3 to 154 µg/m^3), SO_2 (14 µg/m^3 to 28 µg/m^3) and NO_2 (19 µg/m^3 to 27 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 5.78 µg/m^3 and 21.72 µg/m^3 with respect to SPM and SO_2 respectively. The resultant concentrations are within the NAAQS.

Water based mud will be used. Total water requirement from ground water/surface water source will be 40 m^3/day per well. Drilling and wash water generation will be 20 m3/day and treated in ETP and stored in HDPE lined pit. 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. Drilling well will generate drill cutting (800 MT) and drilling mud (20 m3) and discharged in HDPE lined pit. Disposal of drill cuttings and drill mud will be carried out in accordance wit h 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 (5-6 KLD) will be used. DG set (4 Nos. 500 KVA and 1 x 100 KVA) will be installed. Blow-out-preventer (BOP) will be provided to present fluid from the formation gas gushing to the surface.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 14th August, 2012 for Vadodara District. The issues raised were regarding leveling of land, compensation of landdrill cuttings, etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 1st July, 2012 for Bharuch District. The issues raised during public hearing were local employment, local development 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:

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 PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, CH_4, 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 25 m^3/day/well and prior permission should be obtained from the concerned agency.

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 Bhopal.

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 H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H_2S 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 Bhopal.

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 Bhopal.

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 Bhopal.

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 and circulate the environmental policy.

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.

xxv. Remote monitoring of site should be done.

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

4.4.16. Development of On-shore Block CB-ONN-2003/1 (Part A & B) for the production of on-land Crude Oil (upto 20,000 bopd) and Natural Gas (1 MMSCMD) at Cambay Basin, Gujarat **by M/s Reliance Industries Ltd. - regarding EC.**

The project authorities and their consultant (Vimta Labs) 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 14th Meeting of the Expert Appraisal Committee (Industry) held during 16th–17th September, 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 Reliance Industries Ltd. have proposed for the development of On-shore Block CB-ONN-2003/1 (Part A & B) for the production of onland Crude Oil (upto 20,000 bopd) and Natural Gas (1 MMSCMD) at Cambay Basin, Gujarat. Production Sharing Contract (PSC) has been awarded by the GOI for on-land Bock CB-ONN-2003/1 (Part A & B) under NELP-V for exploration and production of Hydrocarbon to M/s RIL, Operator of the Block, holding 100% Participation Interest. Environment Clearance has been accorded by the MoEF vide letter No.J-11011/483/2006 IA-II(I) dated 2nd September, 2008 for the exploratory drilling in Block CB-ONN-2003/1 (Part A & B) and started exploration in November, 2008. Significant quantities of hydrocarbon have been discovered for explanation from the Block. Discovery was notified by the M/o Petroleum & Natural Gas (MoPNG) vide letter No. RM-CB-ONN-2003-1/RNS/8715 dated 9th March, 2009 and is named as Dhirubhai-43. Part 'A' Block is located in Ahmedabad and Part 'B' in Anand, Gujarat. No towns, national parks, sanctuaries, reserve forests are located within 10 km. The CB (A & B) block is spread over an area of 476 km^2 (part A: 411 Km^2 & Part B:65 Km^2). Total cost of development project is Rs. 1100 Crore. Nal Sarovar bird sanctuary is located at a distance of 25 Km and Velavadar block buck national park is located at a distance of 46 Km. Sabarmati River is flowing within block. Mahi River is flowing at a distance of 2.0 km. Following are the coordinates of the CB-ONN-2003/1 (Part A&B) block :

Part A

Pt.	Latitude	Longitude
M.	22°30'06"N	72°21'30" E
N.	22°30'04"N	72°19'27" E
O.	22°26'27"N	72°19'27" E
P.	22°26'26"N	72°20'38" E
Q.	22°24'36"N	72°20'39" E
R.	22°24'36"N	72°18'46" E
S.	22°23'31"N	72°18'47" E
T.	22°23'30"N	72°20'40" E
U.	22°22'52"N	72°20'39" E
V.	22°22'52"N	72°19'32" E
W.	22°21'48"N	72°19'33" E
X.	22°21'49"N	72°20'40" E
Y.	22°20'40"N	72°20'39" E
Z	22°20'40"N	72°17'56" E
Z	22°17'35"N	72°17'58" E
D	22°17'35"N	72°20'05" E
E	22°17'35"N	72°23'53" E
F	22°17'35"N	72°29'25" E
G	22°25'00"N	72°29'25" E
H	22°25'00"N	72°32'53" E
I	22°25'00"N	72°36'55" E
J	22°31'26"N	72°26'50" E
K	22°28'35"N	72°27'08" E
L	22°28'41"N	72°21'40" E
M	22°30'06"N	72°21'30" E

Part B

Pt.	Latitude	Longitude
A.	22°15'40"N	72°47'00" E
B.	22°19'42"N	72°47'00" E

C.	22°19’42”N	72°48’12” E
D.	22°21’18”N	72°48’12” E
E.	22°21’18”N	72°45’36” E
F.	22°20’16”N	72°45’36” E
G.	22°20’16”N	72°44’45” E
H.	22°22’45”N	72°44’45” E
I.	22°22’45”N	72°51’07.4” E
J.	22°19’39.03”N	72°52’0.03” E
K.	22°19’40”N	72°50’42” E
L.	22°19’40”N	72°49’45” E
M.	22°19’22”N	72°48’09” E
N.	22°17’53”N	72°47’50” E
O.	22°16’30”N	72°47’48” E
P.	22°16’20”N	72°48’10” E
Q.	22°17’04.75”N	72°49’0.01” E
R.	22°15’40”N	72°49’00” E
A.	22°15’40”N	72°47’00” E

Following facilities are proposed in the development project (Part A & B) :

Facilities	**Numbers**
Central Processing Facility (CPF)	1
Group Gathering Stations (GGS)	4
Early Production System (EPS)	1
Total Number of Wells Number of Development Wells Number of Water injectors	100 80 20
Oil Producing Capacity	20,000, BO PD
Associated Gas producing capacity	1 MMSCMD
Infield pipeline network	Approx. 80 km
Power Requirement a) GGS b) EPS c) CPF	 500 KW 250 KW 5 MW
Land Requirement a) GGS b) EPS c) CPF d) Well location	 50 acres 15 acres 200 acres 5.5 acres

The total maximum crude oil storage capacity will be approximately 75,000 m^3.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 11 locations during March, 2011-May, 2011 and submitted baseline data indicates range of PM_{10} (23.22–46.3 ug/m^3), $PM_{2.5}$ (6.3-12.1 ug/m^3), SO_2 (5.4 – 10.2 ug/m^3) and NO_x (7.0-13.6 ug/m^3). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 0.001 µg/m^3 and 3.4 µg/m^3 for SO_2 and NOx respectively. The resultant GLCs are within the NAAQS. The suitable elevated flare systems shall be built at EPS, GGS’s and CPF to cater to the need of flaring of associated gas from shut-down/emergency and normal operations. The potable and process water requirement will be 100 m^3/day, which will be met from ground water source. The injection water is estimated to be upto 3000 m^3/day. The

produced water separated in the GGS's will be treated at the respective GGA or routed to the Central Processing Facility for further treatment. The produced water collected at CPF is planned to be treated and made suitable for water injection. The produced water will be treated in ETP, which will consist of degassing, oil/sand/sediment removal through hydro-cyclone, filtration and chemical conditioning for prevention of bacterial growth and dissolved oxygen inhibition. Sewage will be treated in STP. During drilling operation, approximately 300-380 m^3 of wet drill cuttings are generated. In addition to the cuttings about 30 to 40 m^3 of waste residual mud is generated during well drilling programme. The liquid portion in the drilling mud will be solar evaporated in lined pits and dried solids will be disposed as per the guidelines of GSR notification 546 (E) dated 30th August, 2005. After completion of the exploratory drilling, in case of a dry hole, well abandonment will be done as per the environment and oil mines regulation (OMR) guidelines.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 11th October, 2012 for Anand District. The issues raised were regarding excess land requirement for the project, land acquisition, ground water, type of mud to be used, rig collapse at Ankleshwar site, primay health care facilities, greenbelt, Pariyez bird sanctuary etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

The Committee noted that blocks are located in two districts i.e. Ahmedabad and Anand. However, Public hearing report has been submitted for only one district i.e. Anand. Further, the Committee desired to submit recent public hearing report conducted for Ahmedabad district.

After deliberations, the Committee desired following additional information:

1. Revalidate baseline data.
2. Copy of recent public hearing report conducted for Ahmedabad District.
3. Certified compliance report from the Ministry's Regional office at Bhopal for the existing environmental clearance.

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

4.4.17. Laminate Sheets including Resin Manufacturing at near Ornato, Ceramic, Rajpar Road, Village Shakta Sanala Taluka Morbi, District Rajkot, Gujarat by **M/s Samarpan Laminates- regarding EC.**

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 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 resin manufacturing plants located outside notified industrial area are listed at S.No. 5(f) under Category 'A' of the Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Samarpan Laminates have proposed for setting up of Laminate Sheets including Resin Manufacturing at near Ornato, Ceramic, Rajpar Road, Village Shakta Sanala Taluka Morbi, District Rajkot, Gujarat by M/s Samarpan Laminates. Total plant area is 6000 m^2. Total cost of the project is Rs. 2.70 Crores. No national park/wildlife sanctuary/reserve forest is located within 10 km. Following products will be manufactured:

S.N	Products	Production Capacity		
		Existing	Proposed	Total
1	Laminates sheet	12500 Nos./month or 31.25 MTPM	87500 Nos./ month or 21.875 MTPM	100000 Nos./Month or 53.125 MTPM
2	Phenol Formaldehyde Resin	0.0	155 MTPM	155 MTPM
3	Melamine F Resin	0.0	40 MTPM	40 MTPM

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 6 locations during November 2011 – January 2012 and submitted baseline data indicates that range of concentrations of PM_{10} (57.0 µg/m^3 to 94.0 µg/m^3), SO_2 (12.0 µg/m^3 to 27.3 µg/m^3) and NO_x (13.8 µg/m^3 to 27.7 µg/m^3)respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed expansion would be 1.233 µg/m^3, 0.352 µg/m^3 and 0.200 µg/m^3 with respect to PM_{10}, SO_2 and NO_x respectively. Dust collector and stack height of 30m will be provided to coal/lignite fired boiler & Thermic fluid heater. The water requirement from ground water source will be 7.5 m^3/d. Industrial effluent (3.0 m^3/d) will be treated in ETP and the treated water will be evaporated through steam jacketed evaporator. ETP Sludge will be sent to TSDF. Used oil will be sent to authorized recyclers/re-processors. Acoustic enclosure will be provided to control noise pollution. Waste residue will be sent to common hazardous waste incineration facility. Power requirement (150 KVA) will be met from GEB and 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 28.4.2012 The issues raised were regarding social activities of the industry, impact of proposed unit on surrounding, show-cause notice issued by the GPCB 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) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.

ii) Bag filter alongwith stack of adequate height should be installed to lignite/ coal fired boiler to control particulate emission.

iii) 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.

iv) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.

v) Total ground water requirement should not exceed 7.5 m^3/day and prior permission should be obtained from the Central Ground Water Authority/State Ground Water Board.

vi) As proposed, Industrial effluent will be treated in ETP based on photo fenton process followed by evaporation to achieve zero discharge. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.

vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.

viii) Green belt should be developed in 33% of total plant area.

ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

4.4.18. Grain based Distillery Plant (300 KLPD) along with Captive Power Plant (19.5 MW) at Village Guggilla, Mandal Bejjanki, District Karimnagar, Andhra Pradesh by M/s Richmmount Industries Ltd**. - regarding TORs.**

The project authorities and their consultant (B S Envi-Tech. (P) 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 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 Richmmount Industries Ltd. have proposed from setting up of grain based Distillery Plant (300 KLPD) along with Captive Power Plant (19.5 MW) at Village Guggilla, Mandal Bejjanki, District Karimnagar, Andhra Pradesh. Initially project proponent has submitted application for project location at Village Kallepalli and now, project proponent has revised the project location to Village Guggilla. No forest land is involved. No court case/litigation is pending against the project proposal. Total plant area is 100 acres. The cost of project is Rs. 476 Crore. Rs. 10.30 Crore are earmarked toward capital cost for pollution control measures. Mohidummeda River is flowing at a distance of 6.4 Km. Distillery will be operated for 330 days. Following products will be manufactured:

S.N.	Products	Quantity
1	ENA	300 KLPD
2	By products: a. Technical alcohol b. Fusel Oil c. Food Grade CO_2	 15 KLPD 450 LPD 160 TPD
3	Co-Product DDGS	 265 MTPD

ESP will be provided to coal/biomass fired boiler to control particulate emissions within 50 mg/Nm3. Total fresh water requirement from Lower Mannair Dam will be 3300 m^3/day. Spent wash generation will be 6 KL/KL of alcohol. Spent wash will be centrifuged in decanter to form wet cake and thin slop. Thin slop will be evaporated in MEE and concentrated solids will be mixed with wet cake to form DWGS to achieve zero discharge. DWGS will be passed through

dryer to form DDGS. DDGS will be sold as cattle feed. Fly ash will be sent to brick manufactures/ cement plant. Greenbelt will be developed in 33 % of the plant area.

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

1. Executive summary of the project.
2. Detailed break-up of the land area alongwith latest photograph of the area.
3. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. A copy of lease deed or allotment letter, if land is already acquired.
6. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
7. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
8. Details of proposed products alongwith manufacturing capacity.
9. Number of working days of the distillery unit.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
12. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO_2 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.
13. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
14. Action plan to control ambient air quality as per NAAQES Standards for $PM_{10,}$ $PM_{2.5}$, SO_2 and NO_X as per GSR 826(E) dated 16th November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, 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.
16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan to control and monitor secondary fugitive emissions from all the sources.
18. Details of the use of steam from the boiler.
19. Ground water quality around proposed spent wash storage lagoon and the project area.
20. 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.
21. Fresh water requirement should be restricted upto 10 Kl/Kl of alcohol for grain based distillery
22. Permission of withdrawal of water from competent authority.

23. Proposed effluent treatment system for grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.
24. Spent wash generation should not exceed 6 KL/KL of alcohol production. Details of the spent wash treatment for grain based distillery based distillery.
25. Capacity for spent wash holding tank and action plan to control ground water pollution.
26. Dryer shall be installed to dry DWGS.
27. Layout for storage of rice husk/biomass.
28. Details of solid waste management including management of boiler ash.
29. Green belt development as per the CPCB guidelines.
30. List of flora and fauna in the study area.
31. Noise levels monitoring at five locations within the study area.
32. 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.
33. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
34. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
35. Alcohol storage and handling area fire fighting facility as per norms.
36. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
37. 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.
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.

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. **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.

44. 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.
45. Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
46. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
47. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
48. A tabular chart with index for point-wise compliance of above TORs. 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.

4.4.19. Setting up a Chemicals Manufacturing Plant at Dahej Industrial Estate, Bharuch, Gujarat by **M/s SRF Ltd. - regarding extension of Validity of EC and Amendment in EC.**

The project authorities and their consultant (Kadam Environmental Consultant) have requested to extend the validity of the EC for next five years and amend two products in the EC. Since various issues involved in the project proposal, the Committee desired to examine the issues vis-a vis existing environmental clearance before taking final decision. The Committee deferred the project proposal.

4.4.20. Pesticide Manufacturing Unit at SP 3-7/B, Keshvana Industrial Area, Tehsil Kothputli, District Jaipur, Rajasthan by **M/s Agrow Allied Ventures Pvt. 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 units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Agrow Allied Ventures Pvt. Ltd. have proposed for setting up of the Pesticide Manufacturing Unit at SP 3-7/B, Keshvana Industrial Area, Tehsil Kothputli, District Jaipur, Rajasthan. Total plant area is 40,400 m^2. Cost of project is Rs. 4.0 Crore. No forest land is involved. No court case/ litigation is pending against the project proposal. Following products will be manufactured :

S.N.	Products	Quantity (MTPM)	Quantity (TPA)
1	2,4-D Sodium Salt	173	2080
2	2,4-D Acid Technical	141	1690
3	2,4-D Amine Salt	150	1800
4	2,4-D Ethyl Ester Technical	50	600
5	Clodinfaop- Propargyl Chloride Technical	1.7	20
6	Lambda Cyhalothrin Technical	1.7	20
	Total	**517.4**	**6210**
By Products			
1	HCl (28 to 30 %)	95	1140
2	Recovered Di Chloro Phenol (30%)	60	720

Cyclone followed by Bagfilter will be provided to coal fired boiler (2 TPH) and hot air generator. Two stage water and one stage alkali scrubber will be provided to process vents to control process emissions viz. HCl and Cl_2. Total fresh water requirement will be 54 m^3/day. Effluent generation will be 11.25 m3/day and treated in ETP. ETP sludge will be sent to TSDF. Used oil will be sent to authorized recycler/re-processors. Residue will be sent to CHWIF site. HCl will be sold to actual users.

Project proponent has submitted a copy of Government Order no. F. 4(22)Ind./1/92 dated 1st January, 1993 issued by the Industries (GR.I) Department, Government of Rajasthan indicating Keshvana Industrial Area.

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. A copy of Gazette Notification issued by the Govt. of Rajasthan indicating location of the project in notified RIICO 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 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. A report on study of dioxine emissions from other existing plant located anywhere.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
20. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, NOx, HCl, Cl_2 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. 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 control of Dioxin & Furan, 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 NAAQES Standards notified by the Ministry on 16th September, 2009.
26. An action plan to control and monitor secondary fugitive emissions from all the sources.
27. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
28. Permission from Competent Authority for the drawl of 54 m^3/day water from the public water supply. Water balance chart including quantity of effluent generated recycled and reused and discharged.
29. Action plan for 'Zero' discharge of effluent should be included.
30. 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).
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 management 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. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
34. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal.
35. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
36. Risk assessment for storage for chemicals/solvents.
37. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
38. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
39. 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.
40. 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.
41. 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. Total capital cost and recurring cost/annum for environmental pollution control measures.
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.
48. 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.
49. 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.

4.4.21. Drilling of one Off-shore Infill Well in PY-1 Block off the coast of Tamil Nadu by **M/s Hindustan Oil Exploration Company 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 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 Hindustan Oil Exploration Company Ltd. have proposed for Drilling of one Off-shore Infill Well in PY-1 Block off the coast of Tamil Nadu. Block area is 75 Km^2. Environmental clearance has been accorded for the exploration, development and production of gas vide letter no. J-11011/368/2005-IA(II)(I) dated 29th May, 2006 for 2 offshore exploratory and 3 development wells. Installation of PY-1 platform, pipeline, gas processing (90 MMSCFD) and oil condensate processing unit (1600 BPD) is accorded EC vide letter no.J-11011/98/2007-IA(II) (I) dated 6th July, 2007. Environmental clearance has been accorded for conversion of one exploratory well into development well vide letter no. J-11011/183/2011-IA(II)(I) dated 12th October, 2011.

Now, it is proposed to drill one additional infill producer well from the existing offshore platform. The gas produced from the new proposed well will be co-mingled with the production from the existing wells at the offshore platform and evacuated using the existing sub-sea pipeline and treated at the existing on-shore processing terminal. No additional off-shore/on-shore facilities will be installed. Drilling of only one infill producer well in the existing PY-1 field is proposed. No increase in production is proposed but original level of production will be re-established. PY-1 field has been awarded to HOEC by Government of India under a Production

Sharing Contract (PSC) for exploration, development and production of hydrocarbon reserves within the field. Proposed infill producer well lies within 12 nautical miles of the HTL. Surface coordinates of the proposed well will be: Latitude: 11^{o} 30' 06.038" N, Longitude: 79^{o} 56' 03.092 E. Coordinates of the Block are:

Point	Latitude	Longitude
A	11^{o} 31'16" N	79^{o} 52'51" E
B	11^{o} 33'31" N	79^{o} 55'05" E
C	11^{o} 29'53" N	80^{o} 00'00" E
D	11^{o} 26'48" N	79^{o} 57'20" E

Existing drilling platform will be used for drilling and additional well using horizontal directional drilling techniques. No additional offshore footprint other than sub-lea drilling will be installed. There has been a reduction in gas production from the existing 3 production wells in the PY-1 field due to natural depletion and main aim of drilling is to reach production capacity. Offshore drilling activity will be a temporary activity for 45-60 days. Cost of project is Rs. 162 Crore. Top section will be drilled by using water based mud and intermediate section will be drilled by using synthetic based mud. Water requirement will be 89.15 m^3/day. Wastewater generation will be 31m3/day and treated in STP fitted as per MARPOL Convention (IMO) regulation which ultimately disposes off in sea. 5 DG sets of 4000 HP (3 working and 2 standby) will be used.

Based on the information provided by the Project Proponent about the project and after detailed deliberations, the Committee recommended for the drilling of one Infill Development Well in Offshore Block PY-1, Cauvery Basin, off the coast of Tamil Nadu for which environmental clearance has been granted earlier vide Ministry's letter no. J-11011/368/2005-IA-II(I) dated 29th May, 2006. The Committee considered the proposal and exempted the project proposal from EIA report preparation/public hearing as per para 7 (ii) of EIA Notification, 2006 due to following reasons:

i. Permission was granted earlier for 4 nos. development wells and 1 no. exploratory well.
ii. So far, only 4 development wells have been drilled.
iii. 1 exploratory well is yet to be drilled.
iv. One exploratory well will be converted into in-fill development well because of same drilling process in both type of well.
v. No additional well will be drilled.
vi. No additional land will be required.
vii. No additional water will be required.
viii. The in-fill well will be drilled from the existing platform.
ix. Gas production from the proposed infill development well will be comingled and transported using existing sub-sea pipeline to the onshore terminal for which environmental clearance obtained from the Ministry vide letter no. J-11011/98/2007-IA-II(I) dated 6th July, 2007 and CRZ clearance for laying pipeline from PY-1 offshore platform to the onshore gas processing plant has been obtained vide Ministry's letter no. J-11011/103/2009-IA-II(I) dated 1st April, 2009.

The Committee also suggested to stipulate following specific conditions alongwith other environmental conditions while considering proposal for conversion of exploratory drilling to development drilling:

i. All the specific conditions and general conditions specified in the environmental clearance accorded vide Ministry's letter no. J-11011/368/2005-IA-II(I) dated 29th May, 2006, J-11011/98/2007-IA-II(I) dated 6th July, 2007, J-11011/183/2011-IA(II)(I) dated 12th October, 2011 and CRZ clearance vide Ministry's letter no. J-11011/103/2009-IA-II(I) dated 1st April, 2009 should be implemented.

ii. As proposed, direction well method will be used. The infill well should be drilled from the existing platform.

iii. Only high efficiency DG set with adequate stack height and modern emission control equipment and low sulphur clean diesel should be used. Acoustic enclosure should be provided to the DG sets to mitigate the noise pollution.

iv. Total water requirement should not exceed 89.15 m^3/day and prior permission should be obtained from the Competent Authority for the drawl of water. Only water based mud system should be used. No Chromium based fluid should be used as the drilling fluid.

v. No spent synthetic based mud and material will be discharged into sea. Water based drilling mud (WBM, 150 m^3/well) should be discharged to the sea after proper dilution as per E(P) Rules vide G.S.R 546(E) dated 30th August, 2005.

vi. The Company should ensure that there should be no impact on flora fauna due to drilling of wells in the offshore sea. The company should monitor the petroleum hydrocarbons and heavy metals concentration in the marine fish species regularly and submit report to the Ministry.

vii. Treated wastewater (produced water or formation water or sanitary sewage) should comply with the marine disposal standards notified under the Environment (Protection) Act, 1986. Residual Chlorine should not exceed 1 mg/l before disposal.

viii. The drill cutting (DC) wash water should be treated to conform to limits notified under the Environment (Protection) Act, 1986 before disposal into sea. The treated effluent should be monitored regularly.

ix. All the guidelines should be followed for the disposal of solid waste, drill cutting and drilling fluids for onshore and offshore drilling operation notified vide GSR.546(E) dated 30th August, 2005. Different types of wastes should be kept segregated.

x. High efficiency equipment should be used to separate solids, hydrocarbons and water such as shale shakers with improved capacity to filter smaller solids, low shear pumps for use in produced water should be employed.

xi. Good book keeping practices should be put in place to manage wastes such as waste tracking program viz. identify where and when the waste was generated, the type of waste and its volume, the disposal method and its location, and the personnel responsible for the waste management.

xii. A waste minimization plan should be prepared and followed through proper inventory management following best practices in drilling operations, good house keeping practices and optimized equipment maintenance schedules.

xiii. Only essential rig personnel should be on board the rig. Emergency Response Plan and health, safety and environment (HSE) system should be installed. Geo-hazard and geotechnical studies should be carried out to ensure safe drilling operations.

xiv. All the hazardous waste generated at the rig/offshore facility should be properly treated, transported to on shore and disposed of in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008. No waste oil should be disposed off into sea. Waste/Used oil should be sold to MoEF/CPCB authorized recyclers/re-processors only.

xv. The company should also undertake conservation measures to protect the marine animals/biota in the region.

xvi. The International 'Good Practices' adopted by the Petroleum Industry viz International norms to safeguard the coastal and marine biodiversity should be implemented by the company.

xvii. Requisite infrastructure facilities should be provided near the offshore installations so that booms and skimmers/chemical dispersants could be deployed immediately in case of oil leakage from the installations. Efforts should be made to curtail the oil slick within 500 meters of the installation and accordingly, action plan and facilities to check the oil slick beyond 500 meters should be provided.

xviii. Approval from DG Shipping under the Merchant Shipping Act prior to commencement of the drilling operations should be obtained. At least 30 days prior to the commencement of drilling, the exact location should be intimated to the Director General of Shipping and the Company should abide by any direction he may issue regarding ensuring the safety of navigation in the area.

xix. The flare system should be designed as per good oil field practices and oil industry Safety Directorate (OISD) guidelines. The stack height should be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.

xx. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil should be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.

xxi. The project authorities should install SCADA system with dedicated optical fibre based telecommunication link for safe operation of pipeline and Leak Detection System. Intelligent pigging facility should be provided for the entire pipeline system for internal corrosion monitoring. Coating and impressed current cathodic protection system should be provided to prevent external corrosion.

xxii. The project proponent should also comply with the environmental protection measures and safeguards recommended in the EIA/EMP/RA/NIO report.

xxiii. On completion of activities, the well should be either plugged and suspended (if the well evaluation indicate commercial quantities of hydrocarbon) or killed and permanently abandoned with mechanical plugs and well cap. If well is suspended, it should be filled

with a brine solution containing small quantities of inhibitors to protect the well. The position at the end of the activities should be communicated in detail to the Ministry indicating the steps taken i.e. whether all the wells are plugged or abandoned and precautions taken.

xxiv. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan should be followed.

xxv. Full drawings and details of Blow Out Preventor to encounter well kick due to high formation presence, if encountered, should be submitted to the Ministry within 3 months of the issue of environment clearance.

xxvi. Petroleum & Natural Gas (Safety in Offshore Operations) Rules, 2008 of OISD should be strictly adhered during drilling/production.

xxvii. Adequate funds both recurring and non-recurring should be earmarked to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government alongwith the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.

xxviii. A brief report on environmental status & safety related information generated and measures taken as well as frequency of such reporting to the higher Authority should be submitted to this Ministry and its Regional Office at Bangalore.

xxix. Company should prepare project specific environmental manual and a copy should be made available at the drilling site for the compliance.

xxx. Company should adopt Corporate Environment Policy as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011and implemented.

4.4.22. Expansion of Chemicals & Bulk Drugs Manufacturing Unit at Village Vapi, District Valsad, Gujarat by **M/s Paras Intermediates Pvt. Ltd. - regarding TORs.**

The project authorities and their consultant (M/s Paras Intermediates 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 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 Paras Intermediates Pvt. Ltd. have proposed for Expansion of Chemicals & Bulk Drugs Manufacturing Unit at Village Vapi, District Valsad, Gujarat. Total plant area is 4684 m^2 and no additional land is required for the expansion. Total project cost is Rs. 1065 Lakhs. Plant is located within the 10 Km of Union territory boundary i.e. Daman. No forest land is involved. No national parks/wildlife sanctuaries/biosphere reserves are located within 10 Km. No court case/ litigation is pending against the project. Following products will be manufactured:

S.N	Product (Product Group)	Existing Consent	Proposed Addition	Total after Expansion	Remarks

		(MTPM)	(MTPM)	(MTPM)	
A	Glycine (Amino Acetic Acid)	60.0	200.0	260.0	Expansion
	Total	**60.0**	**200.0**	**260.0**	
B	**Inorganic Thiocyanate Salts**				
1	Ammonium Thiocyanate	35.0	0	46.0	Consolidation based on product group
2	Sodium Thiocyanate	5.0	0		
3	Potassium Thiocyanate	6.0	0		
	Total –Thiocyanate Salt	**46.0**	**0**	**46.0**	
C	**Amino Acid Salts & Chelates**				
1	Sodium Hydroxy Methyl Glycinate	30.0	30	60	Expansion + Consolidation of product
2	Ferrous Glycine Sulphate	0			
3	Zinc/Calcium /Copper /Magnesium Glycinate	0			
4	Sodium Glycinate	0			
5	Glycine Mono Sodium/ Disodium Carbonate	0			
	Total	**30.0**	**30.0**	**60.0**	
D	**Amino Acid Derivatives**				
1	Hippuric Acid (N Benzoyl glycine)19.8	1.2	19.8	30.0	Expansion + Consolidation of product
2	N Acetyl Glycine	6.0			
3	Glycine Hyd10.0rochloride	3.0			
4	Valine (Methyl/Ethyl)Ester Hydrochloride	0			
5	Valine Hydrochloride	0			
6	Glycine Methyl/Ethyl Ester Hydrochloride	0			
	Total	**10.2**	**19.8**	**30.0**	
E	**Rubber chemicals & Accelerators**		10.0	20.0	Expansion + Consolidation of product
1	Ethylene Thiourea	2.0			
2	2 Mercapto Benzimidazole	5.0			
3	Di Penta Methylene Thiurum Tetrasulphide	3.0			
4	Mercapto Methoxy Benzimidazole	0			
5	Di Phenyl Thio Urea	0			
	Total Rubber Chemicals & Accelerators	**10.0**	**10.0**	**20.0**	
F	Cyclohexyl Urea	**12.0**	**0**	**12.0**	No change
	Total	**12.0**	**0**	**12.0**	
G	Mono chloro Acetic Acid	**70.0**	**-70.0**	**0**	Discontinue
	Total	**70.0**	**-70.0**	**0**	

	Total (Ocerall)	**238.2**	**189.8**	**428.0**	
H	**By Products**				
1	Ammonium Chloride	42.0	185.8	227.8	Increased due to increased capacity of main product and higher recovery
2	Sodium hydro Sulphide or Ammonium Hydrogen sulphide	87.0	46.46	133.46	-
3	Hydrochloride Acid	95.0	-95.0	0	Eliminated
4	Spent Acetic acid or Acetic acid salts	12.0	0	12.0	-
5	Liquor Ammonia	19.0	42.3	61.3	-
	Total	**255.0**	**179.56**	**434.56**	

Stack of adequate height (11 m) has been provided to the existing gas fired steam boiler (I & II) and thermic fluid heater. Adequate scrubbing system will be provided to process vents to control process emissions viz. NH3 & H2S. Fresh water requirement from GIDC water supply will be increased from 75.1 m3/day to 160.5 m3/day after expansion. Effluent generation will be increased from 31.9 m3/day to 57.5 m3/day after expansion. Effluent will be treated in ETP. Distillation residue from the process and spent carbon will be sent to Cement industries or common incinerator facility. ETP sludge will be sent to TSDF. Used oil will be sent to authorized recycler/re-processors. Greenbelt will be developed in 800 m^2. The Committee noted that environmental clearance was accorded by the MoEF vide letter no. J-11011/518/2007-IA II(I) dated 15th January, 2008 for the existing unit.

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. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
9. Project location and plant layout.
10. Infrastructure facilities including power sources.

11. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
12. Project site location alongwith 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 alongwith supporting document.
14. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
15. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
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.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Action plan for the transportation of raw material and products.
21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
22. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
23. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, NOx, 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.
24. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Details of water and air pollution and its mitigation plan.
28. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
30. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
31. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
32. Attempt to be made for reduction for usage of water.
33. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
34. Zero discharge effluent concepts to be adopted.
35. 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).
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 disposal of fly ash generated from boiler shall be included.

37. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
38. 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.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
41. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
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. 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. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
54. 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.

4.4.23. Expansion of Steel Melting Shop Unit in the existing Steel Plant at Village Palitpur, District Burdwan, West Bengal by **M/s BRGD Ingot 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. 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 BRGD Ingot Pvt. Ltd. have proposed for expansion of Steel Melting Shop Unit in the existing Steel Plant at Village Palitpur, District Burdwan, West Bengal. Total plant area is 5.83 acres. Project cost is Rs. 1500 Lakhs. No forest land is involved. No court case/ litigation is pending against the project. Ramnabagan Wildlife Sanctuary is located at a distance of 3.6 Km to the south –west direction of the project site. River Damodar is flowing t a distance of 7.5 Km. Two induction furnace of capacity 1x 10 T & 1x 15 T with matching LRF & CCM (90,000 TPA Billet) to be installed in order to act simultaneously as the melting unit in the steel melting shop.

Bagfilter will be provided to induction furnace and raw material handling area. Total water requirement from ground water source will be 102 m^3/day. Total power requirement will be 10 MVA and sourced from DVC supply system. DG set (180 KVA) will be installed.

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. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, from the Standing Committee of the National Board for Wildlife as the project is located within 10 Km distance of **Ramnabagan Wildlife Sanctuary.**
10. 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.
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. 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..

21. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO_2, Al_2O_3, MgO, MnO, K_2O, CaO, FeO, Fe_2O_3, P_2O_5, H_2O, CO_2.
22. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
23. Action plan for excavation and muck disposal during construction phase.
24. 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.
25. Manufacturing process details for all the plants should be included.
26. Mass balance for the raw material and products should be included.
27. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
28. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
29. 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.
30. 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.
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 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/Nm^3.
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 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.

37. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
38. 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.
39. One season data for gaseous emissions other than monsoon season is necessary.
40. 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.
41. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
42. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. 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.
43. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
44. Ground water modeling showing the pathways of the pollutants should be included
45. Column leachate study for all types of stockpiles or waste disposal sites at 20^{o}C-50^{o}C should be conducted and included.
46. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
47. Permission for the drawl of water from the 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.
48. A note on the impact of drawl of water on the nearby River during lean season.
49. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
50. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1;10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
51. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.

52. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
53. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
54. 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 heath 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 West Bengal State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

4.4.24. Expansion of Synthetic Organic Chemicals Unit at Plot No. 294-296, GIDC Vapi, District Valsad, Gujarat by **M/s Rama Pulp and papers Ltd. - regarding TORs.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All Synthetic Organic Chemicals Industry 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 Rama Pulp and papers Ltd. have proposed for expansion of Synthetic Organic Chemicals Unit at Plot No. 294-296, GIDC Vapi, District Valsad, Gujarat. Total plant area is 6960 m^2. Total cost of project is Rs. 2.0 Crore. No forest land is involved. No court case/litigation is pending against the unit. Following products will be manufactured:

S.N.	Products	Quantity (MTPM)	Quantity (MTPA)
1	LABSA	1500 MTPM	18000 MTPM
2	Diluted Sulphuric Acid 80%	1327.50 MTPM	15930 MTPM

Scrubber will be provided to process vent to control process emissions. Water requirement from GIDC water supply will be 24.5 m^3/day. Industrial effluent generation will be

5.5 m3/day and treated in SBR based STP. Used oil will be sent to authorized recycler/re-processors. Power requirement will be 100 KVA and met from DGVCL.

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. 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. A map indicating location of the project and distance from severely polluted area
9. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
10. Infrastructure facilities including power sources.
11. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
12. 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.
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 alongwith the production capacities.
17. Detailed list of raw material 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 PM_{10}, SO_2, NOx 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. 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 along with control of Dioxin & Furan, 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 24.5 m^3/day water from the concerned agency. Water balance chart including quantity of effluent generated recycled and reused and discharged.
30. Action plan for 'Zero' discharge of effluent should be included.
31. 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).
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.
33. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
34. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
35. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
36. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
37. Risk assessment for storage for chemicals/solvents.
38. Material safety data sheet of chemicals to be submitted.
39. An action plan to develop green belt in 33 % area.
40. 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.
41. Details of occupational health programme.

i) To which chemicals, workers are exposed directly or indirectly.
ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
iii) What measures company have taken to keep these chemicals within PEL/TLV.
iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
v) What are onsite and offsite emergency plan during chemical disaster.
vi) Liver function tests (LFT) during pre-placement and periodical examination.
vii) Details of occupational health surveillance programme.

42. Socio-economic development activities should 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 should be provided.
45. EMP should 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.

47. 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.
48. 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. 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.

4.4.25. Synthetic Organics and Chemical Fertilizers Manufacturing Unit at Village Wahegaon, Tehsil Paithan, District Aurangabad, Maharashtra by **M/s Rama Pulp and paper Ltd. - regarding TORs.**

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 alongwith the draft Term of References for the preparation of EIA/EMP. 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. All fertilizer plant except single super phosphate plant is listed at S.N. 5(a) under category 'A' and appraised at Central level. under category 'A' and appraised at Central level.

M/s Rama Pulp and paper Ltd. have proposed for setting up of Chemical Fertilizers Manufacturing Unit at Village Wahegaon, Tehsil Paithan, District Aurangabad, Maharashtra. Total plant area is 21.85 acres. Total cost of the project is Rs. 34 Crore. No forest land is involved. No court case/litigation is pending against the project. Nath sagar and River Godavari is located at a distance of 5 Km and 9.6 Km respectively. Following products will be manufactured :

S.N.	Products	Quantity (MTPM)	Quantity (MTPA)
1	LABSA	1500	18000
2	Single Super Phosphate (SSP)	12000	144,000
	By-products		
3	Diluted Sulphuric Acid 80%	1327.50	15930

The process emissions from SSP will be scrubbed in ventury scrubbers and after scrubbing the flue gas will be vented through chimney. The scrubbing liquor formed during the process of scrubbing will be used for dilution of sulfuric aci and recycled back to process. Total fresh water requirement from ground water source will be 97 m3/day. Industrial effluent generation will be 9 m3/day and treated in ETP. Waste oil will be sent to authorized recycler/re-processors. Greenbelt will be developed in 7.22 acres of land.

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 PM_{10}, $PM_{2.5}$, SO_2, NOx, CO, NH_3 , 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 NOx emission and method to control NOx.
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 -l1013/77/2004-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 Maharashtra Pollution Control Board for public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

4.4.26. **Expansion of Fertilizer plant at Plot NO. 96, Sector-A, Sirgitti Industrial Area, Tehsil Bilha, District Bilaspur, Chhattisgarh by M/s BEC Fertilizers. - 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 fertilizer plant except single super phosphate plant is listed at S.N. 5(a) under category 'A' and appraised at Central level. under category 'A' and appraised at Central level.

M/s BEC Fertilizers have proposed for expansion of Expansion of Fertilizer plant at Plot NO. 96, Sector-A, Sirgitti Industrial Area, Tehsil Bilha, District Bilaspur, Chhattisgarh. Total plot area 47.66 acres. Project cist is Rs. 75.00 Crores. River Arpa is flowing at a distance of 12 Km. Following products will be manufactured:

S.N.	Products	Existing CAP (MT PA)	Proposed CAP (MT PA)	REMARKS
1	Sulphuric Acid	40,000	1,40,000	
2 A	Single Super Phosphate	1,40,000	4,40,000	Combined capacity of all the three products will not exceed 4,40,000 TPA
B	Triple Super Phosphate	-	1,00,000	
C	Boronated Single Super Phosphate	-	40,000	
3	Granulated Fertilizer (SSP/TSP/NPK/Customized Fert)	45,000 (NPK)	4,40,000	

Cyclone separator, multi stage scrubbing system with venture and spraying towers are installed in SSP plant. Alkali scrubber, demister and mis-eliminators will be provided to acid plant. Water requirement will be increased from 350 m^3/day to 1550 m^3/day. Power requirement will be increased from 0.7 MW to 3.2 MW and sourced from CSEB. Turbine generator (2500 KVA) will be installed. DG sets (2x1070 KVA) are installed. ETP sludge will be utilized in SSP plant. Catalyst will be sent to authorized recyclers.

After deliberations, the Committee prescribed the following TORs for the 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 Chhattisgarh Polution Control Board.
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 alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
12. Project site location alongwith 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 alongwith the production capacities and list of solvents and its recovery plan.
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 of each products.
19. Action plan for the transportation of raw materials and products.
20. 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.
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 PM_{10}, $PM_{2.5}$, SO_2, NOx, CO, NH_3 , 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 NOx emission and method to control NOx.
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 alongwith 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 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 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.

48. 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.
49. 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 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 -l1013/77/2004-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) 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.

4.4.27. Expansion of Bulk Drug Intermediates Manufacturing Unit at Village Belad, Taluka Malkapur, District Buldhana, Maharashtra by **M/s Chaitanya Biologicals Pvt. 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 Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) and appraised by the Expert Appraisal Committee (Industry) in the Ministry.

M/s Chaitanya Biologicals Pvt. Ltd. have proposed for expansion of Bulk Drug Intermediates Manufacturing Unit at Village Belad, Taluka Malkapur, District Buldhana, Maharashtra. No forest land is involved. No court case/litigation is pending against the project. Total plant area is 3.5 acres. Total cost of expansion is Rs. 1.69 Crores. Rs. 0.30 Crore is earmarked towards capital cost for pollution control measures. No national park /wildlife sanctuary is located within 10km from the project site. Following products will be manufactured:

S.N.	Product	Capacity
1	Ferrous Glycine Sulphate	2.5 TPD Maximum Production of one or more products as per market order
2	Ferrous Amminoate	
3	Ferrous Bis Glycinate	
4	Peptone's/Tryptone	
5	Iron (III) Hydroxide Poymaltose Complex	
6	Iron (III) Hydroxide Poysucrose Complex	
7	Iron (III) Hydroxide Polysacchride Complex	
8	Glucosamine Hydrochloride	
9	Glucosamine Sodium Sulphate	
10.	Glucosamine Potassium Sulphate	
11	Methyl Sulphonyl Methane	
12	Alovera	
13	Chitosan	
14	Malt Extract	
List of Proposed Products		
15	Iron Protein Succinylate	
16	Ferric Pyrophosphate	
17	Ferrous Ascrobate	
18	Calcium Fumarate	
19	Calcium aspartate	
20	Calcium Pidolate	
21	Ferric Gluconate	
22	Iron Caseinate	
23	Sodium Ferric EDTA	
24	Casein Purrified	
25	Casein Protein Hydrolysates	
26	Casamino Acid	
27	Yeast Extract Bacteriological Grade	

Fresh water requirement for existing and proposed plant is 68 m^3/day. Total effluent generation is 31.2 m3/day and treated in ETP. ETP sludge will be sent to CHWTSDF and process residue will be sent to CHWTSDF/ sale to authorized 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. A map indicating location of the project and distance from severely polluted area.
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the MPCB.
12. 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.
13. 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.
14. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
15. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
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.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Action plan for the transportation of raw material and products.
21. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
22. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
23. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, NOx, 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.
24. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Details of water and air pollution and its mitigation plan
28. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
29. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.

30. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
31. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
32. Attempt to be made for reduction for usage of water.
33. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
34. Zero discharge effluent concepts to be adopted.
35. 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).
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 disposal of fly ash generated from boiler shall be included.
37. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
38. Material Safety Data Sheet for all the Chemicals are being used/will be used.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
41. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
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. 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. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
54. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
55. A tabular chart with index for point-wise compliance of above TORs.

The following general points 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.

4.4.28. Proposed expansion at Block No. 123, Ujedia Road, Village Mahiyal, Taluka Talod, District Sabarkantha, Gujarat by **M/s Sterling Lam Ltd- regarding TORs.**

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

4.4.29. Proposed 5000 TCD to 10000 TCD Sugar & 28 MW to 56MW, Cogen Power Plant at Village Uttur, District Bagalkot, And Karnataka by **M/s Indian Cane Power Limited. - regarding TORs.**

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

4.4.30. Expansion of induction furnace and installation of Ferro Alloys Plant, Foundry & Rolling Mill in the existing plant area at Village Diwandighi, P.O. & Mouza-Mirzapur, Palitpur Road, P.S. & District-Burdwan in West Bengal by **M/s N.N. Ispat Pvt. 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. 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 N.N. Ispat Pvt. Ltd. have proposed for Expansion of induction furnace and installation of Ferro Alloys Plant, Foundry & Rolling Mill in the existing plant area at Village Diwandighi, P.O. & Mouza-Mirzapur, Palitpur Road, P.S. & District-Burdwan in West Bengal. Total existing plant area is 10.05 acres and expansion will be done on the land of about 6.95 acres. Project cost is Rs. 58 Crore. No forest land is involved. No court case/ litigation is pending against the project. Ramnabagan Wildlife Sanctuary is located at a distance of 4.0 Km to the south direction of the project site. River Damodar is flowing at a distance of 8.5 Km. Following are the existing and proposed units:

S.N.	Unit	Unit Capacity	Product
Existing Project			
1	Induction Furnace (2 x 8T)	48,000 TPA	Ingot
Proposed Project			
1	Induction Furnace (2 x 15 T)	90,000 TPA	Liq. steel
2	LRF	90,000 TPA	Liq. steel
3	Continuous Casting Machine	90,000 TPA	Billets
4	Rolling Mill	1,20,000 TPA	Structural Steels (Angels, Channels, TMT etc.)
5	Ferro Alloy Plants (2 x 9 MVA Submerged Arc Furnaces)	Ferro Manganese-20,460 TPA	
		Silico Manganese -14,850 TPA	
		Ferro Silicon-6,600 TPA	
6	Foundry Consisting of Cupola Furnace (2 x 5 T)	21,5000 TPA	Cast Iron
7	Induction Furnace	18,000 TPA	Ductile Iron
8	Green Sand Plant (2 x 20 TPH)	72,000 TPA	Mould
9	Sand Reclamation Plant (2 x 10 TPH)	80,000 TPA	Fresh Sand

Adequate air pollution control measures such as bagfilter, dust suppression system & stack of adequate height at relevant point will be installed. Fresh water requirement from ground water source will be 81 m3/day. There will no discharge of industrial effluent. Domestic wastewater will be treated in septic tank. Slag of IF & cupola furnace will be used for landfilling

/road construction. Slag from Ferro-Maganese process will be used for production of silico manganese. Mill scale and scraps from rolling mill as well as end cuts and scales from continuous casting will be used as raw materials in induction furnaces. Total power requirement will be 37 MW and sourced from DVC supply system.

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.
10. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, from the Standing Committee of the National Board for Wildlife as the project is located within 10 Km distance of **Ramnabagan Wildlife Sanctuary.**
11. 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.
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. 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.
14. Details and classification of total land (identified and acquired) should be included.
15. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
16. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
17. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .
18. A list of industries containing name and type in 25 km radius should be incorporated.
19. Residential colony should be located in upwind direction.

20. 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”.
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 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..
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 SiO_2, Al_2O_3, MgO, MnO, K_2O, CaO, FeO, Fe_2O_3, P_2O_5, H_2O, CO_2.
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. Action plan for excavation and muck disposal during construction phase.
25. 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.
26. Manufacturing process details for all the plants should be included.
27. Mass balance for the raw material and products should be included.
28. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
29. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
30. 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.
31. 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.
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 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/Nm^3.
36. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
37. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
    i) Emissions (g/second) with and without the air pollution control measures

ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height using SODAR) on hourly basis
iii) Model input options for terrain, plume rise, deposition etc.
iv) Print-out of model input and output on hourly and daily average basis
v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
ix) Graphs of monthly average daily concentration with down-wind distance
x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.

38. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
39. 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.
40. One season data for gaseous emissions other than monsoon season is necessary.
41. 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.
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. 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.
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 modeling showing the pathways of the pollutants should be included
46. Column leachate study for all types of stockpiles or waste disposal sites at 20^{o}C-50^{o}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 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.

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. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
56. 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.
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 particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
59. 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.
60. 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.
61. 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.
62. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
63. 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.
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 and damage control needs to be addressed and included.
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 heath 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.

67. 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.
68. 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.
69. 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.
70. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
71. 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.
72. 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.
73. A note on identification and implementation of Carbon Credit project should be included.
74. 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 West Bengal State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

4.5.0 Reconsideration

4.5.1 Resid Upgradation Project by adding Delay Coker Unit, OHCU Revamp Unit, Sulfur Recovery Unit, Sour Water Stripper, Amine Regeneration Unit and LPG-CFC Treating Unit at Manali Refinery Complex, District Thiruvallur, Tamil Nadu by **M/s Chennai Petroleum Corporation Limited. (TOR to EC)--Site Visit Report.**

Site visit report

1. Project Name

Resid Upgradation Project by adding Delay Coker Unit, OHCU Revamp Unit, Sulfur Recovery Unit, Sour Water Stripper, Amine Regeneration Unit and LPG-CFC Treating Unit at Manali Refinery Complex, District Thiruvallur, Tamil Nadu by M/s Chennai Petroleum Corporation Limited.

2. Background information

The project proposal was first considered in the 29th EAC meeting held during 17th -18th November, 2011. Based on the committee's requirement for additional information, the project authorities (PAs) submitted the requisite information vide letter dated 26th December, 2011.

PAs presented their project details again on the 32nd EAC meeting held on 16-17th February, 2012. The committee recognized the complexity of the project and site, which is located in a CPA and decided to visit the site. The proposal was deferred till a site visit was performed. A sub-committee comprising of Shri M. B. Lal, Chairman, Shri R.K. Garg, Member, Shri Rajat Roy Chaudhury, Member, EAC along with a representative from the Ministry visited the project site during 30th – 31st March, 2012.

The sub-committee findings were presented to the EAC at the 35th Meeting held on 11th May 2012. The committee observed that 11 short term and 4 long term plans have been identified. Many of the plans have been implemented but a few were due for completion by July-August, 2012. It was recommended that the proposal may be reconsidered after action on the plans has been completed by CPCL.

The PAs presented their details on compliance again to the 1st reconstituted EAC meeting held during 24th-25th September, 2012, wherein a site visit was recommended to assess the existing pollution control measures adopted in the existing plant and suggest additional pollution control measures to be adopted during proposed expansion.

The members of the Sub-committee for the site visit comprised of Shri M. Raman, Chairman, Shri Rajat Roy Chaudhury, Member, (EAC-I) and Mr. A.B.HarpanHalli , Regional office CPCB, Ministry of Environment & Forests. This report provides details of the site visit and compliance status to the issue raised in the previous site visit. Following officials were present from M/s CPCL:

S.Venkataramana Director(Operations)
T.S.Ramachandran Director(Technical)
N.Nachiappan GM(Technical)
S.Visveswaran GM(Operations)
G.Aravindan GM(Maint)
A.Kumar GM-i/c(P&D and R&D)
K.Duraiswamy DGM(EP&S)
S.T.Kalaimani DGM(Ref I & II)
K.Venkatesan DGM(Ref III)
K.Murugesan CM(Dev.)
M.Natarajan CM(EP&S)

3. Findings of the site visit

A presentation of the project and status of compliance was made by Mr. Sankar, GM (Projects) CPCL to the committee. This was followed by a field visit to witness implementation of the

recommendations of the previous sub-committee. Table 1 indicates the original observation and the current status.

1. The committee enquired about the additional pollution load due to the proposed Resid Up-gradation Project (RUP) and the methods for reduction of pollution load.

   CPCL indicated that the overall pollution load will be reduced from the present level, while integrating the RUP with the existing units and implementation of various pollution control measures in the proposed RUP as well as in the existing facilities. Currently, the plant processes the crude in an atmospheric column. The atmospheric column bottom is processed in Vacuum column, where the vacuum column bottom is called as Vacuum Residue (VR). The VR is processed to produce Furnace Oil (FO) & for blending High Speed Diesel.

   The advanced new processing Technology of RUP will convert the Vacuum Residue (presently marketed as FO) and generate additional higher demand and value products, namely Fuel Gas, LPG, Naphtha, Motor Spirit and Superior Kerosene & High Speed Diesel. These products will have lower Sulfur content as new Sulfur Recovery Unit (SRU) with 99.9% recovery is proposed as part of RUP. The sulfur recovery occurs in the form of (162.5 MTPD) elemental sulfur and will be sold commercially to other industries. The sale of low sulfur fuels will also reduce SO2 emissions by the users.

   In addition, Sulfur content of present refinery fuel oil will be further reduced by maximizing Low sulfur components like CBR resid, unconverted bottom from Hydrocracker in post RUP period.

   Low NO_X burners will be installed in all the heaters of proposed RUP project as well as the existing heaters also.

   The overall reduction of emissions in MTPD is summarized below:

S.No	Attributes	Present	Post Resid	Increase (+)/Reduction	Remarks
1	SO_2 emission by CPCL	17.37	16.99	-0.38	Including SRU SO_2 emission
2	NO_x emission By CPCL	3.40	3.00	-0.4	Due to low NO_x burners

   Thus, this expansion project, in isolation, will lead to a reduction in pollutant emissions.

2. However, the plant is located in a CPA and an action plan for overall reduction of pollution was required, as highlighted in the site visit report.

S.N.	**Recommendation**	**Status as on 26.11.2012 and**	**Remarks**

A	**SO_2 Emissions** MoEF while, recommending the Environmental clearance for Refinery Project III, stipulated SO_2 emission, MT/D as 17.41. It is reported that presently the emission level is about 16.44 MT/D and after post project the level may reduce to 15.87 MT/D. However, in the action plans there is no specific target for SO_2 reduction. The collective measures taken may have an impact on SO_2 emission also.	CPCL has not indicated an action plan for SO_x reduction as part of CPA status removal. The figures in Col (1) indicate figures without emissions from SRU.	CPCL indicates that for reduction of SO2 emission is planned through completion of resid Upgradation project. Sulfur emissions including the SRU, before and after the Resid project will be 17.37 and 16.99 MT/D.
B	**NO_X emissions** MoEF while, recommending, the Refinery Project III, stipulated NO_x emission, KG/D as 720. It is reported that presently the emission level is about 4033 KG/D and after post project the level may reduce to 3000 KG/D. The details are given in the Resid up-gradation project 2012. Industry neither met these stipulated limits nor represented to MOEF/CPCB for revision of these stipulations in the EC clearance (Year 2000, for Refinery III). As per the latest oil refinery standards also the figure of 720 appears to be not achievable if calculated based on data. There are 45 nos. of Boiler & heaters operating presently out of which 26 nos. of are having Low NO_X burners and 8 nos. are Low NO_X burners with De-NO_X facilities. Burners	CPCL has confirmed that NO_x of 720 kg/day is not achievable. CPCL's NO_X emission is 0.118 kg/MT of crude. Refineries at Mangalore and Vizag emit 0.162 and 0.285 kg/MT of crude. Burners in 4 number heaters have been replaced in October 2012.	The target for December 2012 cannot be met. Replacement of balance 15 low NO_X heaters can be undertaken only during shut down. Due to postponement of shutdown of these units to 2013-14, the plan of replacement has been deferred. A date/deadline for replacement with low NO_X burners may be specified in EC.

	in 4 nos. of heaters are getting replaced with Low NO_X burners in July 2012 and there is plan to replace all burners in the balance 15 heaters with Low NO_X burners. With above actions CPCL shall reduce further NO_X emission from the present level of 3400 kg/day to 3000 kg/day even with additional heaters (4 Nos) of resid up gradation project. The target is fixed as December 2012		
C	**Particulate Emissions** At present it has been reduced from 4718 kg/d as pre CEPI, to 2000 kg/d and post project scenario estimated as 1500 kg/d (Details as per project report). One of the conditions to reduce particulate matter is introduction of natural gas and is estimated to be a reality only in 2015	There is no NG pipeline or nearby source of LNG as the gas grid is yet to reach this region. CPCL indicates that arrangements to use NG will be done based on its availability. Expected date is 2015-16.	CPCL can meet this requirement, only if LNG supply is made possible.
D	**Reduction of VOC & Benzene Emissions** As per the action plan the industry was required to convert ETP-1 and ETP-2 to close tanks by June 2012. Another action plan was in-situ sludge treatment in crude plants, Provision of vapour adsorption system in ETP-2 and ETP-3 in December 2012. Implementation of LDAR and inventorisation of fugitive emissions. The arrest of VOC from the above sources as per action plan may reduce the emission level to a certain extent. It is observed that most of	Closed tanks (3X10000 KL) have been commissioned for ETP-2. CPCL indicates that ETP-1 will need to be relocated to create space for resid Upgradation project. Thus, covering of open pond could not be taken up. The additional ETP proposed with the RUP will also handle the current ETP-1 load also & closed tanks will be provided for new proposed ETP In-situ sludge treatment has been completed in two tanks and the same	A specific plan for implementation of VPS based on the HAZOP study needs to be provided.

	these projects are in progress; however the progress is not encouraging as desired. It is proposed that industry may be asked to complete these projects as per the action plan. In controlling the fugitive emission by LDAR and inventorisation industry has to take up this work in-house or outsource it every year.	methodology will be adopted for all tanks. Provision of vapor adsorption system (VPS) is delayed due to the directive from task force (CREP) for carrying out a HAZOP study as accidents have been reported in the existing plants elsewhere due to VPS. The HAZOP study has been completed & Detailed Engg is being carried out based on HAZOP recommendation. LDAR has been completed for entire refinery & report submitted. The second cycle of LDAR is in progress. The same job will be repeated every year.	
E	**Reduction of pollutant load to water environment** The entire effluent water generated is treated in ETP's. Industry has taken short term measures as i) Disposal of entire effluent of RO reject to neighbouring industry ii) Reclamation of storm drains water and reused in the refinery. This action plan was targeted for August 2011, now revised as June 2012. It will reduce the pollution load to the Buckingham canal. Details are given in the resid up-gradation project report. Presently during dry weather condition, wate collected in the storm pond from storm drains are let ou to Buckingham canal	Facilities for disposal of entire effluent of RO reject to neighboring industry have been completed & commissioned in Oct'12. The scheme for maximizing recycle has also been completed & commissioned in Sept'12. CPCL indicates there will be no discharge to Buckingham canal during dry weather.	

	Industry has initiated actio for reclaiming the wate discharge to Buckingha canal from these ponds. The scheme of maximising the recycled water was originally targeted to be completed in August 201 and now revised to be completed in May 2012. By this, reduction of pollutants reaching Buckingham cana may be achieved		
F	**Reduction of pollutant load to land environment** To minimize the ground water, following actions were initiated – 1) Improvement in the quality of treated water from ETP by revamp of ETP-1 and ETP-2 by addition and repair of new dissolved air floatation unit and TPI in ETP-2, new diffused aeration system in ETP-2, pressure sand filter and activated carbon filter in ETP-1 and ETP-2 and refurbishment of all existing equipment. 2) Rain water harvesting in flare area and all buildings in the refinery. With the above measures, significant reduction shall be achieved in pollutants reaching ground water. The details in the reduction are given in the resid up gradation project report	All the actions initiated for improvement in the quality of treated water from ETP by revamp of ETP-1 and ETP-2 have been completed & commissioned in Oct 12 CPCL indicates that rain water harvesting has been completed for 14 nos of buildings and near Flare stack area	Percentage completion of rainwater harvesting system needs to be provided and a completion date needs to be indicated in EC.

G	**Linking data from continuous ambient air quality/Stack monitoring station with TNPCB** This linking of monitoring data to TNPCB was originally planned to be complete by December 2011.However, as per the revised plan it is scheduled to be completed in July 2012.	CPCL indicates that hardware has been installed and software issues have delayed implementation. CPCL has indicated that the system will be functioning by Dec 12.	The delays are stated to be due to procurement. Deadlines indicated to MoEF must have the concurrence of CPCL's administration including procurement departments.
H	**Co- processing of hazardous waste in cement kiln** For the disposal and to convert waste material to useful material it has been planned to dispose the hazardous material generated from the refinery to cement industries except the spent catalysts, ion- exchange resins and activated carbons. The co-processing activity is already initiated and proposed to be completed by July 2012.	CPCL indicates that all actions for co processing in cement kiln like sample testing, analysis and acceptance by cement industries (M/s ACC & Ultratech) sale agreement transport methodology have been completed and duly filled application submitted to TNPCB for amendment of Authorization for handing hazardous waste. An amendment from TNPCB for incorporating Co-processing in cement kiln is awaited.	Status of this requirement needs to be provided in the subsequent compliance reports.
1	Spillages were observed at a number of places and the general housekeeping was not found satisfactory. Spillages should be immediately cleared and unwanted materials may be renewed from the working areas.	Spillages have reduced and housekeeping has improved.	Significant scope for improvement exists as the accumulated lack of housekeeping over the years is large. A detailed plan for continuous housekeeping should be prepared by CPCL with a budget and compliance to the plan made part of the environmental compliance reports. Review of the plan and budget allocation

			needs to be done annually based on compliance.
2	Some of the monitoring instruments both in the mobile van and the stationery monitoring station were not found to be in working condition and calibration did not appear to be correct. All monitoring instruments should be properly maintained and regularly calibrated as per CPCB protocol.	The monitoring instruments were found to be working and results were reasonable.	Regular calibration reports may be submitted in the environmental compliance reports. Statistics of mean, min and max need to be compared for previous year and trends analyzed as part of the assessment of calibration.
3	The arrangement of oil recovery from the sludge removed from storage tanks and storage after oil recovery was found to be unsatisfactory. Some automation should be provided in the system and proper intermediate storage of the cake after oil recovery before final disposal should be ensured. The cake should then be disposed of as per HWM rules.	Arrangement for storage of sludge removed from tanks has been made.	CPCL plans automation in the system for treatment of sludge from tanks in "future". A specific date needs to be specified in EC.
4	The company was asked to provide a comparative statement of stack and fugitive emissions of SO_2, NO_X, VOC for the following scenarios.	Details have been submitted to MoEF in April 2012	
	(i) 2008-2009 when the CPI was calculated		
	(i) Current year i.e. 2011-12		

	(iii) After proposed Resid upgradation, it was pointed out that the SO_2 emissions from SRU should also be considered which was not accounted for in the earlier submission. Sulfur recovery efficiency in all the SRU's should be as per latest technology standard of at least 99.9% or more. The consumption of water, fuel & power for the three scenarios should also be included.	SO_2 emissions from SRU have now been considered in the calculation (See Item A in this table). Water & fuel consumption are also provided in the report. Refinery generates it own power and fuel inputs is inclusive of power generation requirement also.	
5	It was observed that industry is discharging the storm water to Buckingham canal at present. TNPCB needs to look into and if required, the outlet may be closed.	CPCL states that "the outlet has already been closed. Many of the storm drains have stagnating stormwater and the drains are apparently clogged.	The committee has received conflicting information on how storm water is handled (stored/treated/reused). Drains need to be cleaned, nonpoint source releases of stormwater to be prevented and stormwater in excess of the retention ponds need to be treated for oil and grease removal prior to bypassing.
6	Complete water balance with effluent discharge scheme presently followed and proposed to be followed after the project should be provided.	Complete water balance have submitted to MoEF in April 2012.	
7	A detailed plan of adopting low NO_X burner even in the existing furnace should be provided. Moreover, data of NO_X emissions in the other refineries of IOCL	See Item B in this table.	

	should be obtained for comparison.		
8	The Environment Cell in the refinery needs to be strengthened with qualified and dedicated staff.	CPCL indicate that two qualified Environment Engineers have inducted in the Environment cell.	
9	Pending action points for CEPI reduction	Latest status of implementation of CEPI action plan has been submitted	Nine out of 11 short term actions points have been completed. The pending items are linking AAQM stations with TNPCB (Item G above) and provision of VOC absorption system. One out of four long term action points have been completed. The pending items are linking CSM to TNPCB (Item G above), use of NG in place of RFO (Item C) and co-processing of hazardous wastes in cement plant (Item H).

4. Conclusions

The proposed project involves upgradation of the plant to produce lower pollution generating fuels, which in turn will also reduce emissions within the plant. In the case of SO2, the reduction of emissions results in production of elemental sulfur, which is to be sold commercially. Thus, the proposed project has a net benefit in terms of pollution reduction.

The sub-committee finds that CPCL has taken action on many of the observations of the previous sub-committee. Housekeeping has improved and yet, in an existing plant like CPCL, needs to have a significant continuous focus. CPCL needs to develop a specific plan and implement the plan with specific goals and objectives. The need to develop a housekeeping plan with compliance requirements needs to be part of the specific conditions.

The Committee discussed the site visit report as well as certified compliance report submitted by the Regional Office at Bangalore and recommended the project proposal for environmental clearance subject to strict compliance of the following specific and general conditions.

4.5.2 Exploratory drilling of additional 8 wells in NELP-VI Block CB-ONN-2004/2, Cambay Basin, Western Onshore, Baroda by M/s ONGC Ltd. **(TOR)--Site Visit Report.**

Site Visit Report

(i) Exploratory Drilling of 182 Wells in 33 Blocks of Cambay Basin, WOB, Baroda by M/s Oil and Natural Gas Corporation Limited (ONGCL)-Site Visit reg.

(ii) Exploratory drilling of additional 8 wells in NELP-VI Block CB-ONN-2004/2, Cambay Basin, Western Onshore, Baroda by M/s ONGC Ltd.- Site Visit reg.

As per recommendations of the Expert Appraisal Committee (Industry-2) in its 34th meeting held during 13th -14th April 2012, a sub-committee comprising of Shri R.K. Garg, Vice Chairman, EAC (I) and Dr. S. K. Dave, Member alongwith a representative from the Ministry was to visit the project sites to assess the pollution control measures being adopted in the existing drilling process and to suggest additional pollution control measures to be adopted in the proposed exploratory/ development drilling activity.

Site visit was conducted by the subcommittee on 21st – 22nd December, 2012 and following officials were present:

(A) From ONGC

1. Shri. S. K. Das = Executive Director-BM
2. Shri. Narain Lal = GGM-CHSE
3. Shri. J S Sharma = DGM CHSE
4. Shri. S. C. Silawat = I/c CHSE
5. Dr M. C. Kandpal = Block Manager-I
6. Shri. A. V. Satha = Block Manager -II

(B) From Expert Appraisal Committee (Industry), MoEF

1. Shri R.K. Garg
2. Dr. S. K. Dave, Member

(C) From Ministry of Environment & Forests, Govt. of India

1. A. N Singh

ONGC Officials welcomed the sub-Committee. They started with a short power point presentation before the field visit. They briefed about the history of drilling in Cambay Basin, existing environmental clearance obtained in block CB-ONN-2004/2, pollution control measures taken by them during drilling activities such as installation of sound barrier around DG sets, rain water harvesting, conservation of fresh water, recycling of effluent, burying of drill cutting in concrete pit etc. The Committee was informed that in this block (area 423 Km^2), 8 exploratory

wells have already been drilled for which environmental clearance have been obtained in January, 2009 after conducting public hearing. Out of this five wells were dry and 3 wells have shown oil. Environmental Clearance for exploratory drilling of 8 wells already obtained vide MoEF's letter no. J-11011/389/2007-IA II (I) dated 22nd January, 2009. For delineation of the discoveries and declaration of commercial and finalization of FDP (Field Development Programme), eight more appraisal drilling are to be carried out. Location of wells are already finalized. Time period for appraisal drilling after extension is upto June 2013 as per Production Sharing Contract. The location of 8 drilled wells is indicated in the map. The locations of the proposed 8 wells are also shown.

Regarding proposed exploratory drilling of 188 wells, the Committee was informed that total no. of blocks are 33 and spread in the area of 3049.166 km^2. The districts include Mehsana, Ahmedabad, Gandhinagar, Kheda and Anand. Total no of 2400 wells already drilled. All 33 ML blocks are producing hydrocarbon around 4500 Ton/day. Details of existing public hearing conducted in the proposed project area is as given below:

S.N.	Districts in which PH conducted	Village /location of PH	Date of public hearing
1	Mehsana	Kadi	12.08.2008
2	Anand	Lambhel	22.08.2008
3	Kheda	Piplag	02.09.2008
4	Kheda	Nadiad	15.05.2008
5	Gandhinagar	Rupal	14.09.2012

Details of exploratory wells planned to be drilled:

S. N.	District Name	Number of exploratory wells planned
1	Ahmadabad	46
2	Mehsana	53
3	Gandhinagar	27
4	Kheda	38
5	Anand	18
	Total	182

During the site visit, the Committee visited 3 locations :

i. Proposed well site in NELP-VI Block, Well No. 5, which is located at a distance of 500 m away from Village Gutal.

ii. Restored site of well (well no 8) VADTAL #8, which is located at a distance of 200 m from the Village and

iii. Third well site VADTAL #3 in which oil has been discovered and presently sealed.

iv. Fourth well site "MYAC", where exploratory drilling was in progress.

During this visit, the Committee observed the following:

i. In the closed well, the land seems to be completely reclaimed and appeared to be normal agriculture field. During some questioning of some nearby people, it was found that the nearby people did not have any complaints during drilling operation in the year 2011.

ii. In the proposed site for the new well, the owner was himself present at the site and appeared to be keen to lease the land.

iii. Third site, where drilled well is still existing in sealed condition, the Committee did not find any adverse impact on the surrounding agriculture field.

iv. At fourth well site "MYAC", It was observed that DG sets were provided with acoustic enclosures and stack height of 0.5 m above the roof of DG set. Total water requirement is about 40 m^3/day for preparation of water based mud and domestic water. Water requirement is met from tanker water supply. Water based mud is being used for the drilling. Recycling of mud is being carried out by segregating coarse and fine drill cutting through mud cleaner consisting of vibrating screen and mud tank. Drill cutting generation is around 200 m^3/day.

Recommendations:

The Sub-Committee recommends grant of EC without fresh EIA report and public hearing for exploratory/appraisal drilling of additional 8 wells in NELP-VI Block CB-ONN-2004/2, Cambay Basin, Western Onshore, Baroda.

The Committee discussed the site visit report and accepted the recommendations and suggested to stipulate following specific conditions alongwith other environmental conditions while considering the proposal for the 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 PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, CH_4, 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 m^3/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 Bhopal.

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 H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H_2S 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 Bhopal.

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 Bhopal.

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 Bhopal.

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.

4.5.3 Exploratory Drilling of 182 Wells in 33 Blocks of Cambay Basin, WOB, Baroda by M/s Oil and Natural Gas Corporation Limited (ONGCL)-Site Visit reg. **(TOR to EC)-Site Visit Report.**

The Committee discussed the site visit report at S.N. 4.5.2 and the Committee exempted the project from public hearing as per para 7 (ii) of EIA Notification, 2006 as public hearing is already conducted in all districts. The Committee also suggested that unit should conduct public hearing at the time of development drilling. 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 PM_{10}, SO_2, NOx, 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. H_2S emissions control.

28. Produced oil handling and storage.

29. Details of scheme for oil collection system alongwith process flow diagram and its capacity.

30. Details of control of air, water and noise pollution in oil collection system.

31. Disposal of produced/formation water.

32. Whether any burn pits being utilized for well test operations.

33. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.

34. Measures to protect ground water and shallow aquifers from contamination 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.

35. Risk assessment and mitigation measures along with disaster management plan and prevention of blow out.

36. Safety plan to be included for the Tea worker in the nearby areas.

37. Environmental management plan.

38. Documentary proof of membership of common disposal facilities, if any.

39. 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.

40. Total capital and recurring cost for environmental control measures.

41. 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.

42. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.

43. 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) 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) 'Certificate of Accreditation' issued by the QCI to the environmental consultant should be included.

The Committee exempted the project from public hearing as per para 7 (ii) of EIA Notification, 2006 as there is no increase in air emissions, water pollution load, solid waste generation and exploratory drilling is a temporary activity. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

4.5.4 Manufacturing of Organic/Inorganic & Specialty Chemicals at Jhagadia, District Bharuch, Gujarat by M/s Panoli Intermediates (India) Pvt. Limited (Unit-VI) **(TOR to EC)---Site Visit Report.**

As per recommendations of the Expert Appraisal Committee (Industry-2) in its 29th Meeting held during 17th–18th November, 2011, a sub-committee comprising of Shri R.K. Garg, Vice Chairman, EAC (I) and Dr. S. K. Dave, Member alongwith a representative from the Ministry was to visit existing plant (Plot No. 778/1 & 756/1, GIDC –Jhagadia, District Bharuch) of the same company nearby proposed unit to suggest additional pollution control measures to be adopted in the proposed project. Shri Roy Choudhury, Member could not join the visit due to some unavoidable reasons.

Site visit was conducted by the subcommittee on 20th December, 2012.

(A) From M/s Panoli Intermediates (India) Pvt. Limited (Unit-VI).

1. Shri B. H. Patel - Technical Advisior
2. Shri A. K. Sharma - Vice President
3. Shri R.V. Dabgar - General Manager
4. Shri Madhukar Gupta - General Manager
5. Shri Deepak Chanchad - Safety Consultant
6. Shri R. K. Jha - Safety Officer
7. Shri Dhaval Javeri - Sr. Chemical Engineer (Eco-Chem Sales & Services)
8. Shri S. M. Patel - Plant Incharge

(B) From Expert Appraisal Committee (Industry):

i. Shri R. K. Garg, Vice Chairman
ii. Dr. S. K. Dave, Member

(C) From Ministry of Environment & Forests, New Delhi:

iii. Shri A N Singh, Dy. Director (S), MoEF

Factory staff welcomed the Sub-Committee. They briefed about the existing operation and proposed project before the field visit. Additional information desired by the Committee has been provided, which include the details of the storage areas and safety system. The information provided by the project proponent appears to be adequate. The existing unit is engaged in manufacturing of Mono Chlor Benzene, Dichloro Benzene, P-Dichlor Benzene, O-Dichlor Benzene, acetanilide, Chloro Sulphonic acid, Amino hydrocarbon, Toludiene, Dichloro analine. Besides, project proponent briefed about manufacturing process, process emissions control system, waste management and chemicals storage and handling.

The Committee went round the plant and Committee's observations are given below:

i. The plant is reported to be operating for about 10 years. The general upkeep and maintenance of the plant did not appear to be satisfactory.
ii. In the Chlorine storage and handling area 100 cylinders were observed both filled and some are empty. The readiness for taking remedial action in case of leakage of the valve was demonstrated, which was satisfactory. However, there is no arrangement for management in case of leakage. The outline of the system required to be installed was indicated to the party.
iii. It was observed that the part of Chlorine is now being obtained from the nearby caustic soda plant through pipeline. This will reduce the storage and handling of chlorine cylinder. The Committee was informed that the major quantity of Cl_2 will be supplied through the pipeline.
iv. In the bulk storage area both benzene and methanol are stored in underground tank and the vent line are connected to condenser. However, the condenser's cooling medium is a normal water instead of chilled water.
v. The project proponent was asked to provide chilled water to supply the condenser.
vi. The monitoring of the process vents is limited only to HCl and Cl_2 but not to Benzene, which is used in the process.

vii. While going through the Medical report of the people working in the plant the following observations were made:

a) The number of people covered for medical examination is much smaller than number of operational people in the plant.
b) Since the plant is handling benzene in large quantity the specific test of phenol an important biomarker of the benzene exposure was not found in the medical report.
c) In the work environment also benzene monitoring is not carried out.

Recommendations :

Based on the above observations, the Sub-committee makes the following recommendations:

The project proponent should comply with the following recommendations before EC for the new unit is considered:

i. Proper hood alongwith suction facility and scrubbing arrangement shall be provided in the chlorine storage area. Alarm for chlorine leakage if any in the liquid chlorine storage area shall be provided alongwith automatic start of the scrubbing system.
ii. Connection of the chilled water supply to the condenser.
iii. Medical examination report of all operational staff including Phenol in the urine.
iv. Benzene monitoring results in relevant process vents and in the work environment.
v. It is also suggested that on receipt of the information alongwith photographs and results of the monitoring from the project proponent and confirmation by the GPCB, similar conditions to be stipulated in the environmental clearance for the new projects.

The Committee discussed the site visit report and accepted the above recommendations of the Sub-committee.

4.5.5 Expansion of Bulk Drugs Manufacturing Unit at Gat no.350,Village Wadhirwarhe, Tehsil Igatpuri, District Nasik, Maharashtra by **M/s Delta Finochem (P) Ltd. (TOR to EC)**

Project proposal was considered in the 36th *Expert Appraisal Committee (Industry-2) meeting held during* 11th – 12th June, 2012 *and the C*ommittee desired following information:

1. Detailed point-wise compliance of the consent to operate.
2. Since existing scheme is inappropriate, an adequate effluent treatment scheme, therefore, to be submitted.
3. Adequate ground water data in and around the site to be provided.

Project proponent vide letter dated 3rd June, 2012 has submitted above additional information.

After detailed deliberations, the Committee found the additional information is not satisfactory and suggested following:

i. Fresh monitoring report of ground water in and around the site.
ii. Ground water monitoring report from MPCB/Central Ground Water Authority.
iii. An adequate effluent treatment scheme.

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

4.5.6 Exploration (4nos.) and Appraisal of Block (10nos) CB-ONN-2005/5 at District Ahmedabad and Gandhinagar, Gujarat by **M/s Omkar Natural Resources Pvt. Ltd. (TOR to EC)**

Project proposal was considered in the 35th *Expert Appraisal Committee (Industry-2) meeting held during* 11th – 12th May, 2012 *and the C*ommittee desired following information:

1. Comprehensive Plan to address the issues raised during public hearing to be submitted.
2. Point-wise replies to the representation submitted from Paryavaran Mitra vide their letter dated 31st May, 2011.
3. Plan for oil waste management including Bio-remediation to be provided.
4. Site restoration plan after completion of project should be submitted.
5. DGH letter mentioning seismic survey shall be provided after EC.

Project proponent vide letter no. ONRPL/CB05/FICO/118 dated 3rd September, 2012 has submitted above additional information.

After detailed deliberations, the Committee found the 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 PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, CH_4, 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 25 m^3/day/well and prior permission should be obtained from the concerned agency.

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 Bhopal.

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 H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H_2S 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 Bhopal.

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 Bhopal.

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 Bhopal.

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 and circulate the environmental policy.

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.

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

4.6.0 <u>Any Other Item</u>

4.6.1 Proposed integrated steel plant (1.2 MTPA) & Captive Power Plant (160 MW) at Village Kunikere & Hirebagnal, Post Ginikere, District Koppal in Karnataka by **M/s Xindia Steels Limited**.

Ministry vide letter no. J-11011/518/2010- IA II (I) dated 15th December, 2010 has awarded TOR for Proposed integrated steel plant (1.2 MTPA) & Captive Power Plant (160 MW). Now, project proponent has requested for extension of validity of TOR for the proposed project as project proponent could not complete the process of obtaining environmental clearance till now due to ban on iron ore mining in the State of Karnataka by the Hon'ble Supreme Court of India.

After detailed deliberations, the Committee recommended the proposal for extension of the validity of the existing TOR.

4.6.2 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 regarding**.

M/s Jaiprakash Associates have proposed for augmentation of Clinker Production Capacity from 2.05 MTPA to 3.5 MTPA at Village Baga, District Solan, Himachal Pradesh. It is informed that augmention will be done without installing additional equipments and no additional area is required. Augmention will be done by optimizing the operation. Existing plant area is 166.01 ha. Environmental clearance was accorded by the Mo EF 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.

After deliberations, the Committee desired that a Sub-committee of EAC should visit the project site and submit a report to the EAC(I) before further considering the proposal for amendment of environmental clearance.

4.6.3 Oil & Gas Exploration in Offshore NELP-VII Block MB-OSN-2005/2 in the Arabian Sea at Mumbai Shallow Offshore by M/s Adani Welspun Exploration Ltd. **Amendment in EC conditions reg.**

Environmental Clearance was accorded by the Ministry's letter no J-11011/728/2009-IA II (I) dated 29th September, 2010 for gas exploration in off shore NELP VII Block MB-OSN-2005/2 in the Arabian Sea.

Now, the project proponent informed that as per para 2.0 of environmental clearance, it is mentioned that no oil drilling will be carried out since block is for gas only. However, block is awarded for hydrocarbon exploration including oil and gas exploration.

The committee recommended for following correction:

For :

"No oil drilling will be carried out since block is for gas only"

Read:
"Block is awarded for hydrocarbon exploration including oil and gas exploration"

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4.6.4 Carbon black (2,80,000 TPA) and Cogeneration Power plant (56 MW) at SOPCOT Industrial Area, Village Thervoy Kandigai, Tahsil Gummidipoondi Taluk, District Thiruvallur, Tamil Nadu by **M/s Phillips Carbon Black Limited- Amendment in TOR condition.**

MoEF vide letter no. J-11011/295/2011-IA II (I) dated 4th November, 2011 has issued TOR for Carbon black unit (2,80,000 TPA) and Cogeneration Power plant (56 MW) at SOPCOT Industrial Area, Village Thervoy Kandigai, Tahsil Gummidipoondi Taluk, District Thiruvallur, Tamil Nadu.

Now, project proponent vide letter dated 4th September, 2012 has requested for public hearing exemption and omission of TOR point no. 19 for commitment for installation of flue gas desulphurization system. Project proponent has submitted a copy of Gazette Notification G O (Ms) No. 127 dated 19.06.2012 issued by Industries Department, Government of Tamil Nadu and copy of environmental clearance accorded by the MOEF vide their letter No. 21-41/2009-IA.III dated 9th August, 2010 for development of Industrial Park at SIPCOT, Thervoy Kandigal. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006. Regarding installation of FGD, agenda point at S.N. 4.6.5 may be referred.

4.6.5 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.**

In the minutes of 32nd EAC (I-2) meeting held during 16th -17th February, 2012, wherein the Committee discussed the issues regarding installation of FGD in the Carbon Black plant and desired the matter may be referred to the Ministry's CP Division to constitute a study group by including CPCB to study the suitability for the installation of FGD in the Carbon Black Plant. The CP Division of the MoEF informed following to the IA Division :

1. With regard to suitability for installation of FGD in a carbon black plant unit, attention is invited to the provisions of National Environment Policy 2006 (NEP-2006) i.e. Article 5.3 Environmental Standards Management System, Certification and Indicators, wherein it is mentioned that "the tendency to prescribe specific abatement technologies should also be eschewed since these may unnecessarily increase the unit and societal costs of achieving the ambient environment quality". Hence, it will not be practicable to constitute a study group to study the suitability for the installation of FGD for the individual case as per the recommendation of EAC.

2. Accordingly, it may be considered that emission limits for SO_2 may be prescribed for carbon black plant across the board in line with provision of NEP – 2006 instead of conducting study for the individual case. Hence, further action in the matter may be considered as follows:
   a) Central Pollution Control Board (CPCB) may be requested for detailed study for evolving / formulating standards for SO2 and other emissions norms for Carbon Black Plant.
   b) As this may take much time to finalize the standards, IA Division may be advised to take appropriate action in the matter for this individual case, through deliberation in EAC.

Considering the view of CP Division, the matter was placed before EAC. After deliberation, the Committee desired to examine the issues vis-a vis existing norms and other similar plants before taking final decision. The Committee deferred the matter for the next meeting.

4.6.6 Expansion of Single Super Phosphate Fertilizer Plant (from 100 TPD to 200 TPD) at Old Chittorgarh Road, Hamirgarh, Bhilwara, Rajasthan by **M/s Gayatri Spinners Ltd. - amendment in Environmental Clearance reg.**

Ministry vide letter no. F. No. J-11011/667/2007-IA II (I) dated 5th September, 2012 has accorded environmental clearance expansion of Single Super Phosphate Fertilizer Plant (from 100 TPD to 200 TPD) at Old Chittorgarh Road, Hamirgarh, Bhilwara, Rajasthan by M/s Gayatri Spinners Ltd**.**.

Now, project proponent vide letter dated 31st December, 2012 has requested to grant permission for forward integration of entire SSP (200 TPD) to GSSP (200 TPD) as after 9th May, 2013 according to Fertilizer Control Amendment Order, 2011 Single Super Phosphate will be not be sold in the market and it is mandatory to convert it into

granulated single super phosphate. It is proposed to install mulitcyclone followed by bagfilter in the GSSP unit.

After detailed deliberations, the Committee recommended the proposal for forward integration of entire SSP (200 TPD) to GSSP (200 TPD).

4.6.7 Applicability of Environmental Clearance for the production of Dicalcium Phosphate used as a feed supplement in poultry and cattle feed.

Applicability of environmental clearance for the production of Dicalcium Phosphate used as a feed supplement in poultry and cattle feed was discussed. The main raw materials used for production of Di-Calcium Phosphate are Rock phosphate, sulphuric acid and hydrated lime.

After detailed deliberations, the Expert Appraisal Committee noted that the project proposal cannot be categorized under synthetic organic or fertilizer activity and no environmental clearance is required. However other statutory clearances under the Air and Water Acts shall be obtained.

The meeting ended with a vote of thanks to the Chair. It was decided that the 5th REAC (Industry) meeting will be held on 31st January, 2013 –1st February, 2013.

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
4.	Dr. Prem Shankar Dubey	Member	P
5.	Dr. R.M. Mathur	Member	P
6.	Dr. S. K. Dave	Member	P
7.	Dr. B.Sengupta	Member	P
8.	Shri Rajat Roy Choudhary	Member	P
9.	Dr. S.D. Attri	Member	A
10.	Dr. Antony Gnanamuthu	Member	P
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjan Raghunath Raje	Member	P
MOEF Officials :			
13.	Dr. P.L. Ahujarai	Member Secretary	
14.	Shri A.N. Singh	Scientist 'C'	
15.	Shri Sunder Ramanathan	Scientist 'C'	

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