

**MINUTES OF 5<sup>th</sup> RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY)**  
**MEETING HELD DURING 31<sup>st</sup> JANUARY, 2013 – 1<sup>st</sup> FEBRUARY, 2013**

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

**TIME 10.00 A.M.**

#### **4.0 Opening Remarks of the Chairman**

At the outset, Chairman welcomed the members of the Expert Appraisal Committee (Industry). The deliberations held and decisions taken are as under.

#### **4.1 Confirmation of the Minutes of the 4<sup>th</sup> reconstituted Expert Appraisal Committee (Industry) held during 8-9<sup>th</sup> January, 2013.**

The minutes of the 4<sup>th</sup> Reconstituted Expert Appraisal Committee (Industry) held during 8 – 9<sup>th</sup> January, 2013 were confirmed.

#### **31<sup>st</sup> January, 2013**

#### **5.2.0 Consideration of the Projects:**

##### **5.2.1 Expansion of Fibre Cement Sheet manufacturing plant at Village Dewanmaro Ayma, Block Kharagpur (Local), District West Medinipur, West Bengal by **M/s Ramco Industries Limited - regarding Environmental Clearance****

The project authorities and their consultant M/s Vimta Labs, Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per the Terms of Reference (ToRs) awarded during the 19<sup>th</sup> meeting of the Expert Appraisal Committee (Industry -1) held on 22-23<sup>rd</sup> February, 2011 for preparation of EIA/EMP report. The ToR was awarded on 13<sup>th</sup> May, 2011 for preparation of EIA/EMP report. All the Asbestos milling and asbestos based products have been listed at Sl. No. 4(c) of Schedule of EIA Notification, 2006 as Category 'A' and have to be appraised at the Central level.

M/s. Ramco Industries Limited have proposed to expand the Asbestos Fibre Cement Sheet Plant located at Dewanmaro Ayma village, PO- Hariatara, P.S.- Kharagpur (Local), West Medinipur District, West Bengal from the existing production capacity of 72,000 TPA to 1,00,000 TPA. The proposed expansion will be carried out within the existing plant area of 12.65 acres (5.06 ha) itself and no additional land is required for the expansion project. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. The water bodies located in the study area are rivers (Kaliaghai and Cossye). Rs. 10 Lakhs is earmarked towards to upgrade the efficiency of dust collecting system in fibre mill, fly ash/cement circuit and pulverizer plant dust collectors. Rs.7 lakhs has been earmarked towards the CSR related activities.

The existing plant got environmental clearance from the Ministry vide letter no. J-11011/43/2003-IA.II (I) on 12<sup>th</sup> May, 2003. Regional Office of MoEF at Bhubaneshwar had sent the certified compliance report for the existing unit. The Committee noted that the

monitoring of asbestos fibre in the stacks is not being done. Further, it was noted that monitoring of asbestos fibre count including fugitive dust in the work zone is not being carried out by an independent monitoring agency. In response to this, the project authorities informed that they are monitoring the asbestos fibre count in the work zone and stack on six monthly basis through an independent third party agency (M/s Vimta Labs, Hyderabad). After discussions, the Committee found that the compliance to the Environmental Clearance (EC) conditions to be satisfactory.

Additionally, the Project Authorities informed that the proposed expansion of the plant will be achieved by optimization of production by removing the existing bottlenecks, increasing the speed of the equipment to the maximum extent possible through Variable Frequency Drive (VFD) and utilizing the maximum production hours available. There will not be any new machinery and change in the process technology. The total raw materials requirement after the proposed expansion are Asbestos Fibre – 745 TPM, Cement – 4200 TPM, Fly ash – 2400 TPM and Pulp – 45 TPM. The power requirement for the proposed expansion is 700 KVA, which will be met from the State Electricity Board.

Ambient air quality monitoring has been carried out at 8 locations during December 2010 to February, 2011 and the data submitted indicated: PM<sub>10</sub> (23.7-43.0 µg/m<sup>3</sup>), PM<sub>2.5</sub> (5.3-8.5 µg/m<sup>3</sup>), SO<sub>2</sub> (4.9-7.3 µg/m<sup>3</sup>) and NO<sub>x</sub> (7.9-11.7 µg/m<sup>3</sup>). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 2.72 µg/m<sup>3</sup>, 1.23 µg/m<sup>3</sup> and 2.6 µg/m<sup>3</sup> with respect to PM, SO<sub>2</sub> and NO<sub>x</sub> respectively. To control air emissions, automatic bag open device followed by shredder for fibre handling and pneumatic bulk handling system for cement and fly ash will be provided. High efficiency pulsejet type bag filters for Fibre circuit, cement & fly ash circuit and solid waste management device – pulverizer, bin filter for cement silo and fly ash silo will be provided to limit the particulate matter emissions. Adequate stack height will be provided for wider dispersion of emissions. Further, bag filters will be provided with appropriate suction devices to control the fugitive emissions. Water spraying arrangements will be made, particularly raw material storage area, wagon tippler and truck tippler. The usage of respiratory protective equipment by all employees will be ensured and the fugitive emission level is monitored as per the CPCB guidelines. In the existing plant, green belt is developed in an area of 7.65 acres, which is about 60% of the total area of the plant.

The existing water requirement is 100 m<sup>3</sup>/day and no additional water will be required for the proposed expansion. The water used in the milling section, cement/fly ash section and slurry mixer comes along with the slurry, from which, the vacuum system sucks the water. The sucked water is then pumped to the water tanks, which will be reused in the process operations. No wastewater will be discharged outside the plant premises as the entire wastewater is reused in the process itself. Discarded fibre cement sheets and other solid wastes (500 TPA) will be pulverized and reused in process. The dust from dust collector (8.50 TPA) and used oil (1100 LPA) will be recycled. There will be no solid waste disposal outside the plant premises.

The Committee desired the authenticated list of flora and fauna exists in the study area. The proponent submitted the authenticated list of flora and fauna exists in the study area.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the West Bengal Pollution Control Board on 5<sup>th</sup> October, 2012. The issues raised in the public hearing were regarding employment opportunity, rain water harvesting etc which are addressed in the EIA/EMP report.

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

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

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

- x. The Company shall ensure that the entire solid waste generated including process rejects, cement, fly ash, dust from bag filters and empty asbestos bag shall be recycled back in the manufacturing process. There will be no solid waste disposal outside the plant premises. Asbestos fibres which can not be further recycled due to contamination of iron dust shall be stored in HDPE lined secured landfill. The disposal facilities for asbestos waste shall be in accordance with the Bureau of Indian Standard Code.
- xi. The cut and damaged fibre bags shall be repaired immediately. Empty fibre bags will be shredded into fine particles in a bag shredder and recycled into the process. Piling of AC sheets shall be done in wet condition only.
- xii. The Company shall obtain a certificate from the supplier of Chrysotile fibre that it does not contain any toxic or trace metals. A copy of certificate shall be submitted to the Ministry of Environment and Forests.
- xiii. Regular medical examination of the workers and health monitoring of all the employees shall be carried out and if cases of asbestosis are detected, necessary compensation shall be arranged under the existing laws. A competent occupational health physician shall be appointed to carry out medical surveillance. Occupational health of all the workers shall be monitored for lung function test, chest x-ray, sputum for acid-fast-bacilli (AFC) and asbestos body (AB), urine for sugar and albumen, bloat tests for TLC, DLC, ESR, Hb and records maintained for at least 40 years from the beginning of the employment or 15 years after the retirement or cessation of employment whichever is later. Occupational Health Surveillance shall be carried out as per the directives of the Hon'ble Supreme Court including the recent Kalyaneswari case.
- xiv. To educate the workers, all the work places where asbestos dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xv. The company shall also undertake rain water harvesting measures and plan of action shall be submitted to the Ministry's Regional Office at Bhubaneswar within three months.
- xvi. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 5<sup>th</sup> October, 2012 shall be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.
- xvii. Green belt shall be developed in at least 33 % of plant area as per the CPCB guidelines in consultation with the DFO. More focus shall be given towards the South East side of the plant layout.
- xviii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.
- xix. The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile

STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

**5.2.2 Proposed Integrated Cement Plant (Clinker:2.0MTPA, Cement – 2.5MTPA) along with 40MW coal based Captive Power Plant and WHRB 10 MW at villages Tonki, Temberni, Sonudal & Gopalpura Tehsil Manawar, District Dhar in Madhya Pradesh by M/s UltraTech Cement Limited - regarding Environmental Clearance**

The Committee deferred the consideration of the proposal as the Public Hearing for the project was presided over by the officer of the rank of Sectional Officer (Revenue), Manawar, District Dhar, which is not in accordance with the procedure prescribed in the Environmental Impact Assessment (EIA) Notification, 2006. The Committee asked the Project Authorities to approach the Madhya Pradesh Pollution Control Board to conduct the Public Hearing in accordance with the procedure prescribed in the Environmental Impact Assessment (EIA) Notification, 2006.

**5.2.3 Grain/molasses based distillery plant (200KLD) and 5 MW cogeneration power plant at Village – Salana Jeon Singh Wala, Tehsil- Amloh, Distt. – Fatehgarh Sahib, Punjab by M/s Nahar Industrial Enterprises Ltd - regarding Environmental Clearance**

The project authorities and their consultant M/s Ace Engineers and Consultants, Patiala 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 36<sup>th</sup> meeting of the Expert Appraisal Committee (Industry -2) held on 11-12<sup>th</sup> June, 2012 for preparation of EIA/EMP report. The ToR was awarded on 8<sup>th</sup> August, 2012 for preparation of EIA/EMP report. All the Distillery Units (more than 30 KLPD) are listed at S.N. 5(g) of Schedule of EIA Notification, 2006 as Category 'A' and have to be appraised at the Central level. The Committee noted that the consultant (M/s Ace Engineers and Consultants, Patiala) who prepared the EIA report is not accredited by QCI/NABET. However, proponent has submitted an order dated 16.7.2012 of Hon'ble High Court of Punjab and Haryana at Chandigarh staying the applicability of QCI accreditation to the instant consultant. Hence, the consultant was allowed by the Committee to present the proposal.

M/s Nahar Industrial Enterprises Limited have proposed for Grain/Molasses based distillery plant (200 KLPD) and 5 MW cogeneration power plant at village Salana Jeon Singh Wala, Tehsil Amloh, District Fatehgarh Sahib, Punjab. Plant will run for 50 days on molasses based and for 280 days on grain based. The total land available with the M/s Nahar Industrial Enterprises Limited is 90.79 acres. Out of the 90.79 acres, M/s Nahar Industrial Enterprises Limited is already operating a sugar mill of 4000 TCD capacity in an area of about 60 acres and the company has reserved 23 acres (9.3 ha) for the distillery unit. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. The company has got the site clearance from the State Government of Punjab on 12<sup>th</sup> July, 2012. Total cost of the project is Rs.146 crores. Rs.21.15 crores and Rs.6.60 crores will be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures. No litigation is pending against the proposed project.

Following products will be manufactured:-

S.No.	Name of the products	Quantity
1.	Extra Neutral Alcohol (ENA)	200 KLPD

S.No.	Name of the products	Quantity
2.	Industrial Alcohol	15 KLPD
3.	Cogeneration power	5 MW
4.	Bottling of liquor	20000 cases/day
5.	CO <sub>2</sub> bottling	160 MT/day
6.	Distillery Dry Grain Solids (DDGS)	100 MT/day

The raw materials required are grain (2.5MT/KL of alcohol), molasses (4MT/KL of alcohol), enzymes (400 kg/day), sodium hydroxide (200 kg/day), sulphuric acid (100kg/day), urea (900kg/day), anti foam agent (100 kg/day) and yeast (400kg/day). The primary fuel in the boiler would be Rice Husk (8MT/hour). Further, the company would supplement rice husk with coal to the maximum extent of 15%. Coal will be procured locally. The power requirement is 5 MW which will be met from the co-generation power. Two D.G. sets with a capacity of 1000 KVA each will be installed for standby power.

Ambient air quality monitoring has been carried out at 6 locations during May to July, 2012 and the data submitted indicated: PM<sub>10</sub> (48.96-62.73 µg/m<sup>3</sup>), PM<sub>2.5</sub> (35.04-43.5 µg/m<sup>3</sup>), SO<sub>2</sub> (5.10-14.37 µg/m<sup>3</sup>) and NO<sub>x</sub> (10.75-30.60 µg/m<sup>3</sup>). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 8 µg/m<sup>3</sup> and 3.5 µg/m<sup>3</sup> with respect to PM and SO<sub>2</sub> respectively. To control air emissions, ESP along with adequate stack height will be provided to rice husk/coal fired boiler. The bottom ash and fly ash will be taken to ash silo through a pneumatic conveying system. Green belt will be developed in 33% of the total project area.

Total fresh water requirement for grain based distillery will be 2165 m<sup>3</sup>/day, whereas total fresh water requirement for molasses based distillery will be 1800 m<sup>3</sup>/day. Spent wash generation from grain based distillery and molasses based distillery would be 850 m<sup>3</sup>/day and 1270 m<sup>3</sup>/day respectively. The spent wash would be treated in Multi-Effect Evaporation (MEE) system. During grain based operation, the generation of spent lees and MEE condensate would be 450 m<sup>3</sup>/day and 750 m<sup>3</sup>/day respectively. During molasses based operation, the generation of spent lees and MEE condensate would be 200 m<sup>3</sup>/day and 805 m<sup>3</sup>/day respectively. These condensates after treatment would be used for make up water for cooling towers. The effluent from other processes is 308 m<sup>3</sup>/day which will be treated in the ETP and then used for irrigation purposes. No effluent will be discharged outside the industry. The ash generation is about 30 MT/day which will be used for the production of fly ash bricks.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Punjab Pollution Control Board on 11<sup>th</sup> September, 2012. The issues raised in the public hearing were regarding air emissions, waste water disposal and employment opportunity etc which are addressed in the EIA/EMP report.

The Committee advised the consultant M/s Ace Engineers and Consultants, Patiala to adequately address the technical aspects of the proposal, air quality impacts etc in the EIA/EMP report in future.

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

- i. Values of PM<sub>10</sub> and PM<sub>2.5</sub> needs to be rechecked.
- ii. Note on availability of molasses
- iii. Certified compliance report of Consent to Establish(CTE)/Consent to Operate(CTO) for the existing sugar mill unit from the Punjab Pollution Control Board
- iv. Complete set of data on Ambient Air Quality (AAQ) monitored during May to July, 2012

- v. Input data used for the AAQ modeling
- vi. Effluent treatment scheme for the grain and molasses based operation
- vii. Rain water harvesting measures for the proposed project
- viii. Permission of the Competent Authority for approach to the industrial plant to comply with the conditions imposed by MoEF in letter no.9PBB694/2007-CHA/1795 dated 1.4.2000
- ix. Undertaking from the proponent that lagoon pond will not be used in the distillery
- x. Action plan along with the financial budget for complying with the commitments made during the Public Hearing

**5.2.4 Proposed 200 TPD Iron Nodule Plant using Rotary Hearth Furnace (RHF) Technology, Beneficiation Plant (600 TPD) and Iron Billet Plant (300 TPD) at Maneri Industrial Area, Village Maneri, Tehsil Niwas, District Mandla in Madhya Pradesh by M/s Arfa Steels & Minerals Pvt. Limited - regarding Environmental Clearance**

The project authorities and their consultant M/s. Grass Roots Research and Creation India Private Limited, Noida 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 33<sup>rd</sup> meeting of the Expert Appraisal Committee (Industry -1) held on 27-28<sup>th</sup> February, 2012 for preparation of EIA/EMP report. The ToR was awarded on 23<sup>rd</sup> March, 2012 for preparation of EIA/EMP report. The proposed project falls under primary metallurgy, listed at Sl. No. 3(a) of Schedule of EIA Notification, 2006 as Category 'A' and have to be appraised at the Central level.

M/s Arfa Steels & Minerals Pvt. Limited have proposed for 200 TPD of Rotary Hearth Furnace (RHF) Iron Nodule plant, 600 TPD Beneficiation plant and 300 TPD Iron Billet plant at village Maneri industrial area, Tehsil – Niwas, District Mandla, Madhya Pradesh. The project area is 21 acres, which is already acquired and green belt will be developed in 7.0 acres of area. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. Gaur Nadi water body flows at a distance of 3 km from the project site in North direction. Total cost of the project is Rs. 49.38 Crores. Rs.262.5 lakhs and Rs.37.5 lakhs will be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures. No litigation is pending against the proposed project.

The details of Production units and their capacities are given below:

<b>Production Facility</b>	<b>Total Capacity</b>
<b>Beneficiation Plant</b>	
Beneficiation Plant	1 x 1,80,000 TPA
<b>Iron Nodule Plant</b>	
RHF based Iron Nodules Plant	1 x 60,000 TPA
<b>Steel Melting Shop</b>	
Steel melt shop capacity	90,000 TPA
Induction Furnace	2 x 10 T
Continuous Casting Machine	2 x 2 Strand

Iron ore fines (1,80,000 TPA), Iron ore concentrate (90,000 TPA), Coal(40,800TPA), dolomite/limestone (3600 TPA), furnace oil (50 kl/year) are the raw materials that will be used. The coal will be supplied by M/s VM Coallogix Private Limited. To this effect, MoU has been submitted by the proponent. The power requirement will be met from State Electricity Board. DG Set of capacity 1,000 KVA will be provided as a stand by power.

Ambient air quality monitoring has been carried out at 8 locations during March to May, 2012 and the data submitted indicated: PM<sub>10</sub> (60.7-86.2 µg/m<sup>3</sup>), PM<sub>2.5</sub> (34-56.8 µg/m<sup>3</sup>), SO<sub>2</sub> (4.4-10.1 µg/m<sup>3</sup>) and NO<sub>x</sub> (8.6-27.5 µg/m<sup>3</sup>). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 4.6 µg/m<sup>3</sup>, 1.5 µg/m<sup>3</sup> and 2.6 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> respectively. To control air emissions, bag filters will be provided to RHF, IF and the beneficiation plant. Stack of adequate height will be provided. Water sprinkling will be done in the raw material handling area. All internal roads will be asphalted.

The total water requirement is 300 m<sup>3</sup>/day which will be extracted from bore well. The cooling water is recycled and reused. The effluent generation from the plant would be 135 m<sup>3</sup>/day. This will be treated in ETP and treated water will be used for green belt development. No wastewater will be discharged outside the plant premises.

Slime generation from the iron ore beneficiation would be 54,000 TPA. Slag (1800 TPA) generated from the Steel Melt Shop will be reused for road construction. Spent oil and lubricants will be properly stored and given to authorized re-processors.

The Committee noted that the Public Hearing is not required as the unit is located in the notified industrial area. To this effect, the proponent has submitted the authentic document from the State Govt. indicating that the project is located in the notified industrial area.

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

- i. Values of PM<sub>10</sub> and PM<sub>2.5</sub> needs to be rechecked. PM<sub>10</sub> and PM<sub>2.5</sub> parameter shall be monitored for a one month period and the data shall be submitted
- ii. Input and output data file for the AAQ modeling
- iii. MoU for the utilization of slime, slag and ash from the gasifier shall be submitted
- iv. Management plan for solid and hazardous waste
- v. Surface and ground water quality data for the study area shall be submitted
- vi. Scheme for achieving zero effluent discharge shall be submitted
- vii. Seismic hazard map for the study area shall be submitted
- viii. Revised scheme for the Occupational Health and Safety shall be submitted

5.2.5 Proposed expansion by installation of a Heavy Casting Unit (HCU) -6000 TPA at Sy. No. 446/A & 498/1, Hazira Manufacturing Complex, Village Suvali, District Surat, Gujarat by **M/s L&T MHI Turbine Generators Pvt. Ltd- regarding Environmental Clearance**

The Project Authorities and their consultant M/s Eco Chem Sales and Services, Surat 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 31<sup>st</sup> meeting of the Expert Appraisal Committee (Industry -1) held on 22-23<sup>rd</sup> December, 2011 for preparation of EIA/EMP report. The ToR was awarded on 10<sup>th</sup> January, 2012 for preparation of EIA/EMP report. Although the proposed expansion project is a Category 'B' project, since the existing unit is a category 'A' project and being a proposal



for expansion to 'A' category project as per the Schedule 3(a) of EIA Notification, 2006, the proposal has been appraised by the Expert Appraisal Committee (Industry) in the Ministry.

M/s L&T MHI Turbine Generators Private Limited have proposed for an expansion project by installation of a Heavy Casting Unit (6,000 TPA) at Sy. No. 446/A & 498/1, Hazira Manufacturing Complex, Village Suvali, District Surat, Gujarat. The project area for expansion is 12 acres and is a part of the existing plant premises located in the Hazira Notified Industrial Area. Green belt will be developed in 33% of the total area. No Forest land is involved. No Defense Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. The cost of expansion project is Rs. 121.25 Crores. Out of Rs.121.25 acres, Rs.3.25 crores and Rs.0.32 crores will be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures. No litigation is pending against the proposed project.

The existing project got environmental clearance from MoEF vide letter no. J-11011/193/2009 IA.II(I) dated 20<sup>th</sup> October, 2009. The proponent informed that the construction activities for the existing project are not fully completed. The Committee decided that the certified compliance report from the Regional office of MoEF for the existing project may not be required at this stage as the construction activities for the existing project are not fully completed.

The Project Authorities informed that the proposed project will cater the requirement of heavy steel castings of thermal power plant equipment manufacturers including L&T's JVs. The HCU will also supply heavy castings to customers in the segments of mining, ship building, valves, and steel manufacturing. Proposed HCU will be able to produce castings as heavy as 75 MT initially, which will be subsequently ramped up to meet domestic and international market.

The raw material is molten steel (10,800 TPA) which will be sourced from the forging shop. Total power requirement for the proposed project will be 1 MW & 2 Nos. of D. G. Sets with the capacity of 750 KVA each will be used in case of power failure. Source of Power supply is "Dakshin Gujarat Vij Co. Ltd (DGVCL)". Natural Gas: 1,500 SCM/Hr (for furnace/burner) and H.S.D.: 240 Lit/Hr (for 2 nos. of DG Sets) will be used as fuel.

Ambient air quality monitoring has been carried out at 9 locations during December 2011 to February, 2012 and the data submitted indicated: PM<sub>10</sub> (50.7-91.5 µg/m<sup>3</sup>), PM<sub>2.5</sub> (23.3-50.6 µg/m<sup>3</sup>), SO<sub>2</sub> (7.2-27 µg/m<sup>3</sup>) and NO<sub>x</sub> (13.8-29.2 µg/m<sup>3</sup>). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs would be 23.07 µg/m<sup>3</sup> with respect to PM. Bag filters will be provided to control particulate emissions. All the internal roads will be properly surfaced to reduce the fugitive dust due to vehicular movement. Water sprinklers will be used to control the fugitive dusts. To reduce fugitive dust emission due to dust extraction and dust suppression systems will be installed at appropriate locations. The dust extraction systems will consist of suction hoods, fans and bag filters unit with all accessories.

The water requirement shall be 45 m<sup>3</sup>/day, for domestic (25 m<sup>3</sup>/day) & industrial (cooling purpose-20 m<sup>3</sup>/day) activities during the operation. Water will be drawn from Singanpur Weir of the existing facility of L&T, HZMC. The sewage generated (i.e. 20 m<sup>3</sup>/day) will be treated in the STP of the existing facility of L&T HZMC (of 100 KLD capacity) & wastewater generated from cooling tower (i.e. 5 m<sup>3</sup>/day) will also be treated in the same STP. Metal Scrap (Runner & Risers) will be reused by remelting. Foundry spillage, Refractory & Glass wool sand will be disposed to TSDF site, STP Sludge will be used as manure within premises, and used oil will be sold to registered recyclers. Discarded containers will be sold to GPCB approved scrap dealers.

The Committee noted that the Public Hearing is not required as the unit is located inside the Hazira Notified Industrial Area.

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

- i. The company shall install bag filters to control the particulate matter emissions below 50 mg/Nm<sup>3</sup>.
- ii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> 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 30<sup>th</sup> May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB should be followed.
- iv. Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- v. Plan for rain water harvesting facilities shall be prepared and a copy shall be submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.
- vi. The total water requirement shall not exceed 45 m<sup>3</sup>/day. No effluent shall be discharged outside the plant premises and 'zero' discharge shall be adopted.
- vii. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy shall be submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.
- viii. As proposed, green belt shall be developed in 33 % of the plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.
- x. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

#### 5.2.6 Proposed 500 TPD Grinding Ball Mill at 12 Mile, Village Ambher, Mouza: Sonapur, Kamrup, Assam by **M/s Guru Gobind Industries regarding TORs**

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

draft Terms of References for the preparation of EIA/EMP report. The stand alone cement grinding units are covered under Category 'B' as per para 3(b) of the Schedule of the EIA notification 2006, but due to absence of SEIAA/SEAC for Assam, the proposal has been appraised at the Central level.

M/s Guru Gobind Industries have proposed to establish a 1,65,000 TPA (2x250 = 500 TPD) stand alone Grinding Ball Mill unit at 12<sup>th</sup> Mile, Village Ambher, Mouza Sonapur, Kamrup, Assam. The longitude and latitude of the project site is 26°7'2" N and 91°58'1" E respectively. The land requirement for the project is 1.46 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.1055.01 lakhs. The power requirement is 500 KVA which will be met from M/s Assam State Electricity Board. The water bodies located in the study area is River Digaru which is 4 km from the project site. The water requirement is 5 m<sup>3</sup>/day. The raw materials required are Clinker, Gypsum and Fly ash.

To control the air emissions, reverse jet bag filter and cyclone separator will be provided. Water will be required only for domestic and dust suppression purposes. used oil will be sold to registered recyclers.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
5. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
6. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
7. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
8. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
9. Details and classification of total land (identified and acquired) should be included.
10. Proposal should be submitted to the SEIAA, Assam for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
11. A list of industries containing name and type in 10 km radius shall be incorporated.
12. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
13. Manufacturing process details for the cement grinding ball mill should be included.
14. Mass balance for the raw material and products should be included.

15. Energy balance data for all the components should be incorporated.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
17. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
18. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> 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<sup>3</sup> 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 16<sup>th</sup> November, 2009 should be included.
24. Ambient air quality monitoring should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
25. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
26. One season data for gaseous emissions other than monsoon season is necessary.
27. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
28. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
29. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.

30. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
31. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
32. A note on the impact of drawl of water on the nearby River during lean season.
33. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
34. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
35. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
36. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
37. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
38. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
39. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
40. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
41. Details regarding expected Occupational & Safety Hazards. Protective measures for Occupational Safety & Health hazards so that such exposure can be kept within permissible exposure level so as to protect health of workers. Health of the workers with special reference to Occupational Health. Plan of exposure specific health status evaluation of workers; pre placement and periodical health status of workers; plan of evaluation of health of workers by pre designed format, chest x ray, Audiometry, Spirometry Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations and plan of monthly and yearly report of the health status of workers with special reference to Occupational Health and Safety.
42. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

- iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
- 43. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
- 44. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 45. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
- 46. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

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

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

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

- 5.2.7 DAP Fertilizer manufacturing plant (1.1 Million TPA) on GIDC/PCPSIR Plot Nos. D3/2 & D3/3 at Village-Dahej, Taluka-vagra, District Bharuch, Gujarat by **M/s Zuari Fertilisers and Chemicals 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 fertilizer plants except Single Super Phosphate plant is listed at S.N. 5(a) of the Schedule of the EIA notification 2006 under category 'A' and appraised at Central level.

M/s Zuari Fertilisers and Chemicals Limited have proposed for setting up of 1.1 Million TPA Greenfield Integrated Di-Ammonium Phosphate (DAP) Fertilizer Plant at survey nos 262/1, 262/2 and 262/3 at Village Dahej, Tehsil Vagra, District Bharuch, Gujarat. Total plot area 465 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. Project cost is Rs. 4000 Crores.

Following products will be manufactured:

S.N.	Products	Nominal Daily Capacity, MTPD	Installed Annual Capacity Million MTPA
1.	Sulphuric Acid	4600	1.65
2.	Phosphoric Acid	1550 P <sub>2</sub> O <sub>5</sub>	0.48 P <sub>2</sub> O <sub>5</sub>
3.	DAP/NPK	3300	1.10

Multi stage scrubbing system and stack of adequate height will be provided to control the air emissions. Water requirement will be 16,000 m<sup>3</sup>/day. Power requirement will be met through captive power generation. The power requirement during the construction phase would be 2.5 MW.

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. 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.
6. A map indicating location of the project and distance from severely polluted area
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius.
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 and list of solvents and its recovery plan.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart of each products.
17. Action plan for the transportation of raw materials and products.
18. Ambient air quality monitoring at 8 locations within the study area of 10 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.

19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub>, Fluoride, Benzene including VOCs should be collected. The monitoring stations should take into account the predominant wind direction, population zone and sensitive receptors including reserved forests. Data for surface and ground water and noise monitoring should also be included.
20. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits. Control of fluorine emissions at source.
21. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO<sub>x</sub> emission and method to control NO<sub>x</sub>.
22. Details of water and air pollution and its mitigation plan.
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
24. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
25. 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.
26. Reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
27. Recheck the water requirement figure, which seems to be higher side. 'Permission' for the drawl of proposed water from the competent authority.
28. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber etc.).
29. Action plan for Zero Discharge of effluent as proposed should be included.
30. 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).
31. Baseline data for fluoride levels in surface water, ground water, soil in and around plant site.
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler should be included.
33. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
34. Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
35. Action plan for regular monitoring of worker and population for fluoride in the working area and population within 1 Km.
36. Details of captive landfill alongwith design details as per CPCB guidelines. Location of secured land fill/TSDf.
37. Authorization/Membership for the disposal of solid/hazardous waste in TSDf.
38. An action plan to develop green belt in 33 % area
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 has taken to keep these chemicals within PEL/TLV.



- iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
41. Details of occupational health surveillance programme.
  42. Socio-economic development activities should be in place.
  43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
  44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 45. 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.
46. 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.
  47. Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
  48. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
  49. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
  50. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

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

including their status of approvals etc. In this regard circular no. J -11013/77/2004-IA II(I) dated 2<sup>nd</sup> December, 2009 posted on the Ministry's website <http://www.moef.nic.in> may be referred.

- ix. Certificate of Accreditation issued by the QCI to the environmental consultant should be included.

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

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

**5.2.8 Pellet Plant for 4.0 MTPA (1.2 MTPA x 3 lines + 10% up-gradation) along with Producer gas Plant ( 72000 NM<sup>3</sup>/hr.) at Village Dudhaposi, Keonjhar District, Odisha by M/s Rungta Mines Ltd.- regarding TORs**

The Committee deferred the consideration of the proposal as the proposal submitted by the proponent is incomplete in several technical aspects.

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

- i. Transportation pattern of raw materials/finished products including the possibility of setting up of railway siding shall be explored
- ii. Mode of disposal/utilization of solid and hazardous waste generated shall be submitted
- iii. Plan for achieving zero effluent discharge shall be submitted

**5.2.9 Manufacturing of Structure (angle, Channel & Girder) & TMT bars-1,75,200 TPA and ERW & GL/EP Pipes-79,200 TPA at Plot No. SP-234, RIICO Industrial Area, Phase-II, Abu Road, District-Sirohi, Rajasthan at M/s J.D. Metalloys Limited - regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. The proposed project activity is covered under Category (B) and listed at S.N. 3(a) of the Schedule of the EIA notification 2006, but due to the applicability of general condition of EIA notification 2006, as the project site falls within the inter-state boundary of Gujarat-Rajasthan (2.8 km from the site) and the Balaram Ambaji Wildlife Sanctuary is located 2.7 km distance from the project site, the proposal has been appraised at the Central level.

M/s J.D. Metalloys Limited have proposed to manufacture Structure (Angle, Channel & Girder) & TMT Bars – 1,75,200 TPA and E.R.W & G.I./E.P Pipes – 79,200 TPA at Plot No. SP-234, RIICO Industrial Area, Phase-II, Abu Road, District-Sirohi, Rajasthan. The water bodies located within the study area are suket nadi, sewaran river, bansa nadi, teliya nadi, kawasi nadi and gomti nadi. The land requirement for the project is 19.27 acres. No Forest land is involved. **Balaram Ambaji Wildlife Sanctuary is located 2.7 km distance from the**

**project site.** There is a fairly dense mixed jungle which is about 4.1km distance from the project site. No court cases/litigation is pending against the project. Total cost of the project is Rs.7535.39 lakhs. The power requirement is 35MW which will be met from M/s Rajasthan State Electricity Board. D.G. set with a capacity of 1000 KVA will be installed as a standby power. The water bodies located in the study area is River Digaru which is 4 km from the project site. The water requirement is 500 m<sup>3</sup>/day which will be met out from the ground water (bore well). The raw materials required are sponge iron/scrap iron, ferro manganese, ferro silicon, ingots, HR coil, HCL and Chromate solution.

To control the air emissions, stack of adequate height will be provided. Water sprinkling will be done to control the fugitive emissions. The wastewater generation is about 194 m<sup>3</sup>/day which will be treated in the ETP. Slag will be sent to cement industries and will also be used for road construction. ETP sludge will be sent to Udaipur TSDF for disposal.

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

1. Executive summary of the project
2. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site duly authenticated by the Chief Wildlife Warden along with his recommendations or comments
3. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife as the project is located within 10 Km distance of Balaram Ambaji Wildlife Sanctuary.
4. Photographs of the proposed plant area.
5. A line diagram/flow sheet for the process and EMP
6. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
7. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
8. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
9. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
10. Details and classification of total land (identified and acquired) should be included.
11. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
12. A list of industries containing name and type in 10 km radius shall be incorporated.
13. 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".
14. Manufacturing process details for all the process units should be included.
15. Mass balance for the raw material and products should be included.
16. Energy balance data for all the components should be incorporated.

17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
18. 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.
19. 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 30<sup>th</sup> May, 2008.
20. Vehicular pollution control and its management plan should be submitted.
21. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
22. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
23. Air quality modeling for all the plants for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm<sup>3</sup> should be included.
24. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
25. 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.
26. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
27. One season data for gaseous emissions other than monsoon season is necessary.
28. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
29. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used 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.
30. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
31. 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.

32. 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.
33. A note on the impact of drawl of water on the nearby River during lean season.
34. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
35. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
36. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
37. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
38. 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.
39. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
40. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
41. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
42. 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.
43. 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.

44. 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.
45. Total capital cost and recurring cost/annum for environmental pollution control measures.
46. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
47. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

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 4<sup>th</sup> 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.

#### 5.2.10 Proposed setting up of a pot-still distillation plant in survey nos. 299/1 (part) and 301/0 (part) of Latambarcem village in Bardez taluka, North Goa district –reg. By **M/s Phoenix Alcobevz Pvt Ltd - regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. The proposed project activity is covered under Category (B) and listed at S.N. 5(g) of the Schedule of the EIA

notification 2006, but due to the applicability of general condition of EIA notification 2006, as the project site falls within the inter-state boundary of Goa - Maharashtra (3.74 km from the site), the proposal has been appraised at the Central level. The proposal has been forwarded by the Goa State Environmental Impact Assessment Authority.

M/s Phoenix Alcobevz Pvt Ltd have proposed to establish 2800 LPD Pot still distillery for production of malt, grape, cashew and other consumable spirits, winery of a capacity of 15000 cases annually and bottling unit of 30,000 cases per month for IMFL contry liquor and wine at Plot No: 299/1(part) 301/0(part) , Latambarcem, Bicholim , State- Goa. The land requirement for the project is 11,400 m<sup>2</sup>. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. Project cost is Rs. 18 Crores. Rs. 2 crore and Rs. 20 lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures. The power requirement is 300 KVA which will be met from the D.G. set. The water requirement is 80 m<sup>3</sup>/day. The raw materials required are cashew apple, barley, grapes, sugarcane etc.

To control the air emissions, stack of adequate height will be provided. Green belt will be developed. The wastewater generated from the distillery will be treated in the ETP.

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

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 (HSD etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. Stack height should be based on maximum sulphur content in the HSDI.
13. Storage facility for raw materials, prepared alcohol and fuel.
14. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> 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<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> 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 molasses/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 and scheme for achieving zero discharge.
24. Spent wash generation 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 Goa 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.

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

5.2.11 Expansion of Steel Plant from 0.20 MTPA to 0.50 MTPA at Village Chaliyama, Bankasai and Kuju in Saraikela, Kharwan District, Jharkhand by **M/s Rungta Mines Limited. - regarding TORs.**

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

M/s Rungta Mines Limited have proposed to expand their steel plant from 0.20 to 0.50 MTPA at village Chaliyama, Bankasai and Kuju, District Saraikela Kharsawan, Jharkhand. The existing plant got environmental clearance from MoEF vide letter no. J-11011/838/2007-IA.II(I) on 4<sup>th</sup> November, 2008. The existing plant is located in an area of 204.425 acres. The additional land requirement for the proposed expansion is 387.735 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. Project cost is Rs. 1237.02 Crores. The power requirement for the proposed expansion is 80 MW which will be met from the captive power plant. The water requirement is for the proposed expansion 1063 m<sup>3</sup>/hr which will sourced from Kharkai river. The Kharkai river is located at a distance of 0.20 km from the project site. The raw materials required are coal char, coal fines, coal, sponge iron, bentonite, dolomite, coke breeze, iron ore fines and iron ore pellets etc.

The details of the existing and proposed product details are as below:

Sl.	Facilities	Existing	Proposed	Total
1.	Sponge Iron Plant	0.21 MTPA	0.24 MTPA	0.45 MTPA
2.	Mini Blast Furnace	0.383 MTPA	-	0.383 MTPA
3.	Steel Melting Shop	0.20 MTPA	0.30 MTPA	0.50 MTPA
	a) Induction Furnace	4x15 T	4x15 T	4x15 T
	b) Ladle Furnace, EAF	1x20 T	1x20T, 1x30 T	
	c) Continuous casting machine	1x3 Strand	2x3 - Strand	3x3- Strand
4.	Captive Power Plant (Total)	39 MW	80 MW	119 MW
	a) WHR Boiler	14 MW	18 MW	32 MW
	b) AFBC Boiler	25 MW	62 MW	87 MW
5.	Pelletisation Plant	-	2x1.2 MTPA	2.4 MTPA
6.	Coal Washery	-	1.26 MTPA	1.26 MTPA
7.	Rolling mills	0.20 MTPA	-	0.20 MTPA
8.	Billets/Slab/Bloom Caster	-	0.40 MTPA	0.40 MTPA
9.	Flats/Round/Structural Mill	-	0.40 MTPA	0.40 MTPA
10.	Vaccum Degassing unit		1x30 T	1x30 T
11.	Oxygen Plant		1x30 TPD	1x30 TPD
12.	Lime Plant		1x90 TPD	1x90 TPD

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

1. Executive summary of the project
2. Photographs of the existing and proposed plant area.
3. Copies of coal linkage documents
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.

5. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
6. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
8. A line diagram/flow sheet for the process and EMP
9. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
10. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
11. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
12. Break up of small, medium and large farmers from whom the land is being acquired. If small farmers are involved, a detailed R&R plan.
13. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
14. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
15. Details and classification of total land (identified and acquired) should be included.
16. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
17. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
18. Permission and approval for the use of forest land and recommendations of the State Forest Department regarding impact of proposed expansion on the surrounding reserve forests, if applicable, should be included.
19. A list of industries containing name and type in 10 km radius shall be incorporated.
20. Residential colony should be located in upwind direction.
21. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
22. Studies for fly ash, muck disposal, slurry, sludge material and solid waste generated should also be included, if the raw materials used has trace elements and a management plan.
23. Manufacturing process details for all the process units should be included.
24. Possibility of installation of WHRB will be explored and details included
25. Mass balance for the raw material and products should be included.

26. Energy balance data for all the components including proposed power plant should be incorporated.
27. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
28. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
29. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
30. Vehicular pollution control and its management plan should be submitted.
31. A write up on use of high calorific hazardous wastes from all the sources in kiln and commitment regarding use of hazardous waste should be included.
32. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
33. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
34. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
35. Air quality modeling for all the plants proposed including mine for specific pollutants needs to be done. APCS for the control of emissions within 50 mg/Nm<sup>3</sup> should be included. Cumulative impacts of steel plant and Captive Power Plant on the ambient air quality shall be assessed.
36. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
37. Ambient air quality monitoring along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height using SODAR on hourly basis
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
38. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.

39. One season data for gaseous emissions other than monsoon season is necessary.
40. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
41. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
42. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
43. Ground water modelling showing the pathways of the pollutants should be included
44. Column leachate study for all types of stockpiles or waste disposal sites, at 20 °C-50 °C should be conducted and included.
45. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
46. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
47. A note on the impact of drawl of water on the nearby River during lean season.
48. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
49. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1;10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
50. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
51. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
52. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
53. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans.
54. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
55. Action plan for solid/hazardous waste generation, storage, utilization and disposal. A note on the treatment, storage and disposal of all type of solid waste should be included. End use of solid waste viz. fly ash etc. and its composition should be covered.
56. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
57. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening

- of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
58. A scheme for rainwater harvesting has to be put in place. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well. Efforts should be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources.
  59. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
  60. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
  61. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
  62. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
  63. Occupational health:
    13. 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,
    14. 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.
    15. Annual report of health status of workers with special reference to Occupational Health and Safety.
    16. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
    17. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
  64. Plan for the implementation of the recommendations made for the steel plant in the CREP guidelines must be prepared.
  65. Corporate Environment Policy
    - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
    - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
    - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
    - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
  66. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
  67. A note on identification and implementation of Carbon Credit project should be included.

68. Total capital cost and recurring cost/annum for environmental pollution control measures.
69. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
70. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

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

#### 5.2.12 Development of Drilling of one location-BMDE in Baramura Field in Tripura by **M/s Oil and Natural Gas Corporation 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 the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Oil and Natural Gas Corporation Ltd have proposed for development drilling ( 1 Well) in Baramura Field in West Tripura, Plot No. 35/P, Baramura, Tripura. Proposal also include laying of flowline to nearest GCS. Forest land is involved. Application submitted and joint inspection with Forest Department was carried out on 11.06.2012. No new production facilities are proposed. The existing Baramura GCS has adequate capacity to handle additional gas, condensate and water production. The details area:

S.N.	Material to be handle	Installed Capacity	Present Production	Additional Production
1	Gas	0.75 MMSCMD	0.4 MMSCMD	0.115 MMSCMD
2	Liquid	90 m <sup>3</sup> /day	3.32 m <sup>3</sup> /day	0.115 MMSCMD
3	Condensate	18 m <sup>3</sup> /day	0.782 m <sup>3</sup> /day	--
4	Water	72 m <sup>3</sup> /day	2.538 m <sup>3</sup> /day	--

Well will be drilled upto depth of 2400 m. Water requirement will be 25 m<sup>3</sup>/day. Wastewater generation from well drilling will be 15 m<sup>3</sup>/day. Total cost of drilling will be 20.52 Crore.

After detailed deliberations, the Expert Appraisal Committee prescribed the following TORs for preparation of EIA/EMP subject to submission of revised form-1:

1. Executive summary of the project
2. Project description, project objectives and project benefits.
3. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area.
4. Details of forest land involved in the proposed project. A copy of forest clearance letter.
5. 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.
6. Distance from nearby critically/severely polluted area as per Notification dated 13<sup>th</sup> January, 2010, if applicable.
7. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
8. Environment clearance for the existing wells/unit, if any, issued by the Ministry, Consent to Operate and Authorization accorded by the TPCB alongwith point-wise compliance report. Latest photograph of existing area to be provided.
9. Detailed break up of project cost including recurring cost.
10. 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.
11. 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<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, 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
12. Incremental GLC as a result of DG set operation.
  13. Potential environmental impact envisages during various stages of project activities such as site activation, development, operation/ maintenance and decommissioning.
  14. 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.
  15. Noise control and measures to minimize disturbance due to light and visual intrusions in case coastally located areas.
  16. Treatment and disposal of wastewater.
  17. Details of generation, treatment and management of solid waste.
  18. Management of spent oil and loose material.
  19. Storage of chemicals and diesel at site.
  20. Commitment for the use of WBM only
  21. Mud make up and mud and cutting disposal – all options considered should be listed with selective option.
  22. Hazardous material usage, generation, storage accounting and disposal.
  23. Disposal of packaging waste from site.
  24. Oil spill control and emergency plans in respect of recovery/ reclamation.
  25. H<sub>2</sub>S emissions control.
  26. Produced oil handling and storage.
  27. Details of scheme for oil collection system alongwith process flow diagram and its capacity.
  28. Details of control of air, water and noise pollution in oil collection system.
  29. Disposal of produced/formation water.
  30. Whether any burn pits being utilized for well test operations.
  31. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.
  32. 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.
  33. Risk assessment and mitigation measures along with disaster management plan and prevention of blow out.
  34. Safety plan to be included for the Tea worker in the nearby areas.
  35. Environmental management plan.
  36. Documentary proof of membership of common disposal facilities, if any.
  37. Details of environmental and safety related documentation within the company including documentation and proposed occupational health and safety Surveillance Safety Programme for all personnel at site. This should also include monitoring programme for the 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.
  38. Total capital and recurring cost for environmental control measures.
  39. A copy of Corporate Environment Policy of the as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26<sup>th</sup> April, 2011 available on the Ministry's website.

40. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
41. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
42. A tabular chart with index for point-wise compliance of above TORs.

The following general points 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 together with Public Hearing prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA/EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the Tripura Pollution Control Board for public hearing. The issues emerged and response to the issues raised during public hearing should be incorporated in the EIA report.

#### 5.2.13 Proposed 30 KLPD distillery at village Watwate, Tal.-Mohol, Distt. Solapur, Maharashtra by **M/s Jakraya Sugar Ltd.- regarding TORs.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Terms of References for the preparation of EIA/EMP report. All the Distillery Units (30 KLPD and above) are listed at S.N. 5(g) of Schedule of EIA Notification, 2006 as Category 'A' and have to be appraised at the Central level.

M/s Jakraya Sugar Limited have proposed to set up a 30 KLPD distillery to produce RS/ENA/Anhydrous (Fuel) Alcohol at Gat No.61/A, at village Watwate, Tal.-Mohol, Distt. Solapur, Maharashtra. 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 plot area is 17 acres (68796.559 m<sup>2</sup>). Project cost is Rs. 3174.43 lakhs. The power requirement is 10.44 MW. The water requirement is 600 m<sup>3</sup>/day. It was informed by the proponent that they are already operating a sugar factory 2500 TCD and 11 MW Co-generation power plant in the proposed project site for which Consent to Establish and Consent to Operate is already obtained. The distillery will be operating for a period of 190 days in a year. The raw materials required are molasses, sulphuric acid, nutrients, deformer agent etc. Following products will be manufactured:

**Products**

Alcohol Conforming to I.S.I. Grade-I 323 – 28.5 KLPD Rectified Spirits + 1.5 KLPD Impure Spirits (5%) on wash to RS mode and 27.0 KLPD Anhydrous Alcohol.

**By products:**

- i. Fuel Alcohol Conforming to IS: 15464 – 810 KL / MONTH
- ii. Head Spirit Conforming to I.S.I. Grade-II 323 – 45 KL / MONTH
- iii. Rectified Spirit – 855 KL / MONTH
- iv. Extra Neutral Alcohol – 855 KL/ MONTH
- v. Fusel Oil – 1.8 KL / MONTH
- vi. Biogas – 12000 M<sup>3</sup> / DAY
- vii. Bio-compost- 23640 MT/ ANNUM

To control air emissions, venture wet scrubber will be provided for arresting fly ash generated from boiler. The effluent generation from the distillery would be 316.80 m<sup>3</sup>/day. This effluent will be treated in the ETP. Spent wash will be treated in Bio-methanation plant.

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<sub>2</sub> 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<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> 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<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> 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 molasses/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 due to alcohol production. Details of the spent wash treatment for molasses/grain 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 Maharashtra 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 report 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.

5.2.14 Proposed 30MTPH Fertilizer Blending Unit for customized NPK grade of fertilizer production facility at Distt. South Goa, Goa by **M/s Zuari Holdings 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 Terms of References (ToR) for the preparation of EIA/EMP report. All fertilizer plants except Single Super Phosphate plant is listed at S.N. 5(a) of the Schedule of the EIA notification 2006 under category 'A' and appraised at Central level.

M/s Zuari Holdings Limited have proposed for setting up of 30 MTPH fertilizer blending unit for customized NPK fertilizer production within the existing fertilizer complex at survey no 110 to 252, zuarinagar, village sancoale, tehsil Marumugao, South Goa district, Goa. Total plot area 1.44 ha. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. Project cost is Rs. 50 Crores. Rs. 5 crores is earmarked towards the capital cost for the Pollution Control equipment. The raw materials required are multiple finished fertilizers, sulphuric acid, natural gas etc.

Water requirement will be 2-3 m<sup>3</sup>/hr and power requirement is 1 MW which will be met through the existing sources.

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. Photographs of the existing and proposed plant area.
5. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
6. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
7. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
8. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
9. Regulatory framework.
10. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
11. A map indicating location of the project and distance from severely polluted area
12. Project location and plant layout.
13. Infrastructure facilities including power sources.
14. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
15. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
16. Present land use based on satellite imagery for the study area of 10 km radius.
17. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.

18. Details of the total land and break-up of the land use for green belt and other uses.
19. List of products alongwith the production capacities and list of solvents and its recovery plan.
20. Detailed list of raw materials required and source, mode of storage and transportation.
21. Manufacturing process details alongwith the chemical reactions and process flow chart of each products.
22. Action plan for the transportation of raw materials and products.
23. Ambient air quality monitoring at 8 locations within the study area of 10 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
24. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub>, 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.
25. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits. Control of fluorine emissions at source.
26. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO<sub>x</sub> emission and method to control NO<sub>x</sub>.
27. Details of water and air pollution and its mitigation plan.
28. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
29. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
30. 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.
31. Reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
32. Recheck the water requirement figure, which seems to be higher side. 'Permission' for the drawl of proposed water from the competent authority.
33. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber etc.).
34. Action plan for Zero Discharge of effluent as proposed should be included.
35. 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).
36. Baseline data for fluoride levels in surface water, ground water, soil in and around plant site.
37. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler should be included.
38. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
39. Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
40. Action plan for regular monitoring of worker and population for fluoride in the working area and population within 1 Km.
41. Details of captive landfill alongwith design details as per CPCB guidelines. Location of secured land fill/TSDF.

42. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
43. An action plan to develop green belt in 33 % area
44. 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.
45. Details of occupational health programme.
  - i. To which chemicals, workers are exposed directly or indirectly.
  - ii. Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii. What measures company has taken to keep these chemicals within PEL/TLV.
  - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v. What are onsite and offsite emergency plan during chemical disaster.
  - vi. Liver function tests (LFT) during pre-placement and periodical examination.
46. Details of occupational health surveillance programme.
47. Socio-economic development activities should be in place.
48. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
49. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
50. Corporate Environmental Responsibility
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
51. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
52. Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
53. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
54. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
55. Any litigation pending against the project and / or any direction / order passed by any Court of Law against the project, if so, details thereof.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material 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 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no. J -11013/77/2004-IA II(I) dated 2<sup>nd</sup> December, 2009 posted on the Ministry's website <http://www.moef.nic.in> may be referred.
- ix. Certificate of Accreditation issued by the QCI to the environmental consultant should be included.

It was decided that 'TORs' prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the Goa 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.

#### 5.2.15 Proposed Synthetic Organic Resin at Village Shapar, Distt. Rajkot, Gujarat by **M/s Vision Laminates 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 Terms of References (ToR) for the preparation of EIA/EMP report. All Synthetic Organic Resin Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Vision Laminates Pvt. Ltd have proposed to expand the manufacture of electrical insulation board and switch board sheet & decorative laminate sheet from 72 MT/month to 528 MT/month and synthetic organic resin (Phenol-Formaldehyde Resin and Melamine-Formaldehyde Resin) – 425 MT/month at Plot No. 8, Opp. Sahyog Cotton, N.H. No. 8-B, Shapar (Veraval), Tal. Kotda Sangani, Dist. Rajkot, Gujarat. It was informed by the proponent that the existing unit already got Consent to Establish from the Gujarat Pollution Control Board. Total plot area 2704.87 m<sup>2</sup>. No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. Project cost is Rs. 203 lakhs. Water requirement is 24.30 m<sup>3</sup>/day which will be met from the ground water. The power requirement is 150 KVA which will be procured from M/s Paschchim Gujarat Vij Company Limited.

To control air emissions multi cyclone separator will be attached to steam boiler and thermic fluid heater. The wastewater generation is 3.3 m<sup>3</sup>/day. Used oil will be sold to GPCB registered recyclers.

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

1. Executive summary of the project
2. Justification of the project.
3. Photographs of the existing and proposed plant area.
4. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
5. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
6. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
8. Promoters and their back ground.
9. Regulatory framework
10. A map indicating location of the project and distance from severely polluted area
11. Project location and plant layout.
12. Infrastructure facilities including power sources.
13. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
14. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
15. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
16. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
17. Permission, if any, from the State Forest Department
18. Details of the total land and break-up of the land use for green belt and other uses.
19. List of products alongwith the production capacities.
20. Detailed list of raw materials required and source, mode of storage and transportation.
21. Manufacturing process details alongwith the chemical reactions and process flow chart.
22. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
23. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
24. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
25. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
26. Control methanol emission from drying section.
27. Details of VOC monitoring system in the working zone environment, if any.
28. Name of all the solvents to be used in the process and details of solvent recovery system.

29. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
30. Details of water and air pollution and its mitigation plan.
31. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
32. An action plan to control and monitor secondary fugitive emissions from all the sources.
33. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
34. Permission for the drawl of 24.30 m<sup>3</sup>/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
35. Action plan for 'Zero' discharge of effluent shall be included.
36. Treatment of phenol in the effluent, if any.
37. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
38. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
39. Explore the possibility to use fuel other than wood.
40. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
41. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
42. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
43. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
44. A write up on "Treatment of workers affected by accidental spillage of methanol/phenol".
45. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
46. An action plan to develop green belt in 33 % area
47. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
48. Details of occupational health programme.
  - i. To which chemicals, workers are exposed directly or indirectly.
  - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii. What measures company 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.
49. Details of occupational health surveillance programme.
50. Socio-economic development activities shall be in place.
51. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
52. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

53. Corporate Environmental Responsibility
  - (a) Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
54. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
55. Does the company has a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
56. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
57. Public hearing to be conducted and issues raised and commitments made by the project proponent on the same should be included in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
58. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

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

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

5.2.16 Proposed 3,60,000 TPA cement production clinker grinding unit by **M/s RLJ Steel Plant Ltd. (Cement Division)** at Plot No. 391, Village Baragaon, Tehsil Chunar, District Mirzapur (U.P.)- **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.

#### 5.2.17 Proposed 45 KLPD Distillery/Ethanol plant at Village-Bijora, Distt. Yavatmal, Maharashtra by **M/s Chintamani Agrotech (India) Ltd. - regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Terms of References(ToR) for the preparation of EIA/EMP report. All the Distillery Units (30 KLPD and above) are listed at S.N. 5(g) of Schedule of EIA Notification, 2006 as Category 'A' and have to be appraised at the Central level.

M/s Chintamani Agrotech (India) Ltd have proposed to set up a 45 KLPD distillery/ethanol plant at village Bijora, Taluka Mahagaon, District Yavatmal, Maharashtra. The plant will operate for a period of 270 days in a year. The project is proposed to be set up along with a 3500 TCD sugar plant and 30 MW co-generation power plant. Environmental Clearance to the 30 MW co-generation power plant was already awarded by the SEIAA, Maharashtra vide letter no. EC(Chintamani)/2009/141/CR154/TC1 dated 29.9.2010. Consent to Establish (CTE) for the sugar plant has been received from Maharashtra Pollution Control Board on 14.1.2005. CTE for the 30 MW co-generation power plant was received from MPCB. 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 plot area required for the ethanol plant is 7.2 ha. Project cost is Rs. 56.30 crores. Rs.4 crores is earmarked for the capital cost towards the pollution control measures. The power requirement will be met from co-generation power plant. The water requirement is 450 m<sup>3</sup>/day, which will be sourced from Pimpalagaon Dam. The Pimpalagaon Dam is located at a distance of 3 km from the project site. The raw materials required are molasses, sulphuric acid, nutrients, defomer agent etc.

To control air emissions, bag filters will be provided.. The effluent generation from the distillery will be treated in the ETP. Spent oil will be sent to the authorized recycler.

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

1. Executive summary of the project.
2. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
3. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
4. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
5. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
6. Detailed break-up of the land area alongwith latest photograph of the area.
7. Present land use based on satellite imagery and details of land availability for the project alongwith supporting document.
8. Details of site and information related to environmental setting within 10 km radius of the project site.

9. A copy of lease deed or allotment letter, if land is already acquired.
10. Information regarding eco-sensitive areas such as national park/wildlife sanctuary/ biosphere reserves within 10 km radius of project area.
11. List of existing distillery units in the study area alongwith their capacity and sourcing of raw material.
12. Details of proposed products alongwith manufacturing capacity.
13. Number of working days of the distillery unit.
14. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
15. Details of raw materials, its source & availability of all raw materials including cereal grains requirement.
16. Sources and quantity of fuel (rice husk/coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> 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.
17. Storage facility for raw materials, prepared alcohol, fuel and fly ash.
18. Action plan to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> 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.
20. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
21. An action plan to control and monitor secondary fugitive emissions from all the sources.
22. Details of the use of steam from the boiler.
23. Ground water quality around proposed spent wash storage lagoon and the project area.
24. Details of water requirement, water balance chart for molasses/grain based Distillery and co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
25. Fresh water requirement should be restricted upto 10 Kl/Kl of alcohol for molasses/grain based distillery
26. Permission of withdrawal of water from competent authority.
27. Proposed effluent treatment system for molasses/ grain based distillery (spent wash and spent lees) alongwith utility wastewater including CPP and scheme for achieving zero discharge.
28. Spent wash generation due to alcohol production. Details of the spent wash treatment for molasses/grain based distillery.
29. Capacity for spent wash holding tank and action plan to control ground water pollution.
30. Dryer shall be installed to dry DWGS.
31. Layout for storage of rice husk/biomass.
32. Details of solid waste management including management of boiler ash.
33. Green belt development as per the CPCB guidelines.
34. List of flora and fauna in the study area.
35. Noise levels monitoring at five locations within the study area.
36. 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.

37. EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
38. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
39. Alcohol storage and handling area fire fighting facility as per norms.
40. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.
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 Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii. What measures company have taken to keep these chemicals within PEL/TLV.
  - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v. What are onsite and offsite emergency plan during chemical disaster.
  - vi. Liver function tests (LFT) during pre-placement and periodical examination.
43. Details of occupational health surveillance programme.
44. Details of socio-economic welfare activities.
45. 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.
46. Action plan for post-project environmental monitoring.
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. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
52. 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 Maharashtra 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 report 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.

#### 5.2.18 Expansion of Steel Plant along with Captive Power Plant and Sponge Iron Plant/WHRB at Periyapuliur, Amirthamangalam & Poovalambedu Village, Gummidipoondi Taluk, Thiruvallur Distt. Tamil Nadu by **M/s J.R. Metal Chennai Limited. -regarding TORs**

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

#### 5.2.19 Expansion of the existing unit products from 220 TPM to 1000 TPM with by-product capacity of 920 TPM at Plot Nos. 287/1 & 2A, 2<sup>nd</sup> Phase, Gujarat Industrial Development Corporation (GIDC), Vapi.-396195, Gujarat by **M/s Vertellus Speciality Materials (India) Pvt. Ltd.-regarding TORs**

The project authorities and their consultant (M/s Precitech Laboratories, Environmental 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 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 Vertellus Speciality Materials (India) Pvt. Ltd have proposed to expand the production of Polymer Intermediates such as 4, 4 Di-chloro Di-phenyl Sulphone (4:4 DCDPS) and 4-Nitro N-Methyl Phthalimide (4 NPI) at Plot Nos. 287/1 & 2-A, Phase II, GIDC, Vapi, District Valsad, Gujarat. Total land requirement is 6109.17 m<sup>2</sup> (1.50 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.1.55 crores. The existing and the proposed products details are as below:



Name of the Products/By-Products	Existing (TPM)	Proposed Expansion (TPM)	Total (TPM)
<b>Products</b>			
4,4 Dichloro Diphenyl Sulphone (4:4 DCDPS)	145 or 220	755	900
4-Nitro N-Methyl Phthalimide (4 NPI)	75	25	100
<b>Total</b>	<b>220</b>	<b>780</b>	<b>1000</b>
<b>By-Products</b>			
4 – Chlorobenzene Sulphonic Acid (CBSA) Salts*	*50 or 80	275	*325
Ortho Nitro Chlorobenzene Para Sulphonic Acid (ONCBPSA) from spent acid **	0	720	720
<b>Total</b>	<b>0</b>	<b>895</b>	<b>920</b>
Note-1: *CBSA is produced as a by-product from DCDPS. In current valid CC&A, it is shown as hazardous waste. CTE is obtained from GPCB for removing it from haz. Waste category and including it in the product list. Application for CTO submitted.			
Note-2: **Ortho Nitro Chlorobenzene Para Sulphonic Acid (ONCBPSA) is produced from spent acid, which is generated during DCDPS manufacturing (from Stream-1). Currently, the spent acid is sold to Novel spent acid Management or TSDF-BEIL. Company proposes that it may either use it to manufacture ONCBPSA or sale to Novel Spent Acid Management or dispose at TSDF-BEIL			

The power requirement is 1644 KVA which will be met from the Dakshin Gujarat Vij Co. Limited. D.G. set of 2500 KVA will be installed as a stand by power. The water requirement is 553.50 m<sup>3</sup>/day which will be sourced from GIDC water supply. The raw materials required are Di-methyl sulphate, sulphur tri oxide, ammonium hydroxide, methanol, activated carbon sulphuric acid etc.

To control the air emissions, adequate stack height will be provided. The waste water generation is 104.50 m<sup>3</sup>/day. Out of this effluent, 46 KLD will be diverted to RO/ evaporator and 58.50 KLD will be treated in ETP and final disposal to CETP through underground drainage. Used oil will be sold to registered recyclers.

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

1. Executive summary of the project
2. Photographs of the existing and proposed plant area
3. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
4. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
5. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
6. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
7. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.

9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
12. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
13. Details and classification of total land (identified and acquired) should be included.
14. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
15. A list of industries containing name and type in 10 km radius shall be incorporated.
16. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
17. Manufacturing process details for the synthetic chemicals unit should be included.
18. Mass balance for the raw material and products should be included.
19. Energy balance data for all the components should be incorporated.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
21. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
22. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> 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<sup>3</sup> 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 16<sup>th</sup> November, 2009 should be included.
28. Ambient air quality monitoring should be included for the day (24 hrs) for maximum GLC along with following :
  - i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.

- vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
- vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
- viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
- 29. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
- 30. One season data for gaseous emissions other than monsoon season is necessary.
- 31. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
- 32. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
- 33. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
- 34. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
- 35. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
- 36. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
- 37. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
- 38. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
- 39. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
- 40. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
- 41. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.

42. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
43. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
44. Occupational health:
  - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c. Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
  - d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
  - e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
45. Corporate Environment Policy
  - i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
46. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment 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 4<sup>th</sup> 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.

#### 5.2.20 Proposed expansion of AC Sheets at Village RC Puram, Distt. Medak AP by **M/S Visaka Industries Ltd.-regarding TORs**

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

M/s Visaka Industries Limited have proposed to expand the production of asbestos cement manufacturing unit from 78000 TPA to 1,20,000 TPA at village Velemala, Mandal R.C.Puram, District Medak, Andhra Pradesh. The proposed expansion will be done in the existing land area of 38 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.12 crores. Rs. 50 lakhs is earmarked towards the environmental pollution abatement. The raw materials required are cement (4200 TPM), fly ash (2600 TPM), Chrysotile asbestos fibre (800 TPM) and Pulp (60 TPM). Asbestos fiber (Chrysotile variety) is imported from Canada/Brazil/Zimbabwe/Russia. The water requirement is 180 m<sup>3</sup>/day.

The proponent has submitted abstract of Government of Andhra Pradesh and requested the Committee to exempt the project from the Public Hearing. The Committee noted that the abstract submitted by the proponent is related to the declaration of local authority for maintenance of industrial estates/industrial development areas under section 147 of the Andhra Pradesh Panchayat Raj Act, 1994. Further, the Committee noted that the proponent has not submitted the relevant documents of Govt. of Andhra Pradesh declaring the project site as a notified industrial area. The Committee decided not to exempt the project from the Public Hearing.

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

- 1 Executive Summary of the project.
- 2 Photographs of the existing and proposed plant area.
- 3 A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
- 4 Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
- 5 Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
- 6 A line diagram/flow sheet for the process and EMP
- 7 The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
- 8 Modern up-to-date Asbestos plant with automatic bag opening devices should be installed.
- 9 The safety measures adopted during import and transport of Asbestos from Canada or any other country should be included.
- 10 Present land use of study area for 10 Km radius should be included. Detailed topographical map indicating drainage pattern and other features of the area should also be included.
- 11 Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land viz. allotment letter should be included.
- 12 High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 km radius area from proposed site should be incorporated. The same should be used for land used /land-cover mapping of the area.
- 13 Project site layout plan to scale using AutoCAD, raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 Km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
- 14 Cumulative data base of last 2 yrs. for emissions e.g. aerosols size, optical depth, CO, CO<sub>2</sub>, surface and air temperature, NO, CH<sub>4</sub>, anions/cations/trace metals as given below in surface/subsurface water with present GW level and its fluctuation for last 5-10 yrs from CGWB as may be applicable.
- 15 For the project location within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
- 16 Geo-technical data by a bore hole of upto 40 mts. in every One sq. km area such as ground water level, SPTN values, soil fineness, geology, shear wave velocity etc. for liquefaction studies. This will help making a future Seismic Hazard and Earthquake Risk Management area.
- 17 Site-specific micro-meteorological data including inversion height and mixing height should be included
- 18 Details of the other industries located in 10 km radius should be included
- 19 One season base line data on air, water, soil & noise etc. should be included
- 20 A chapter on chemistry of asbestos, handling of asbestos material, precautions proposed for the direct contact, arrangements made for storage and monitoring of asbestos fibres etc. other details as per given below:
  - i. Size of silica sand, transportation, storage, spillway of melt and temperature management for float glass and mirror Industry along with silicosis management and toxicity studies and management for Ag etc.
  - ii. Source and location of Asbestos (GPS) even if imported, size in F/ml, levels in environment, Chemical composition of raw material as especially amount of Tremolite, Crocidolite, Amosite and other amphiboles, Hexavalent chromium in raw

- material especially in serpentine, talc and chrysotile, Electron microscopy, XRD and Raman Spectra studies.
- iii. Health Management Plan for Mesothelium, Lung cancer and Asbestosis related problems in asbestos industries.
  - 21 Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per ISO-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (vi) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.),
  - 22 Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
  - 23 If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
  - 24 Mode of transport of raw materials from sources are to be shown. All the trucks for raw material and finished product transportation must be "Environmentally Compliant"
  - 25 Studies are also required for management of muck disposal, slurry, sludge material and solid waste generated if the raw materials used has trace elements and a management plan.
  - 26 Air quality modeling for the Asbestos handling system. Ambient air quality monitoring modelling along with cumulative impact. Following are to be included as an annexure for the day (24 hrs) considered for maximum GLC:
    - i. Emissions (g/second) with and without the air pollution control measures
    - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height) on hourly basis
    - iii. Model input options for terrain, plume rise, deposition etc.
    - iv. Print-out of model input and output on hourly and daily average basis
    - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
    - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
    - vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
    - viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
    - ix. Graphs of monthly average daily concentration with down-wind distance
    - x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
    - xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
    - xii. Existing stack emission data and fibre concentration in the work zone.
  - 27 Sources of secondary emissions, its control and monitoring as per the CPCB guidelines and latest notification vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008 should be included.

- 28 Chemical characterization of RSPM and incorporation of RSPM data. Location of one AAQMS in downwind direction.
- 29 Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
- 30 Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
- 31 Actual source and permission for the drawl of water from bore well from the SGWB/CGWA or concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included
- 32 Ground water monitoring minimum at 8 locations should be included.
- 33 Scheme for proper storage of asbestos fibres and disposal of solid/hazardous waste should be included.
- 34 Presence of aquifer/aquifers within 1 km of the project boundaries should be included. Management plan for recharging the aquifer should be given so as to limit the water extraction within permissible limit of CWC or CGWB should be included.
- 35 Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
- 36 Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management should be included.
- 37 Ground water modeling showing the pathways of the pollutants should be included
- 38 Column leachate study for all types of stockpiles or waste disposal sites, at 20°C-50°C should be conducted and included.
- 39 All samplings for water have to be done during the peak summer time (Sampling number, dates and standard deviation should be included.
- 40 Incorporation of water harvesting plan for the project is necessary, if source of water is bore well should be ensured.
- 41 Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents should be included.
- 42 If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
- 43 Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from asbestos bearing effluent should be included.
- 44 The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, lakes), sub-surface and ground water with a monitoring and management plans should be included.
- 45 All stock piles should be on top of a stable liner to avoid leaching of materials to ground water.
- 46 The green belt should be around the project boundary in 33 % area and a scheme for greening of the traveling roads should also be incorporated. All rooftops/terraces should have some green cover.
- 47 Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
- 48 Occupational health:



- a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c) Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
  - d) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
  - e) Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
- 49 Detailed action plan for compliance of the directions (including the recent Kalyaneswari case) of the Hon'ble Supreme Court of India regarding occupational health and safety measures in asbestos industries should be included.
  - 50 Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
  - 51 Compliance to the recommendations mentioned in the CREP guidelines should be included.
  - 52 An action plan on entire operation should be automatic and closed system for all operations for fibre handling and processing should be included.
  - 53 Details of arrangement for measurement and monitoring of asbestos fibre (Phase contrast microscope) should be included.
  - 54 Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
  - 55 EMP should include the concept of waste-minimization, recycle/reuse/recovery techniques, Energy conservation, and natural resource conservation.
  - 56 EMP should include a clear map for plantation/green belt.
  - 57 Commitment that laboratory for monitoring asbestos fibres will be established at the site.
  - 58 Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
  - 59 At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
  - 60 Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

The following general points should be noted:

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

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

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA/EMP report shall be submitted to 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 reports, after public consultation.

**5.2.21 Proposed Ferro Alloys manufacturing unit (Tanushree Ispat Pvt. Ltd) at J.L. No. 37, Dag No. 2853, 2854, Village-Tewaridanga, District-Bankura, West Bengal by **M/s Tanushree Ispat Pvt. 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.

**5.2.22 Expansion of manufacturing of Synthetic Organic Resin unit at Village Bhimasar, Anjar-Bhimasar Road, Tal. Anjar, Distt. Kutch, Gujarat by **M/s Natural Petrochemicals 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 Natural Petrochemicals Pvt.Ltd have proposed to expand the production of unsaturated polyester resin and alkyd resin S. No. 443, Village: Bhimasar, Anjar-Bhimasar Road, Tal. Anjar, Dist. Kutch, Gujarat. Total land requirement is 42,291 m<sup>2</sup> (10.45 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.14.89 crores. Rs. 11 lakhs per annum is earmarked towards recurring cost for environmental management. The existing and the proposed products details are as below:

S.No.	Name of Product	Capacity, MT/Month		
		Existing	Proposed	Total after Expansion
1.	Unsaturated Polyester Resin	1,000	2,300	3,500
2.	Alkyd Resin	200		
<b>Total</b>		<b>1,200</b>	<b>2,300</b>	<b>3,500</b>

The power requirement is 575 KVA which will be met from the Paschim Gujarat Vij Co. Limited. Two D.G. sets with a capacity of 380 KVA and 250 KVA will be installed as a stand by power. The water requirement is 30 m<sup>3</sup>/day which will be sourced from M/s Gujarat Water Infrastructure Limited. The raw materials required are glycol, acid anhydride, malice anhydride, styrene monomer and xylene etc.

To control the air emissions, adequate stack height will be provided. All the pumps for the handling of hazardous chemicals will be provided with suitable mechanical seal with stand by arrangement and all the motors will be flame proof to control the fugitive emissions. The waste water generation is 7 m<sup>3</sup>/day which will be treated in the Effluent Treatment Plant. Used oil will be sold to registered recyclers.

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

1. Executive summary of the project
2. Photographs of the existing and proposed plant area
3. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
4. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
5. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
6. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
7. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.

12. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
13. Details and classification of total land (identified and acquired) should be included.
14. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
15. A list of industries containing name and type in 10 km radius shall be incorporated.
16. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
17. Manufacturing process details for the synthetic chemicals unit should be included.
18. Mass balance for the raw material and products should be included.
19. Energy balance data for all the components should be incorporated.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
21. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
22. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> 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<sup>3</sup> 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 16<sup>th</sup> November, 2009 should be included.
28. Ambient air quality monitoring should be included for the day (24 hrs) for maximum GLC along with following :
  - i. Emissions (g/second) with and without the air pollution control measures
  - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity
  - iii. Model input options for terrain, plume rise, deposition etc.
  - iv. Print-out of model input and output on hourly and daily average basis
  - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix. Graphs of monthly average daily concentration with down-wind distance
  - x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.

- xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
29. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
30. One season data for gaseous emissions other than monsoon season is necessary.
31. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
32. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
33. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
34. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
35. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
36. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
37. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1;10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
38. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
39. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
40. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
41. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
42. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
43. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.
44. Occupational health:
  - a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry,

Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

- c. Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
- d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
- e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.

#### 45. Corporate Environment Policy

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
46. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment 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 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc.

It was decided that 'TORs' prescribed by the Expert Appraisal Committee-1 (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation should be provided. The draft EIA/EMP report shall be submitted to 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 reports, after public consultation.

#### 5.2.23 Proposed asbestos cement Sheet Plant (216,000 TPA capacity) at Village Rachakpura, Shedriya Grampanchayat, Niwali Tehsil, Tonk district, Rajasthan **M/s Visaka Industries Ltd.-regarding TORs**

The Committee deferred the consideration of the proposal and asked the proponent to check back the availability of ground water in Niwai block of Tonk District of Rajasthan and submit a report in this regard. The Committee also asked the proponent to submit copy of the permission obtained from the Central Ground Water Authority for the withdrawal of ground water for the proposed project. The Committee decided to consider the proposal on receipt of the said documents from the proponent.

#### 5.2.24 Proposed expansion for manufacturing of Resins and Paints (Integrated Paint Complex) at District Valsad, Gujarat – 396195 by **M/s Anchor Enterprises Private Limited -regarding TORs**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Terms of Reference for preparation of EIA/EMP report. The proposed project activity is covered under Category (B) and listed at S.N. 5(h) of the Schedule of the EIA notification 2006, but due to the applicability of general condition of EIA notification 2006, as the project site falls within the inter-state boundary the proposal has been appraised at the Central level.

M/s Anchor Enterprises Private Limited have proposed to expand the existing products and additional products for manufacturing various types of Resins and Paints at Plot No. 153/B & 154/3, 2<sup>nd</sup> phase, GIDC Notified Industrial Area, Vapi, Dist- Valsad (Gujarat). Total land requirement is 5298.12 m<sup>2</sup> (1.30 acres). No Forest land is involved. No National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. No court cases/litigation is pending against the project. The Damanganga River is located at a distance of 6 km from the project site. Total cost of the project is Rs.1014.18 lakhs. Rs. 16 lakhs per annum is earmarked towards recurring cost for environmental management. The existing and the proposed products details are as below:

S.No.	Name of the product	Unit	Existing	Proposed	Total
1.	Water Based Paints	KL/Month	300.00	700.00	1000.00
2.	Synthetic Paints (Oil Paints)	KL/Month	100.00	250.00	350.00
3.	Putty	MT/Month	30.00	60.00	90.00

S.No.	Name of the product	Unit	Existing	Proposed	Total
4.	Alkyd Resin	MT/Month	0.00	365.00	365.00
5.	Epoxy Resin	MT/Month	0.00	10.00	10.00
6.	Melamine Formaldehyde resin	MT/Month	0.00	10.00	10.00
7.	Phenolic Resin	MT/Month	0.00	10.00	10.00
8.	Polyamide Resin	MT/Month	0.00	5.00	5.00
9.	Pure acrylic Emulsions	MT/Month	0.00	100.00	100.00
10.	Styrene acrylic Emulsions	MT/Month	0.00	100.00	100.00
11.	Vinyl Acrylic Emulsions	MT/Month	0.00	100.00	100.00
	<b>Total</b>		<b>430.00</b>	<b>1710.00</b>	<b>2140.00</b>

The power requirement is 300 KVA which will be met from the Dakshin Gujarat Vij Co. Limited. The water requirement is 57.59 m<sup>3</sup>/day which will be sourced from M/s GIDC water supply. The raw materials required are water based paints, synthetic enamel, putty, alkyd resin, epoxy resin and melamine formaldehyde resin etc.

To control the air emissions, adequate stack height will be provided. The waste water generation is 10.71 m<sup>3</sup>/day which will be treated in the Effluent Treatment Plant. The treated effluent will be discharged through underground drainage to CETP/Plantation within the premises. ETP waste will be sent to Vapi waste and effluent management company limited for final disposal. Used oil will be sold to registered recyclers.

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

1. Executive summary of the project
2. Photographs of the existing and proposed plant area
3. Compliance to the conditions stipulated in the Environmental Clearance / NOC granted by the SPCB.
4. A certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
5. Recent monitoring report from SPCB, which shall include data on AAQ, water quality, solid waste etc. shall be submitted.
6. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s)
7. A line diagram/flow sheet for the process and EMP
8. The earlier questionnaire for industry sector should be submitted while submitting EIA/EMP.
9. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.



10. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
11. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing land use / land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc. in 10 km of the project site.
12. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
13. Details and classification of total land (identified and acquired) should be included.
14. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
15. A list of industries containing name and type in 10 km radius shall be incorporated.
16. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
17. Manufacturing process details for the synthetic chemicals unit should be included.
18. Mass balance for the raw material and products should be included.
19. Energy balance data for all the components should be incorporated.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
21. Sources of secondary emissions, its control and monitoring as per the CPCB guidelines should be included. A full chapter on fugitive emissions and control technologies should be provided.
22. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> 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<sup>3</sup> 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 16<sup>th</sup> November, 2009 should be included.
28. Ambient air quality monitoring should be included for the day (24 hrs) for maximum GLC along with following :
  - i. Emissions (g/second) with and without the air pollution control measures
  - ii. Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity
  - iii. Model input options for terrain, plume rise, deposition etc.
  - iv. Print-out of model input and output on hourly and daily average basis
  - v. A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi. Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii. Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of

- expansion project, the contribution should be inclusive of both existing and expanded capacity.
- viii. No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
    - ix. Graphs of monthly average daily concentration with down-wind distance
    - x. Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
    - xi. Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
  29. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
  30. One season data for gaseous emissions other than monsoon season is necessary.
  31. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
  32. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used along with a Piper and Piper Duro-V diagram. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.
  33. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
  34. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
  35. Permission for the drawl of water from the concerned authority and water balance data including quantity of effluent generated, recycled and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
  36. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
  37. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
  38. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
  39. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
  40. Action plan for the green belt development plan in 33 % area should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
  41. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
  42. Disaster Management Plan including risk assessment & damage control needs to be addressed and included. Landslide hazard map and mitigation plan, Earthquake history and management plan should be submitted.
  43. Action plan for solid/hazardous waste generation, storage, utilization and disposal should be covered.

44. Occupational health:
- a. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - c. Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
  - d. Action plan for the implementation of OHS standards as per OSHAS/USEPA.
  - e. Plan and fund allocation to ensure the occupational health & safety of all contract and sub-contract workers.
45. Corporate Environment Policy
- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
46. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment 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 4<sup>th</sup> 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.

### 5.3.0 Any Other Item

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

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.

- 5.3.2 Expansion of existing pig iron plant and CPP by installation of Ductile Iron Pipe Plant (1,90,000 TPA), Sinter Plant (2,98,800 TPA) and Captive Power Plant (15 MW) at Village Haresamudram, Mandal Bommanahal, District Ananthapur, Andhra Pradesh by **M/s Sathavahana Ispat Limited – Amendment in Environmental Clearance regarding**

Environmental Clearance to the above proposal was accorded by MoEF vide letter no. J-11011/125/2010-IA.II(I) dated 02.06.2011. The Project Proponent (PP) vide letter dated 1.10.2012 requested MoEF for the amendment in the EC in respect of the production capacities. The PP also made a presentation before the Committee.

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

S. No.	Units	Approved production capacities as per the EC dated 2.6.2011	Amendment sought
1	Pig Iron Plant	2,50,000 MTPA	Nil
2	Captive Power Plant	3 MW+8.43 MW + 15 MW (Imported coal based and Blast Furnace Gas) <sup>xx</sup>	30 MW <sup>xx</sup> (Imported coal based)
3	Ductile Iron Pipe Plant	1,90,000 TPA	Nil
4	Sinter Plant	2,98,800 TPA	Nil
5.	DI Pipe Fittings	Nil	30,000 TPA

Note: <sup>xx</sup> 3 MW power plant will be discarded. 8.43 MW power plant will be used as a stand by power. 15 MW power plant will be replaced by the 30 MW power plant – At any time, the power generation will not exceed 26.43 MW.

M/s Sathavahana Ispat Limited submitted that no additional area will be required due to the installation of 30 MW imported coal based power plant and DI pipe fittings unit. The proposed power plant and foundry facilities will be located in the existing area of 142.94 acres. The water requirement for the plant will be increased from 4467 m<sup>3</sup>/day to 4917 m<sup>3</sup>/day. However, no effluent will be discharged outside the plant premises. The proponent informed that they have a water withdrawal permission from the Govt of Andhra Pradesh to withdraw 7000m<sup>3</sup>/day of water from Hagari. AAQ modeling study due to the installation of 30 MW imported coal based power plant indicates that the maximum incremental GLCs would be 0.3 µg/m<sup>3</sup> and 8.2 µg/m<sup>3</sup> with respect to PM and SO<sub>2</sub> respectively. The proponent also presented the pollution load details due to the installation of the foundry unit.

After detailed deliberations, the Committee recommended for the amendment in the EC as referred above subject to the submission of certified compliance report from the Regional Office of MoEF for the environmental clearance accorded on 2.6.2011.

5.3.3 Integrated Super Heavy Forge Shop to Manufacture Forgings (60,000 MTPA) and Steel Ingots & Casting (80,000 MTPA), Supercritical Steam Turbines & Generators (4 units/year) and Boilers (3 units/year) at Survey No. 446/A & 498/1, Hazira, District Surat in Gujarat by **M/s L&T Special Steels & Heavy Forgings Pvt. Ltd. – Amendment in Environmental Clearance regarding**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/193/2009-IA.II(I) dated 20.10.2009. Subsequently, the EC was transferred to M/s L&T Special Steels & Heavy Forgings Private Limited vide letter no. J-11011/193/2009-IA.II(I) dated 23.5.2012. The Project Proponent (PP) vide letter dated 28.11.2012 requested MoEF for the amendment in the EC for inclusion of liquid steel in the product list. The PP also made a presentation before the Committee.

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

<b>Units approved as per the EC dated 20.10.2009</b>	<b>Amendment sought</b>
Steel Ingots & Castings (80,000 MTPA)	Steel Ingots, Castings & <b>Liquid Steel</b> (80,000 MTPA)

M/s L&T Special Steels & Heavy Forgings Private Limited submitted that there will be no change in the production capacity due to the aforesaid amendment. This amendment will not alter the manufacturing process. The proposed liquid steel product will be directly sold to their group company in the complex itself (or) will be used for manufacturing forgings.

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.

5.3.4 Bulk drug unit of M/s Praveen Laboratories Pvt Limited at village Moje/Jolwa, Surat Distt., Gujarat by **M/s Praveen Laboratories Pvt. Ltd. Amendment in Environmental Clearance regarding**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/39/2003-IA.II(I) dated 4.9.2003. The Project Proponent (PP) vide letter dated 3.4.2012 requested MoEF for the amendment in the EC condition related to the waste water management. The PP also made a presentation before the Committee.

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

Specific condition no. (iii) as per the EC dated 4.9.2003	Amendment sought
The Process Effluent generated (13.45 m <sup>3</sup> /Day) shall be treated in the ETP of the unit. The treated effluent after primary treatment shall be incinerated in the incinerator.	“The Process Effluent generated (13.45 m <sup>3</sup> /Day) shall be segregated in Dilute Stream and Concentrated Stream (Mother Liquor from Process) and collected separately. The Dilute Stream resulting from Washing, Boiler and Cooling Blow Down shall be treated in ETP having Physico-Chemical Treatment and treated wastewater complying CETP inlet norms shall be disposed off in CETP operated by M/s Globe Enviro Care Ltd., Sachin, Surat. The Concentrated Mother Liquor shall be striped off Low volatiles and then after it will be concentrated in Multiple Effect Evaporator”

The reasons submitted by the proponent for the proposed amendment are as below:

- i. The industry is a Small Scale Industry (SSI) unit
- ii. The production process generates mainly Washings and Blow downs from Boiler and Cooling Tower as trade effluents which are dilute streams, along with process mother liquor as concentrated effluent.
- iii. Gujarat Pollution Control Board already issued Consent to Establishment and Consent to Operate for the proposed wastewater management scheme

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

- Certified compliance report from (GPCB) in respect of the wastewater management scheme

#### 5.3.5 Expansion of Salem Cement Grinding Unit from 1.0 MTPA to 2.0 MTPA in SF Nos. 121, 123 and 124 Parts in Village Singhipuram, Taluk Valapadi, District Salem in Tamil Nadu by **M/s Madras Cements Limited – Amendment in Environmental Clearance regarding**

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

#### 5.3.6 Expansion of integrated Mini Steel Plant and Captive Power Plant [74 MW; WHRB (16 MW) & FBC (58 MW)] at Taraimal, Gharghoda, Raigarh, Chattishgarh by **M/s Singhal Enterprises Pvt. Ltd – Amendment in Environmental Clearance**

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

5.3.7 Expansion of integrated cement plant (Clinker from 8.0 MTPA to 10.4 MTPA), Cement 8.8 MTPA, CPP: 180 MW, Waste Heat Recovery Power: 35 MW to 45 MW along with Nimbeti Limestone Mining (750 ha, 14.4 MTPA to 17.2 MTPA) situated near Village Ras, Tehsil Jaitaran, District Pali, Rajasthan by **M/s Shree Cement Ltd – Revision in the Environmental Clearance regarding**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/400/2010-IA.II(I) dated 27.08.2012. The Project Proponent (PP) vide letter dated 11.12.2012 requested MoEF for the revision in the EC in respect of the production capacities. The PP also made a presentation before the Committee.

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

S.No.	Unit	Production capacities approved as per the EC dated 20.10.2009	Amendment sought in the production capacities	Total production capacity
1.	Clinker Production (MMTPA)	10.4	0.8	11.2
2.	Cement Production (MMTPA)	8.8	Nil	Nil
3.	Thermal Power Generation (MW)	180	Nil	Nil
4.	Waste heat recovery Power Generation (MW)	45	15	60
5.	Nimbeti Limestone Mining (MMTPA)	17.2	2.4	19.6

M/s Shree Cement Ltd submitted that due to aforesaid revision in the production quantities the total cost of the project will be increasing from Rs.1265 crores to Rs.1596.7 Crores. The capital cost for the environmental production measures will be increasing from Rs.60 Crores to Rs.75 Crores. Recurring cost per annum for the environmental production measures will be increasing from Rs.0.5 Crores to Rs.0.7 Crores. The water requirement will be increasing from 4300 KLD to 4350 KLD. The company has a permission for withdrawal of ground water for 3,800 KLD has already been granted by CGWA vide letter no. 21-4(12)/WR/ CGWA/ 2005-1566 dated 28th November 2008 & 21-4(12)/ WR/ CGWA/ 2005-866 dated 19th October' 2009 & balance 550 KLD will be met from harvested rain water i.e. rain water collected in mine pit and earthen ponds developed in plant area. No additional ground water will be required for the proposed expansion. The power demand will be increased from 104.2 MW to 111 MW. This will be met from the Captive Power Plant. The requirement of raw materials will be increased Lime stone (17.2 MMTPA to 19.6 MMTPA), Pet Coke (1.04 MMTPA to 1.12 MMTPA) and Laterite or Lead Zinc Slag (0.468 MMTPA to 0.504 MMTPA). The increase in ground level concentration due to the proposed revision in the production quantities is as below:

Parameter	CPCB Norms	Maximum Concentration in $\mu\text{g}/\text{m}^3$			Incremental Percentage
		Existing	Resultant as per EC sanctioned	Proposed Resultant (after expansion)	

Parameter	CPCB Norms	Maximum Concentration in $\mu\text{g}/\text{m}^3$			Incremental Percentage
		Existing	Resultant as per EC sanctioned	Proposed Resultant (after expansion)	
PM <sub>10</sub>	100	79.45	80.74	91.25	13.1%
PM <sub>2.5</sub>	60	38.3	-	43.8	14.3%
NO <sub>x</sub>	80	19.2	21.18	25.8	21.8%
CO	2000	625	-	627.8	0.4%

After detailed deliberations, the Committee recommended that aforesaid revision in the production capacities in the EC accorded on 27.8.2012 cannot be amended as it is a fresh expansion proposal which involves increase in pollution load, increase in resources requirement and increase in project cost to the tune of Rs.331.7 crores.

**5.3.8 Expansion project of 1.0 MTPA clinker production and 1.2MTPA Cement Plant at Pedaveedu village, Mattanpalli Mandal in district Nalgonda in Andhra Pradesh by M/s Amarneswari Cement Limited – Name change and extension of the validity of the Environmental Clearance regarding**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/378/2006-IA.II(I) dated 2.4.2007 in the name of M/s. Amarneswari Cement Limited. The Project Proponent (PP) vide letter dated 15.3.2012 requested MoEF to extend the validity of the EC by a period of five years with effect from 2.4.2012 and also requested to change the company name from M/s Amarneswari Cement Limited to M/s Sagar Cements Limited. The PP also made a presentation before the Committee.

It was submitted that M/s Amarneswari Cement Limited could not able to implement the aforesaid project due to the financial constraints. Further, M/s Amarneswari Cement Limited was merged with M/s Sagar Cements Limited vide order dated 19.5.2011 of the Hon'ble High Court of Andhra Pradesh at Hyderabad. A copy of the order was submitted to the Ministry vide letter dated 3.9.2012.

After detailed deliberations, the Committee recommended for the extension of validity of EC for a period of five year w.e.f from 2.4.2012 subject to the specific and general environmental conditions. The Committee also recommended for the change in the company name from M/s Amarneswari Cement Limited to M/s Sagar Cements Limited.

**5.3.9 Proposed expansion project of clinker production from 0.50 MTPA and Cement Plant from 0.30 MTPA to 2.35 MTPA along with 25MW Coal based CPP at Mattampally, District Nalgonda, Andhra Pradesh by M/s Sagar Cements Limited – Amendment in the Environmental Clearance and extension of its validity regarding**

Environmental Clearance (EC) to the above proposal was accorded by MoEF vide letter no. J-11011/379/2006-IA.II(I) dated 2.4.2007. The Project Proponent (PP) vide letter dated 24.2.2012 and 22.12.2012 requested MoEF to extend the validity of the EC by a period of five years with effect from 2.4.2012 and also requested to amendment in the EC in respect of the change in configuration of the 25 MW captive power plant. The PP also made a presentation before the Committee.



It was submitted that M/s Sagar Cements Limited is operating the Clinker production unit of 2.0 MTPA capacity and Cement plant of 2.35 MTPA capacity as accorded in the EEC dated 2.4.2007. The proponent could not able to implement the captive power plant (25 MW coal based) due to the financial reasons and water allocation constraints. Further, the techno economic feasibility studies carried out by the proponent indicates that the possibility of installing a waste heat recovery based power plant based on heat energy of flue gases from cooler and kiln units. The proponent has requested for the following amendment in the EC accorded on 2.4.2007:

S.No.	Unit	Production capacities approved as per the EC dated 2.4.2007	Amendment sought in the production capacities
1.	Captive Power Plant	25 MW Coal based	25 MW (10 MW based on waste heat recovery and 15 MW based on coal firing)

It was submitted by the proponent that there will be reduction in coal consumption and ash generation due to the aforesaid amendment. There will also be a reduction in air pollution load to the tune of 40%. The total power generation capacity will not exceed 25 MW at any time.

After detailed deliberations, the Committee recommended for the extension of validity of EC for a period of five year w.e.f from 2.4.2012 subject to the specific and general environmental conditions. The Committee also recommended for the amendment in the EC in respect of the change in configuration of the 25 MW captive power plant as mentioned above.

#### 5.3.10 Enhancement of production capacity of writing & printing paper from 30,000 TPA to 45,000 TPA at Village-Ahmedgarh, District-Sangrur in Punjab by M/S Shreyans Industries Ltd – **Reconsideration for the grant of Environmental Clearance.**

The aforesaid proposal was considered in the 1<sup>st</sup> meeting of the Reconstituted Expert Appraisal Committee held during 24-25<sup>th</sup> September, 2012. After detailed deliberations, the Committee sought the following additional information for reconsideration:

- Revised plant layout by incorporating 33% green belt and the total area under green belt. Selection of plant species for the greenbelt should be in consultation with DFO as per CPCB guidelines.
- Ground water quality data of the study area after monitoring the same.
- The ground water quality data of last 10 years in the vicinity of the project site.
- Any study/report on the impact of disposal of the treated effluent on ground water quality and crop of the area. If not, a study shall be conducted by the proponent on the impact of disposal of treated effluent on the ground water quality and crops.

The above information was submitted by the proponent to MoEF vide letter dated 21.12.2012 and also been circulated to all the Committee members. The PP also made a presentation before the Committee. The Committee found that the information submitted by

the proponent is adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Government shall be ensured and regular reports submitted to the Ministry and its Regional Office at Chandigarh.
- i. The project authority shall install multi cyclones, wet scrubbers with the boilers to achieve the particulate emission below 50 mg/Nm<sup>3</sup>. The emissions from chemical recovery section shall be controlled through primary and secondary venturi scrubbers.
- ii. Data on ambient air, stack and fugitive emissions shall be regularly submitted online to Ministry's Regional office at Chandigarh, SPCB and CPCB as well as hard copy once in six months and display data on PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> outside the premises at the appropriate place for the general public.
- iii. In case of treatment process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- iv. The total water requirement (including existing) shall not exceed 11,750 m<sup>3</sup>/day. The industry shall ensure the compliance of the standards for discharge of the treated effluent from the unit as stipulated under the EPA rules or SPCB whichever is more stringent. The company shall make efforts to limit the water consumption upto 75 m<sup>3</sup>/tonne of product. Adequate steps including use of modern RO/UF based technologies should be used to increase recycling and reduce water consumption.
- v. Adequate number of influent and effluent quality monitoring stations shall be set up in consultation with the State Pollution Control Board and regular monitoring shall be carried out for all relevant parameters to maintain the effluent treatment efficiency. Online flow meter, pH meter, conductivity meter etc. shall be installed. The report shall be submitted to Ministry's Regional Office at Chandigarh, SPCB and CPCB.
- vi. Ground water quality study in and around the project area shall be conducted and report submitted to Ministry's Regional Office at Chandigarh, SPCB and CPCB.
- vii. The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1 kg/tonne of paper production.
- viii. The company shall submit the comprehensive water management plan along with monitoring plan for the ground water quality and the level, within three months from date of issue of this letter.
- ix. The project authority shall dispose of hazardous waste as per the provision of Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
- x. The company shall develop green belt in 33% of the total land as per the CPCB guidelines to mitigate the effect of fugitive emissions.
- xi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

- xii. The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.
- xiii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the pulp and paper sector shall be strictly implemented.
- xiv. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 26<sup>th</sup> March, 2012 shall be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Chandigarh.
- xv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Chandigarh. Implementation of such program shall be ensured accordingly in a time bound manner.
- xvi. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

**5.3.11 Integrated Cement Plant of 5 MTPA Capacity with Captive Limestone Mine (701.2681 ha) and 54 MW CPP, Near Village Mangrol, Taluk Nimbahera, District Chittaurgarh in Rajasthan by M/s Rajputana Properties Private Limited (RPPL), is a fully owned subsidiary of M/s Dalmia Cement Ventures Limited - extension of validity of ToR regarding**

Terms of Reference to the above proposal was accorded by MoEF vide letter no. J-11011/472/2010-IA II (I) dated 16.11.2010. The Project Proponent (PP) vide letter dated 26.9.2012 requested MoEF for extension of validity of ToR. 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:

- Delay in issuance of Letter of Intent for the mining lease
- Delay in IBM Approval of Mining plan. Mining plan submitted for approval to IBM on 23.8.2012.

After detailed deliberations, the committee recommended for the extension of validity of TOR for a period of one year with effect from 16.11.2012.

**5.3.12 Proposed Integrated Steel Plant and Captive Power Plant (100 MW) at Villages Dagori, Ameri Akberi and Udgaon, Tehsil Bilha, District Bilaspur, Chhattisgarh by M/s Jayaswal Neco Industries Limited – Reconsideration for grant of Environmental Clearance.**

The aforesaid proposal was considered in the 3<sup>rd</sup> meeting of the Reconstituted Expert Appraisal Committee held during 3-5<sup>th</sup> December, 2012. The Committee discussed on the issues regarding Coal linkage documents, permission/NOC from Archaeological Survey of India (ASI) regarding location of Devrani Jethani temple at 3 kms from project site shall be submitted; Revised layout plan after excluding the existing pond from the project area;

Alternate route for the villagers duly approved by the State Govt; Revised project area and layout plan shall be submitted after exclusion of all the water bodies from the project site; Documents regarding tribal land; Optimization of water requirement. The project proponent submitted the above information in detail. The proponent also committed that they would provide the alternate route to the villagers other than passing through project area. The Committee decided that the above information may be circulated among the Committee members without calling the project proponent.

The above information was submitted by the proponent to MoEF vide letter dated 13.12.2012 and 21.1.2013 and also been circulated to all the Committee members. The Committee noted that the proponent has revised the total project area from 210.8 ha to 207 ha after excluding the water bodies area from the project site. Further, the Committee noted that the other requisite information submitted by the proponent are found to be adequate and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. Rehabilitation and Resettlement (R & R) Plan shall be prepared and submitted to the State Government of Chattisgarh. This shall be implemented as per the R & R Policy of the State Government of Chattisgarh. All the recommendations mentioned in the R & R Plan shall be strictly followed including suitable employment and other facilities to all the oustees. Compensation paid in any case shall not be less than the norms prescribed under National Resettlement and Rehabilitation Policy, 2007.
- ii. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks should be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm<sup>3</sup> by installing energy efficient technology.
- iii. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be followed.
- iv. Gaseous emission levels including secondary fugitive emissions from all the sources should be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB should be followed.
- v. Dust suppression system and bag filters shall be installed to control the fugitive dust emissions at conveyor and transfer points, product handling, loading and unloading points.
- vi. Hot gases from the DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB). The gas then shall be cleaned in ESP before dispersion out into the atmosphere through ID fan and stack. ESP shall be installed to control the particulate emissions from the WHRB.
- vii. Total make up water requirement shall not exceed 19,800 m<sup>3</sup>/ day. The water consumption shall not exceed as per the standard prescribed for the sponge iron plants and steel plants.
- viii. Efforts shall further be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement should be met from other sources. Use of air cooled condensers shall be explored and closed circuit

cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly.

- ix. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage should be treated in septic tank followed by soak pit.
- x. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.
- xi. All the char from DRI plant shall be utilized in FBC boiler of power plant and no char shall be disposed off anywhere else. FBC boiler shall be installed simultaneously along with the DRI plant to ensure full utilization of char from the beginning.
- xii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2009. All the fly ash should be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding should be submitted to the Ministry's Regional Office at Bhopal.
- xiii. Risk and Disaster Management Plan along with the mitigation measures should be prepared and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xiv. A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Bhopal. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in brick manufacturing
- xv. As proposed, green belt shall be developed in 33 % of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xvi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Sponge Iron Plants and Steel Plants should be implemented.
- xvii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on locals need and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at 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 bring into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

- xix. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 29<sup>th</sup> June, 2012 shall be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xx. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

**1<sup>st</sup> February, 2013**

#### **5.4.0 Consideration of the Projects:**

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

The project authorities and their consultant (Ultra Tech Environmental Consultant & Laboratory, Pune) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of References (TORs) awarded in the 23<sup>rd</sup> Meeting of the Expert Appraisal Committee (Industry) held on 30<sup>th</sup>– 31<sup>st</sup> May, 2011 for preparation of EIA/EMP report. All molasses based distilleries are listed at S.N. 5 (g) (i) under category 'A' and appraised at Central level.

M/s Lorvin Industries Ltd. have proposed for setting up of molasses based Distillery (ENA/RS/AA 70 KLPD), Cogeneration Power Plant (2.5 MW) and Liquid Carbon Di-oxide (30 TPD) at Sy. No. 72/2, 79/2, 79/4, 80/2, 80/2A, 80/2A 80/4, 86/1, Kenganoor and Sy No. 84/2, Pattihal KB, Taluk Bailhongal, District Belgaum, Karnataka. Total plant area is 17.50 ha. Malaprabha River is flowing at a distance of 2.5 Km from the project site. No wildlife sanctuaries/national parks/biosphere reserve are located within 10 Km. Total cost of the project is Rs. 65.50 Crore. Rs. 20.00 Crores are earmarked towards pollution control measures. No R & R is involved. Distillery will be operated for 330 days.

Ambient air quality monitoring was carried out at 6 locations during February 2011 – May 2011 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (42.8 µg/m<sup>3</sup> to 69.1 µg/m<sup>3</sup>), SO<sub>2</sub> (6.9 µg/m<sup>3</sup> to 18.2 µg/m<sup>3</sup>) and NO<sub>x</sub> (8.5 µg/m<sup>3</sup> to 20.6 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.23 µg/m<sup>3</sup> and 15.88 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, and SO<sub>2</sub> respectively. The resultant concentrations are within the NAAQS. ESP alongwith stack of adequate height will be provided to bagasse/biogas/spentwash concentrate fired boiler.

Total fresh water requirement from the river will be 770 m<sup>3</sup>/day. Spent wash (579 TPD) will be passed through bio-digester. The treated spent wash will be concentrated in Multi-effect evaporator (MEE). The spent wash concentrate will be mixed with other fuel and incinerate in the boiler. Storage capacity of spent wash holding tank will be for 7 days. Fermented sludge and fly ash from biomass fired boiler will be used as manure. Used oil will be sent to authorized recyclers/re-processors.

Green belt will be developed in 6.0 acres out of 17.5 acres. Total power requirement will be 1.5 MW which will be sourced from captive sources. DG set (500 KVA & 250 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 22<sup>nd</sup> February, 2012. The issues raised during public hearing were local employment, CSR activities, complaint containing signatures of 106 villagers of the Kenganour village regarding setting up of distillery, land acquisition etc. The Committee also deliberated upon the inspection report dated 4<sup>th</sup> November, 2011 of Sri K B Kotresh, Regional Office, KSPCB, Belgaum. It is noted that project site located at Sy. Nos. 79/2, 79/4, 80/1 of Kenganour Village is not meeting the siting guidelines. Further inspection was carried out at alternate proposed site at Sy. No. 84/2 of Pattihal K B Village, which is meeting the siting guidelines.

After detailed deliberations, the Committee desired following additional information:

- I. Confirmation needs to be obtained from the project proponent and the environmental Consultant whether EIA/EMP report and public hearing has been conducted for proposed site at Sy. No. 84/2 of Pattihal K B Village.
- II. A copy of lease deed or allotment letter, if land is already acquired.

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

5.4.2. On-Shore Exploratory Drilling of 8 Wells in Oil and Gas in Block CB- ONN-2005/3 in Districts Ahmedabad and Mehsana, Gujarat by **M/s Mercator Petroleum Limited. - 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 21<sup>st</sup> Meeting of the Expert Appraisal Committee (Industry) held during 23<sup>rd</sup>-24<sup>th</sup> March, 2011 for preparation of EIA/EMP. All the Offshore and Onshore Drilling projects are listed at S.N. 15(b) under Category 'A' and appraised at the Central level.

M/s Mercator Petroleum Limited have proposed for the Exploratory Drilling (On-shore) for Oil and Gas (15 wells) in Block CB-ONN-2005/9 in Taluka & District Mehsana and Taluka Detroj Rampura, Ahmedabad, Gujarat. Production Sharing Contract (PSC) contract with the Govt. of India was signed on 22<sup>nd</sup> December, 2008. Government of Gujarat has awarded PEL on 7<sup>th</sup> June, 2007. Project proponent confirmed that no drilling will be carried out in Mehsana district. Total block area is 48 Km<sup>2</sup>. No national park, wildlife sanctuary/Eco sensitive area is located within 10 Km. Total project cost is Rs. 80.00 Crore. Rs. 58.7 Lakhs per well are earmarked towards capital cost for pollution control measures. Temporary wells (110x110 m) will be developed for 30-45 days. Site will be located in seismic zone III classified as moderate damage risk zone. Narmada River, Khari River and Branch canal of Narmada is passing through the block. Exploratory wells will be drilled upto 4875 m. Location of proposed wells are as given below:

Point	Longitude			Latitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec.

1	72	10	17.94	23	25	77
2	72	10	16.67	23	24	53
3	72	11	59.27	23	23	68
4	72	12	52.16	23	22	53
5	72	12	57.13	23	21	60
6	72	13	48.53	23	20	71
7	72	14	17.48	23	21	33
8	72	11	35.10	23	24	01

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during Summer Season 2011 and submitted baseline data indicates range of PM<sub>10</sub> (31–104 ug/m<sup>3</sup>), SO<sub>2</sub> (8 – 119 ug/m<sup>3</sup>) and NO<sub>2</sub> (10.00-17.4 ug/m<sup>3</sup>). The results of the modeling study indicate that the maximum increase of GLCs due to the proposed expansion is 0.004 µg/m<sup>3</sup>, 0.013 µg/m<sup>3</sup> and 0.90 µg/m<sup>3</sup> for SPM. The resultant GLCs are within the NAAQS.

Air emissions from D.G. sets will be dispersed by providing adequate stack height. Fresh water requirement from ground water source will be 20 m<sup>3</sup>/day. Water based mud (WBM) and Synthetic based mud will be used. Wastewater generation during drilling operation will be 5 m<sup>3</sup>/day. Effluent will be treated in effluent treatment plant (ETP) comprising equalization, chemical coagulation, flocculation and clarification by settling and residual unusable mud will be collected in lined pits and solar evaporated. Drill cutting (DC) will be separated from water based mud (WBM) and washed properly and unusable drilling fluids (DF) will be disposed off in well designed lined pit with impervious liner for solar drying. Disposal of drill cuttings and drill mud will be carried out in accordance with the GSR 546 (E) dated 30<sup>th</sup> August, 2005. Used oil will be sent to authorized recyclers.

HSD (150l/h) will be used as fuel in rig and D.G. sets during drilling period. Number of blow out prevention techniques will be part of drilling rig unit. Blow out preventers (BOP) will be installed to control fluid from the formation gushing to the surface. Safety measures and fire fighting equipments will be provided at drilling site in accordance with 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 13<sup>th</sup> April, 2012 for Ahmedabad district. The issues raised during public hearing were benefits to the farmer, well location, ownership of land, educational benefits, compensation to farmers etc. The issues raised 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. Non methane hydrocarbon and VOC monitoring for 1 month to be conducted.
2. Ambient air quality monitoring data in respect of SO<sub>2</sub> to be conducted.
3. Coliform value in surface water quality monitoring to be rechecked.

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

- 5.4.3. Expansion of Brownfield Ammonia, Urea Plant, New Aniline, TDI-MDI Blends, Water Soluble Fertilizers (NPK), Acetic Acid and CPSU Plants at Narmadanagar, Village, Tehsil & District Bharuch, Gujarat by **M/s Gujarat Narmada Valley Fertilizers Company Ltd. regarding TOR.**



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 along-with the draft Term of References for the preparation of EIA/EMP report. All fertilizer plant is listed at S.N. 5(a) under category 'A' and appraised at Central level.

M/s Gujarat Narmada Valley Fertilizers Company Ltd. have proposed for expansion of fertilizer plant at Narmadanagar, Village, Tehsil & District Bharuch, Gujarat. Total plot area in GNFC Unit 1 is 32,39,698 m<sup>2</sup> and in GNFC Unit 2 is 6,50,000 m<sup>2</sup>. Expansion will be done in the existing unit. Total cost of expansion project is Rs. 4,463 Crore. No protected areas, forest land/national parks/ wildlife sanctuaries are involved. Narmada river is flowing at a distance of 4.00 Km. Following products will be manufactured:

S.N.	Product	Existing Capacity (MTPA)	Proposed Capacity (MTPA)	Total Capacity (MTPA)
1	Ammonia	630000	1022000	1652000
2	Urea	720000	1405250	2125250
3	Aniline	48000	78000	126000
4	Acetic Acid	1,50,000	25,000	1,75,000
5	TDI-MDI Blends	---	7800	7800
6	Water Soluble Fertilizers	--	5000	5000
6	Power Generation	45 MW	45 MW	90 MW

Prilling tower is provided to the existing Urea unit. Packed bed absorption column is provided in the concentrated Nitric Acid. High efficiency cyclone separator & scrubbing system and bag filter are attached to calcium ammonium nitrate plant. Bag filter is provided to rock phosphate bins handling unit. Packed bed column and ammonia scrubber is provided to Rock dissolving reactor. Packed bed ammonia scrubber is provided to NP melt unit. Cyclone separator & scrubbing system is provided to ANP drying drum. Ammonia scrubber is provided to calcium nitrate unit. Acetic acid scrubber is provided to acetic acid plant. Vapour scrubbing tower is provided to ethyl acetate plant. PRilling tower will provided to proposed urea unit.

Venturi scrubber & packed bed scrubber is provided in aniline incinerator. Venturi scrubber & mist eliminator is provided in the TDI incinerator I & II. Caustic scrubber is provided in the phosgene plant as emergency scrubber. Caustic scrubber, water scrubber, absorption tower and flash tank are provided in the TDI plant. Absorption tower and scrubber are provided to the aniline plant. Scrubbers are provided to Hydrogen vent of proposed aniline plant. Scrubber will be provided to Nitrobenzene vent of NB plant. Absorption tower will be provided to SAC plant. Venturi scrubber & Packed bed scrubber are provided to aniline incinerator of Aniline plant.

Water requirement from Narmada River, Ukai Canal and Narmada Canal will be increased from 51918 m<sup>3</sup>/day to 81,918 m<sup>3</sup>/day after expansion. Industrial effluent generation in GNFC Unit -1 will be increased from 18500 m<sup>3</sup>/day to 24200 m<sup>3</sup>/day after expansion. Industrial effluent generation in GNFC Unit -2 will be increased from 1160 m<sup>3</sup>/day to 2360 m<sup>3</sup>/day after expansion. Industrial effluent will be treated in ETP and treated effluent

will be discharged to Bhukhi River. Spent catalyst, used oil, waste oil and used batteries will be sent to CPCB authorized recyclers. ETP sludge, spent resin, silica gel and incinerator ash will be sent to TSDF.

Coal/imported coal (33/23 MTPH) is used in the existing unit. Natural gas consumption will be increased from 158012 NM<sup>3</sup>/Hr to 173012 NM<sup>3</sup>/Hr.

The Committee noted that as per Gazette Notification dated 24<sup>th</sup> September, 1986 and 19<sup>th</sup> September, 1985 of Government of Gujarat, project site is located in the GIDC Bharuch Industrial Area.

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

- 1 A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> 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 A map indicating location of the project and distance from severely polluted area
- 10 Project location and plant layout.
- 11 Infrastructure facilities including power sources.
- 12 Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
- 13 Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
- 14 Present land use based on satellite imagery for the study area of 10 km radius.
- 15 Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
- 16 Details of the total land and break-up of the land use for green belt and other uses.
- 17 List of products alongwith the production capacities and list of solvents and its recovery plan.
- 18 Detailed list of raw material required and source, mode of storage and transportation.
- 19 A note on the viability of the project in absence of non availability of gas.
- 20 Manufacturing process details alongwith the chemical reactions and process flow chart.
18. Action plan for the transportation of raw materials and products.
19. Ambient air quality monitoring and stack emission data for the relevant parameters including PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub>, HC (Methane and Non-methane) and VOCs for all the stacks for the existing fertilizer plant.
20. Data for surface and ground water, treated effluent quality data, noise pollution and solid waste management for the existing plant should also be included.
21. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits. Plant-wise air pollution control measures

- proposed for the control of emissions from all the sources. Details of continuous NOx monitoring system in Nitric Acid Plant.
22. Name of all the solvents to be used in the process and details of solvent recovery system.
  23. Details of water and air pollution and its mitigation plan.
  24. An action plan to control and monitor secondary fugitive emissions from all the sources.
  25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
  26. Details of water requirement for existing and proposed project. Water balance chart including water intake, effluent generated, recycled and reused and discharged is to be provided.
  27. Action plan to reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
  28. 'Permission' for the drawl of existing and proposed water requirement from the Competent Authority.
  29. Impact of wastewater discharge on water quality of river including details of lean season flow of river, water quality modelling, water quality etc.
  30. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber, incinerator etc.). Installation of Continuous TOC analyzer to holding tank before discharge of effluent.
  31. 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).
  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 Comprehensive "Quantitative Risk Assessment Report" considering all scenarios including the Worst Consequence Scenario(say Catastrophic Rupture of Ammonia Tank) and clearly showing the Individual Risk Contours and Societal Risk Chart shall be submitted.
  35. Commitment to be made regarding no additional storage for ammonia will be provided. Double walled tank to be installed in place of single wall tank.
  36. Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
  37. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
  38. An action plan to develop green belt in 33 % area
  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. Occupational health:
    - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
    - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

- c) Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
  - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
  - e) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
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. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
45. Corporate Environment Policy as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26<sup>th</sup> April, 2011 to be prepared.
- 46. Corporate Environmental Responsibility**
- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
48. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification

2006, as project is located in the notified industrial area. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

5.4.4. Proposed Additional Exploratory Drilling (01 well) in Kangra-Mandi under PEL Block, Himachal Pradesh by **M/s ONGC Ltd. - regarding amendment in EC.**

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

M/s ONGC Ltd. has proposed for additional exploratory drilling (01 well) in Kangra-Mandi under PEL Block, Himachal Pradesh. Block area is 1828 m<sup>2</sup>. Ministry vide letter no. J-11011/160 (kangra-Mandi)/2007-IA II (I) dated 16<sup>th</sup> November, 2009 has accorded environmental clearance for 2 wells. Exploratory drilling of two wells (JMI-8/9) was completed on 13.06.2012. Public hearing of the project was held on 28<sup>th</sup> July, 2009. Hydrocarbon Gas was detected in both two wells. Water based mud will be used. Total quantity of cuttings will be generated 150 m<sup>3</sup>. Water requirement from ground water source will be 20-30 m<sup>3</sup>/day. Certified compliance report from Regional Office at Chandigarh has been received. It is reported that existing exploratory drilling has been stopped since 13.06.2012 and not having previous six monthly reports. The Committee exempted the project proposal from EIA report preparation/public hearing as per para 7 (ii) of EIA Notification, 2006.

After deliberations, the Committee desired following additional information:

1. Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.
2. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
3. Baseline data collection in respect of air, water and soil for one month.
4. Details of effluent generation and its treatment.
5. Disposal of drill cutting.
6. Restoration and decommissioning plans which should include mud pits and wastage restoration also and documentation and monitoring of site recovery.

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

5.4.5. Extraction of Value Added Products (LPG, Naphtha and C2C3 ) from ONGC gas at Hazira Plant, Village Bhatpore, Tehsil Choriasi, District Surat, Gujarat by M/s ONGC. - **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 petro-chemical complexes are listed at S.N. 5(c) under category 'A' and appraised at Central level.

M/s ONGC have proposed for extraction of Value Added Products (LPG, Naphtha and C2C3 ) from ONGC gas at Hazira Plant, Village Bhatpore, Tehsil Choriasi, District Surat, Gujarat. This is an expansion project. No forest land is involved. The Hazira plant is designed to process 40.6 mmscmd of sour natural gas with installed capacity of 46.2

MMSCMD of sour gas and associated hydrocarbon. Cost of project is Rs. 1630.38. Following products will be manufactured:

S.N.	Product	Existing	Proposed additional
1	LPG	1669 TPD	681 TPD
2	Naptha	3545 TPD	136 TPD
3	SKO	593 TPD	--
4	HSD	97 TPD	--
5	C2-C3	--	715 TPD

Water requirement from Irrigation Department will be 345 m<sup>3</sup>/hr. One ETP of 100 m<sup>3</sup>/hr will be installed. Solid waste will be generated in once in 4 years., which will be disposed in secured landfill site already engaged by the ONGC. Natural gas (1.92 MTPA) will be used during plant operation. Energy requirement will be 26.5 MW which will met from captive power plant. Natural gas will be used as fuel for boiler.

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

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> 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. Project Description and Project Benefits.
4. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
5. 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.
6. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
7. Site details including satellite imagery for 5 km around the site.
8. A list of industries within 10 km radius of the project.
9. Details of facilities alongwith utilities to be provided for the proposed project.
10. Manufacturing process details alongwith the chemical reactions and process flow diagram.
11. List of products alongwith the production capacities and list of solvents and its recovery plan.
12. Detailed list of raw material required and source, mode of storage and transportation.
13. Details of the storage and technical specifications with safety aspects & standards.
14. Is there additional storage required for the proposed products mix.
15. Details indicating National Park/Wild life Sanctuary/Eco sensitive area/reserve forest within 10 Km.
16. Baseline data collection for air, water and soil for the period of 3 months (except monsoon season) for :
  - i. Ambient air quality monitoring for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO.
  - ii. Background levels of hydrocarbons (methane & non-methane HC) and VOCs.

- iii. Soil sample analysis.
  - iv. Base line underground and surface water quality in the vicinity of project.
  - v. Climatology & meteorology including wind speed, wind direction, temperature, rainfall etc.
  - vi. Measurement of noise levels.
17. Give existing status of stack emission, raw water requirement, treated effluent quantity & quality data, noise pollution and solid waste management in the existing units.
  18. Action plan to achieve smokeless flare should be included.
  19. Details of Sulphur balance in the existing petrochemical unit. Additional SO<sub>2</sub> emissions due to the proposed product mix.
  20. Unit-wise air pollution control devices to be installed.
  21. Details of water consumption and source of water supply, waste water generation, treatment and utilization of treated water generated from the facilities and effluent disposal.
  22. Details of existing and proposed effluent treatment plant alongwith water quality of inlet and outlet of ETP.
  23. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
  24. Note on compliance to the recommendations mentioned in the CREP for petrochemical industries.
  25. Quantification of oil sludge generation from the existing and proposed refinery including management of the oil sludge in the existing refinery. Details of temporary storage for the oil sludge.
  26. Details of catalyst waste generated from the refinery along with temporary storage facility at site. Action plan for disposal of the catalyst solid waste.
  27. Status of existing secured landfill sites. Design details as well as ground water monitoring around the project site.
  28. Details of membership of TSDF for hazardous waste disposal.
  29. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
  30. Details of proposed preventive measures for leakages and accident.
  31. Details of Vapour Recovery System.
  32. Earmarking of area for parking of Lorries at a remote location to avoid congestion.
  33. Full Quantitative Risk Assessment & Disaster Management Plan should include:
    - a. Identification of hazards
    - b. Consequence Analysis
    - c. Determination of Individual Risk and Societal Risk
    - d. List of last Major Refinery Incidents Globally in last 10 years
    - e. Proposed measures for risk reduction.
  34. Occupational health:
    - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
    - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
    - c) Annual report of health status of workers with special reference to [Occupational Health and Safety](#).
    - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.

- e) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
35. Corporate Environment Policy
- v. 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.
  - vi. 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.
  - vii. 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.
  - viii. 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.
36. Details including existing green belt developed. Action plan for development of green belt in 33%.
37. Total capital cost and recurring cost/annum for environmental pollution control measures. Break up details should also be included.
38. Details of environmental management cell alongwith the qualification and duties of all the personnel involved.
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. Environmental monitoring programme including online stack monitoring system as well as continuous ambient air quality monitoring system. Method/System to be adopted to ensure correct calibration of automatic monitoring system.
41. Details of Corporate Social Responsibility (CSR) including sufficient budgetary provision for health improvement, education, water and electricity supply etc. in and around the project.
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 indicating point-wise compliance of the TOR.  
The following general points should be noted:
- i. All documents should be properly indexed, page numbered.
  - ii. Period/date of data collection should be clearly indicated.
  - iii. Authenticated English translation of all material provided in Regional languages.
  - iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
  - v. The copy of the letter received from the Ministry should be also attached as an annexure to the final.  
EIA-EMP Report.
  - vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report.

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.

- 5.4.6. Expansion of Synthetic Drug API (656 TPA to 1268 TPA) and R & D Products (0 to 5 TPA) at Plot No. 89A/B, 90, 91, F10 & 80 Village Pologround Industrial Estate, Tehsil and District Indore, Madhya Pradesh by **M/s Ipca Laboratories Ltd. - regarding EC**

The Committee noted that EIA/EMP report was prepared by a non-accredited consultant. Therefore, Committee advised them to validate EIA/EMP report first by the QCI/NABET accredited consultant and submitted to the Ministry for consideration of environmental clearance.

The proposal was deferred till EIA/EMP report validated by the QCI/NABET accredited consultant is submitted.

- 5.4.7. Pesticide Technical Product Manufacturing Unit at Village Seerapalayam, Taluk Madukkarai, District Coimbatore, Tamil Nadu by **M/s Fytocare Chemicals (P) Ltd.- regarding TOR.**

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 Fytocare Chemicals (P) Ltd have proposed for setting up of Pesticide Technical Product Manufacturing Unit at Village Seerapalayam, Taluk Madukkarai, District Coimbatore in Tamil Nadu. Unit is engaged in pesticide formulation activity in the existing unit. Total plot area is 14000 m<sup>2</sup> and no additional land is required for proposed activity. Following product will be manufactured:**

S.N.	Product	Production Capacity	
		Kg/Month	Kg/Annum
1	Bromodialone (BDL) Technical	42	500

Dust collector has been installed in the existing agrowaste fired boiler. Water requirement from ground water source will be 64 m<sup>3</sup>/month. Effluent generation will be 29.6 m<sup>3</sup>/month and sent to the TNPCB approved common incineration facility. ETP sludge will be sent to TSDF. Process waste/distillation residues will be sent to common incineration facility. Power requirement will be 85 KVA and met from Tamil Nadu Electricity Board. DG set (1x 85 KVA + 1 x 30 KVA) will be installed.

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

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.

4. Regulatory framework.
5. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the TN Pollution Control Board.
6. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
7. A map indicating location of the project and distance from severely polluted area
8. Plant layout alongwith details of facility.
9. Infrastructure facilities including power sources.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Project site location alongwith photographs and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
12. Present land use based on satellite imagery for the study area of 10 km radius.
13. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
14. Details of the total land and break-up of the land use for green belt and other uses.
15. List of products alongwith the production capacities.
16. Detailed list of raw material required and source, mode of storage and transportation.
17. Manufacturing process details alongwith the chemical reactions and process flow chart.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> 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<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, Br<sub>2</sub> 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. 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 from CGWA/SGWA for the drawl of ground water. Water balance chart including quantity of effluent generated recycled and reused and discharged.
28. Action plan for 'Zero' discharge of effluent should be included.
29. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
30. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the management of fly ash generated from boiler should be included.

31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
33. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
34. Risk assessment for storage for chemicals/solvents.
35. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemical.
36. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
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 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.
39. Details of occupational health surveillance programme.
40. Socio-economic development activities shall be in place.
41. Note on compliance to the recommendations mentioned in the CREP guidelines.
42. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
43. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
44. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 45. Corporate Environmental Responsibility**
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
46. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
47. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
48. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

The Committee 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.

- 5.4.8. Expansion of Bulk Drugs Unit Sy. No. 388 & 389, Borapatla(v), Hathnoor Mandal, Medak District Andhra Pradesh by **M/s Aurobindo Pharma Ltd. (Unit-1) - regarding TOR**

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

- 5.4.9. Bulk Drugs and Intermediates unit Hetero Drugs Ltd. Unit IV Sy. No. 598,599,600,615, 617, 618,619,620,629,630,&631 Bonthapally IDA, Jinnaram Manda, Medak District Andhra Pradesh by **M/s Hetero Drugs Ltd. (Unit -IV)- regarding TOR.**

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

- 5.4.10. Bulk Drugs and Intermediates unit Hetero Drugs Ltd. Unit I, Sy. No 10, IDA Gaddapotharam, Jinnaram, Medak District Andhra Pradesh by **M/s Hetero Labs Ltd. (Unit -I) - regarding TOR.**

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

- 5.4.11. Bulk Drugs and intermediates manufacturing unit Sy. No. 371, Gundlamachanoor Village, Hathnoor Mandal, Medak District Andhra Pradesh by **M/s Cirex Pharmaceuticals Ltd.- regarding TOR.**

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

5.4.12. Expansion of Emulsion Styrene Butadiene Rubber Project ( from 120,000 TPA to 216,000 TPA) at Village Balajatan, Taluk Madlauda, District Panipat, Haryana by **M/s IOCL - regarding TOR.**

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 petro-chemical complexes are listed at S.N. 5(c) under category 'A' and appraised at Central level.

**M/s IOCL have proposed for the** expansion of Emulsion Styrene Butadiene Rubber Project ( from 120,000 TPA to 216,000 TPA) at Village Balajatan, Taluk Madlauda, District Panipat, Haryana. The existing plot area is 2,31,431 m<sup>2</sup> and no additional land is required. Total cost of expansion project is Rs. 400 Crore.

Vent gases generated from various process units and monomer storage tanks and intermediates vessels will be connected to a flare system. Untreated excess styrene will be burnt in the onsite incinerator as per CPCB guidelines. Dryer exhaust gas will be passed through wet scrubber. Scrubber will be also provided to incinerator. Water requirement from IOCL Panipat Naptha Cracker Unit will be increased from 1218 m<sup>3</sup>/day to 2192 m<sup>3</sup>/day. Wastewater generation will be increased from 2781 m<sup>3</sup>/day to 5005 m<sup>3</sup>/day. Effluent will be treated through RO and MEE. Zero liquid discharge concept will be implemented.

Excess low quality styrene will be incinerated at onsite facility. ETP Sludge and concentrate from MEE will be sent to TSDF. Used oil will be sent to authorized recyclers.

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

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project
3. Justification of the project.
4. Promoters and their back ground.
5. Regulatory framework.
6. Environment clearance for the existing unit issued by the Ministry, Consent to Operate and Authorization accorded by the HSPCB.
7. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
8. Project location and plant layout.
9. Infrastructure facilities including power sources.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
12. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.

13. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
14. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
15. Details of the total land and break-up of the land use for green belt and other uses.
16. List of products alongwith the production capacities.
17. Detailed list of raw material required and source, mode of storage.
18. Manufacturing process details alongwith the chemical reactions and process flow chart.
19. Action plan for the transportation of raw material and products.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
22. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOCs including HC shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
23. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.
25. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
28. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
29. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
30. Permission from competent Authority for the drawl of water. Water balance chart for existing and expansion project including quantity of effluent generated recycled and reused and effluent discharge.
31. Attempt to be made for reduction for usage of water.
32. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
33. Zero discharge effluent concepts to be adopted.
34. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
35. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
36. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
37. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
39. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.

40. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
41. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
43. Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
45. Note on compliance to the recommendations mentioned in the CREP guidelines.
46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 49. Corporate Environmental Responsibility**
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
50. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
51. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
52. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

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

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

**5.4.13. Bulk Drugs and Intermediates Sy. No. 371, Gundlamachanoor(V), Hathnoora(M), Medak District Andhra Pradesh by M/s Aurobindo Pharma Ltd. (Unit-IX)- regarding TOR.**

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

**5.4.14. Expansion of (POY and FDY) Manufacturing Unit at Plot no. 280, 281,282, Village Nana Borasara, Taluka Mangrol, District Surat, Gujarat by M/s Gujarat Polyfils Ltd. - regarding TOR.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All other man made fibre are listed at S.N. 5(d) under category 'B' and appraised at State level. However, applicability of general condition due to project location within 10 Km of the Critically Polluted Area, proposal is treated as category 'A' and appraised at Central Level.

M/s Gujarat Polyfils Ltd. have proposed for expansion of (POY and FDY) Manufacturing Unit at plot no. 280, 281,282, Village Nana Borasara, Taluka Mangrol, District Surat in Gujarat. Total plant area is 88312 m<sup>2</sup>. No additional land is required. Cost of the project is Rs. 3873 Lakhs. Following products will be manufactured:

S.N.	Product/Byproduct	Production Capacity (MTPM)		
		Existing	Proposed	Total
1	Polyester Filament Yarn (POY and FDY)	1200	1200	2400
2	Polyster Lumps and rejected Yarn (By Product)	25	25	50

It is noted that environmental clearance was accorded by the MoEF vide letter no. J-11011/132/2007-IA-II (I) dated 6<sup>th</sup> June, 2008 for the existing unit.

There is no process emission of flue stack involved in the proposed project. Water consumption will be increased from 145 m<sup>3</sup>/day to 285 m<sup>3</sup>/day after expansion. Industrial Wastewater generation will be increased from 22 m<sup>3</sup>/day to 44 m<sup>3</sup>/day after expansion and



treated in ETP. No effluent will be discharged outside the factory premises. Thermic fluid heater based on electricity will be installed. DG sets (2 x 860 KVA) are installed. ETP sludge will be sent to TSDF site. Spent oil and Used oil will be sent to authorized recyclers.

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

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. A map indicating location of the project and distance from critically/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 16<sup>th</sup> 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<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO 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.
20. Details of water and air pollution and its mitigation plan.
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. Air quality modelling for proposed plant.
22. 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.
23. Reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
24. Source of water supply and 'Permission' for the drawl of proposed water from the Competent authority.
25. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber etc.).
26. Action plan for Zero Discharge of effluent as proposed should be included.

27. 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).
28. 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.
29. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
30. Details of captive landfill alongwith design details as per CPCB guidelines. Location of secured land fill/TSDF.
31. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
32. An action plan to develop green belt in 33 % area
33. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
34. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
35. Socio-economic development activities should be in place.
36. 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.
37. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 38. Corporate Environmental Responsibility**
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
39. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
40. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
41. A tabular chart with index for point wise compliance of above TORs.

The following general points should be noted:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vi. The final EIA-EMP report submitted to the Ministry must incorporate the issues in this letter. 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 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no. J -11013/77/2004-IA II(I) dated 2<sup>nd</sup> 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 Gujarat Pollution Control Board for public hearing. The issues emerged and response to the issues raised during should be incorporated in the EIA report. The final EIA/EMP alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

- 5.4.15. Bulk Drugs and Intermediates manufacturing unit –Hetero Labs. Unit –III (Bulk Division) Plot No. – 22-110, Phase-IV, IDA Jeedimetla, Rangareddy District Andhra Pradesh by **M/s Hetero Labs Ltd. (Unit-III) - regarding TOR.**

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

- 5.4.16. Expansion of Bulk Drugs and Intermediates Manufacturing Unit at Sy. No- 10&13, Gaddapotharam IDA, Jinnaram Mandal, Medak District, Andhra Pradesh by **M/s Aurobindo Pharma Ltd. (Unit- VIII) - regarding TOR.**

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

- 5.4.17. Expansion of Intermediates Bulk Drugs Unit at Sy. No – 200, 202,203 A, 204 & 206A, Bonthapally IDA, Jinnaram Mandal, Medak District Andhra Pradesh by **M/s Honour Lab Limited. - regarding TOR.**

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

5.4.18. Bulk Drugs And Intermediates Manufacturing Unit at Sy. No. 213, 215, 253 Bonthapally IDA, Jnnaram Mandal, Medak District, Andhra Pradesh by **M/s Hetero Drugs Limited (unit –I)- regarding TOR.**

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

5.4.19. Expansion of Sugar Cane Crushing Capacity (from 10,000 TCD to 20,000 TCD), Co-generation Power Plant (from 44MW to 75 MW) & Molasses based Distillery (from 76 KLPD to 200 KLPD) at Village Ugar Khurd, District Belgaum, Karnataka by **M/s The Ugar Sugar Works Ltd. - regarding TORs.**

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All sugar industries (> 5000 TCD cane crushing) are listed at S.N. 5(j) under category 'B' and appraised at state level. All Co-generation Plant based on biomass ( $\geq$  20 MW) are listed at S.N. 5(j) under category 'A' and project proposal is treated as category 'A' project.

M/s The Ugar Sugar Works Ltd. have submitted the project proposal for expansion of Sugar Cane Crushing Capacity (from 10,000 TCD to 20,000 TCD), Co-generation Power Plant (from 44MW to 75 MW) & Molasses based Distillery (from 76 KLPD to 200 KLPD) at Village Ugar Khurd, District Belgaum in Karnataka. Further, project proponent has dropped the project proposal for expansion of molasses based distillery (from 76 KLPD to 200 KLPD). Total plant area is 251.31 acres. Krishna River is flowing at a distance of 1 Km. No forest land is involved. No court case/ litigation is pending against the project proposal. Total project cost is Rs. 383.67 Crore after expansion. The water requirement from Krishna River for the existing and proposed expansion of sugar and cogeneration will be 6600 m<sup>3</sup>/day. Effluent from sugar unit will be treated in the effluent treatment plant. Power requirement will be 25.45 KW. DG set (4 MW) is installed for emergency back up. Ash generation will be 16137.96 MTPD.

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

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Executive summary of the project.
3. Compliance of environmental conditions prescribed by the SPCB for the existing sugar & Distillery unit
4. Detailed breakup of the land area along with latest photograph of the area.
5. Present land use based on satellite imagery.
6. Details of site and information related to environmental setting within 10 km radius of the project site.

7. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
8. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
9. List of existing distillery units in the study area alongwith their capacity.
10. Number of working days of the distillery unit and CPP.
11. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
12. Manufacturing process details of sugar plant and CPP alongwith process flow chart.
13. Details of raw materials and source of raw material molasses, bagasse etc.
14. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO<sub>2</sub> emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
15. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
16. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
17. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
18. An action plan to control and monitor secondary fugitive emissions from all the sources.
19. Details of boiler and its capacity. Details of the use of steam from the boiler.
20. Ground water quality around existing spent wash storage lagoon and the project area.
21. Details of water requirement, water balance chart for Sugar and Co-generation plant. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
22. Prior 'permission' from Competent Authority for the drawl of total fresh water. Details of source of water supply.
23. Hydro-geological study of the area for availability of ground water.
24. Proposed effluent treatment system for sugar unit as well as CPP and scheme for achieving 'zero' discharge.
25. Lagoon capacity for sugar unit and spent wash as well measures to be taken to control ground water contamination.
26. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
27. Green belt development as per the CPCB guidelines.
28. List of flora and fauna in the study area.
29. Noise levels monitoring at five locations within the study area.
30. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
31. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
32. Details of bagasse storage. Details of press mud requirement.
33. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
34. Details of occupational health programme.

- 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.
35. Details of socio-economic welfare activities to be provided.
36. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
37. Action plan for post-project environmental monitoring.
- 38. Corporate Environmental Responsibility**
- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
39. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
40. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
41. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

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

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the State Pollution Control Board for conducting

public hearing/consultation. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The concerns emerged during the Public Hearing/ Consultation should be incorporated in the EIA/EMP Report and the final EIA/EMP submitted to the Ministry for obtaining environmental clearance.

5.4.20. Pellatisation Unit (0.6 MTPA) at Village Sreerampuram, Mandal L. Kota, District Vizianagaram, Andhra Pradesh by M/s Simhadri Pellets India Ltd- **regarding TORs.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with draft Terms of Reference for the preparation of EIA/EMP Report. Pelletization being a primary metallurgical process, is listed at Sl. 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 Simhadri Pellets India Ltd have proposed for setting up of Pellatisation Unit (0.6 MTPA) at Village Sreerampuram, Mandal L. Kota, District Vizianagaram, Andhra Pradesh. The proposed project will be taken up in the plant premises of M/s Steel Exchange India Ltd. Total land is possession of M/s Steel Exchange India Ltd. is 405 Acres. No national parks/sanctuaries are located within 10 km. Total 25.6 acres will be taken on lease for the proposed unit. No forest land is involved. No court case/ litigation is pending against the project. Total project cost is Rs. 238.9 Crore.

Dry grinding with grate kiln process will be adopted in the proposed project. Iron ore fines (663060 TPA), limestone (9020 TPA) and Bentonite (6800 TPA) will be used as raw materials. Imported coal (21295 TPA), Furnace oil (8840 KL), HSD (640 KL) and producer gas (8500 m<sup>3</sup>/hr.) will be used as fuel. Water requirement from Greater Vishaka Municipal Corporation will be 300 m<sup>3</sup>/day. Dry type ESP will be provided as part of induration plant package. Bag filter in the areas covering drying, ore grinding, pulverizing units, proportioning system and mixing unit as part of dedusting system. ESP will be provided at screening building. Cyclone separators and electric detarrer will be provided in producer gas units. Ash generated from the producer gas unit will be disposed off to the brick manufacturers and tar will be given to coal tar distillation units.

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

1. Executive summary of the project.
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP.
4. Proposal should be submitted to the Ministry for environment clearance only after acquiring total land. Necessary documents indicating acquisition of land should be included.
5. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3- D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site.
6. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.

7. Location of national parks / wildlife sanctuary / reserve forests within 10 km. radius should specifically be mentioned. A map showing landuse/landcover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
8. A list of industries within 10 km radius of the plant area.
9. Details and classification of total land (identified and acquired) should be included.
10. Project site layout plan showing raw materials and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. List of raw material required and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
12. Quantification & Characterization of solid /hazardous waste & its action plan for management should be included.
13. Mass balance for the raw material and products should be included.
14. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
15. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
16. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
17. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
18. Ambient air quality as per National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be included.
19. Air Quality Impact Prediction Modelling based on ISCST-3 or the latest models.
20. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided.
21. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
22. Presence of aquifer/aquifers within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
23. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included.



24. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
25. 'Permission' for the drawl of water should be obtained. Water balance data must be provided.
26. A note on the impact of drawl of water on the nearby River during lean season.
27. Action plan for rainwater harvesting measures.
28. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
29. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean river discharge as well as flood occurrence frequency.
30. Pre-treatment of raw water, treatment plant for waste water should be described in detail. Design specifications may be included.
31. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
32. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources should also be included.
33. Identification and details of land to be used for all type of slag disposal in the secured land fill as per CPCB guidelines should be included.
34. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
35. Provision of Toxic Chemical Leachability Potential (TCLP) test for the slag and its end use should be included.
36. Action plan for the green belt development plan in 33 % area should be included.
37. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
38. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
39. Occupational health:
  - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during preplacement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.

c) Annual report of health status of workers with special reference to Occupational Health and Safety.

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

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

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

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

The following general points should be noted:

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

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

5.4.21. Proposed to set up an Integrated Steel Plant (1.5 MTPA) along with a Captive Power Plant (356 MW) at Village Dagori, Amiri Akbari & Sati Ghat, District Bilaspur, Chattisgarh by M/s Nova Iron & Steel Ltd. ( A Unit of **Bhushan Power & Steel Ltd**)-**regarding TORs.**

The committee noted that the information regarding quantity of raw materials to be required and its sources as well as transportation of raw materials and the coal linkage is not available which is required for the Steel Plant. The Committee noted

that proposal is premature and is deferred for consideration after submission of the revised prefeasibility report with complete details.

5.4.22. Bentonite Sulphur and Zinc Fortified Bentonite Super Fertilizer Manufacturing Unit at Panipat, Haryana by **M/s Deepak Fertilizers and Petrochemicals Corporation Ltd. - regarding TORs.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. 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 Deepak Fertilizers and Petrochemicals Corporation Ltd. have proposed for Bentonite Sulphur and Zinc Fortified Bentonite Super Fertilizer Manufacturing Unit (30 x 2 KMPA) at Panipat, Haryana. Further, project proponent has revised their proposal for 2x32000 TPA in phase-1 with provision of doubling the capacity in phase-2. No forest land is involved. Hali lake is located at 9.5 Km. No court case/litigation is pending against the project. No wildlife sanctuary is located near the project site. Plot area is 5000 m<sup>2</sup>. The Committee noted that proposed project is located in HSIIDC industrial estate, Panipat. But HSIIDC has applied for environmental clearance for this Industrial area, which is awaited. Sulphur (116000 MTPA) from adjacent refineries, Bentonite (12800 MTPA) from Gujarat/Rajasthan and ZnO micronutrient from local market will be used as raw materials. Power requirement will be 24 MWH and sourced from HSEB. Water requirement from HSIIDC will be 480 m<sup>3</sup>/day. Effluent will be treated in ETP and treated effluent will be discharged in CETP. Impurity in raw material will be sold to the authorized vendor. Used oil/ spent oil will be sent to authorized re-processors.

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 critically / 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 16<sup>th</sup> 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<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, Benzene including VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for surface and ground water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits. Control of fluorine emissions at source.
20. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO<sub>x</sub> emission and method to control NO<sub>x</sub>.
21. Details of water and air pollution and its mitigation plan.
22. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
23. 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.
24. Reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
25. 'Permission' for the drawl of water from the Competent authority.
26. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber etc.).
27. Action plan for Zero Discharge of effluent as proposed should be included.
28. 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).
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler should be included.
30. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
31. Plan for the implementation of the recommendations made for the fertilizer plants in the CREP guidelines must be prepared and included.
32. Details of captive landfill alongwith design details as per CPCB guidelines. Location of secured land fill/TSDF.
33. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
34. An action plan to develop green belt in 33 % area
35. 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.
36. 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.

37. Details of occupational health surveillance programme.
38. Socio-economic development activities should be in place.
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. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
- 41. Corporate Environmental Responsibility**
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
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. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
44. A tabular chart with index for point wise compliance of above TORs.

The following general points should be noted:

- i. The following general points should be noted:
- ii. All documents should be properly indexed, page numbered.
- iii. Period/date of data collection should be clearly indicated.
- iv. Authenticated English translation of all material provided in Regional languages.
- v. The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter.
- vi. The copy of the letter received from the Ministry should be also attached as an annexure to the final EIA-EMP Report.
- vii. 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.
- viii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report should be submitted to the Haryana State 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.

- 5.4.23. Proposed Synthetic Organic Chemical Unit at IIDC, Village Sidcul Industrial Estate, Tehsil Pant nagar, District Udham Singh Nagar, Uttarakhand by M/s Shirdi Organics Pvt. Ltd.-regarding TORs.

The committee noted that this project proposal falls under category 'B' and should be appraised at the State level by the SEIAA/SEAC, Uttarakhand. Constitution of SEIAA/SEAC for the State Uttarakhand is in progress. The project proposal may be transferred to the SEIAA/SEAC, Uttarakhand.

- 5.4.24. Expansion of NPK Fertilizer Manufacturing Unit at DFPCL Complex, K-1 to K-5, MIDC Industrial Area, District Raigad, Maharashtra by **M/s Deepak Fertilizers and Petrochemicals Corporation Ltd. - regarding TORs.**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All 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 Deepak Fertilizers and Petrochemicals Corporation Ltd. have proposed for expansion of NPK Fertilizer Manufacturing Unit, DFPCL Complex, MIDC Industrial Area, District Raigad, Maharashtra. Expansion will be from single grade NP Fertilizer Unit (324000 MTPA) to Multiple Grade Fertilizer Unit ( 6,00,000 MTPA). Total plot area is 2.67 lakh m<sup>2</sup>. Cost of project is Rs. 360 Crores. Rs. 40 Crore is earmarked towards capital cost for pollution control measures. Kasardi River is flowing at a distance of 1 Km. Ammonia (150 MTPD), Phosphoric Acid P<sub>2</sub>O<sub>5</sub> (325 MTPD), Clay (150 MTPD), Zinc Sulfate (15 MTPD), Borax (15 MTPD), MOP (550 MTPD) and Sulfuric Acid (10 MTPD) will be used as raw materials. This proposal attracts consideration under Maharashtra Government notification no. MMB/2009/325/PK/TAK dated 13<sup>th</sup> July 2009 regarding RRZ. No court case/litigation is pending against the project. Total water requirement is 200 m<sup>3</sup>/day. No additional fresh water requirement is envisaged for overall complex due to this project. NPK process will use brackish water generated during secondary treatment of effluent (RO). DFPCL will install RO unit to treat present effluent. This will reduce overall effluent discharge by 450 m<sup>3</sup>/day. Balance 3428 m<sup>3</sup>/day treated effluent will be discharged to CETP for further treatment. Power requirement from MSEDCL will be 5 MWH. Natural gas (17000 SM<sup>3</sup>/day) will be used as fuel.

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 30<sup>th</sup> 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. Recommendation of Maharashtra Government that project proposal is complying with the provisions of the RRZ policy of the Government of Maharashtra.
7. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the Maharashtra Pollution Control Board.

8. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
9. A map indicating location of the project and distance from severely polluted area
10. Project location and plant layout.
11. Infrastructure facilities including power sources.
12. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
13. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
14. Present land use based on satellite imagery for the study area of 10 km radius.
15. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities and list of solvents and its recovery plan.
18. Detailed list of raw materials required and source, mode of storage and transportation.
19. Manufacturing process details alongwith the chemical reactions and process flow chart of each products.
20. Action plan for the transportation of raw materials and products.
21. Ambient air quality monitoring at 6 locations within the study area of 10 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
22. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> 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.
23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
24. Plant-wise air pollution control measures proposed for the control of emissions from all the sources particularly uncontrolled NO<sub>x</sub> emission and method to control NO<sub>x</sub>.
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 16<sup>th</sup> September, 2009.
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. 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.
29. Reduce fresh water requirement. Methods adopted/to be adopted for the water conservation should be included.
30. Source of water supply and 'Permission' for the drawl of proposed water from the Competent Authority.
31. Design details of the ETP and STP as well as air pollution control equipments (Bag filters/ wet scrubber etc.).
32. Action plan for Zero Discharge of effluent as proposed should be included.
33. 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).
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. Details of captive landfill alongwith design details as per CPCB guidelines. Location of secured land fill/TSDF.
  38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
  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 Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
    - iii) What measures company have taken to keep these chemicals within PEL/TLV.
    - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
    - v) What are onsite and offsite emergency plan during chemical disaster.
    - vi) Liver function tests (LFT) during pre-placement and periodical examination.
    - vii) Details of occupational health surveillance programme.
  42. Socio-economic development activities should be in place.
  43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
  44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
  - 45. Corporate Environmental Responsibility**
    - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
    - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
    - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
    - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
  46. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
  47. A tabular chart with index for point wise compliance of above TORs.

The following general points 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 4<sup>th</sup> August, 2009, which are available on the website of this Ministry should also be followed.
- viii. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no. J -11013/77/2004-IA II(I) dated 2<sup>nd</sup> 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.

5.4.25. Expansion of Induction Furnace and Ferro Alloy Manufacturing Unit at Sy. No. 43/A, Village Macharam, District Mahaboonagar, Andhra Pradesh by **M/s Tanmayi 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 Tanmayi Ispat Pvt. Ltd. have proposed for Expansion of Induction Furnace and Ferro Alloy Manufacturing Unit at Sy. No. 43/A, Village Macharam, District Mahaboonagar, Andhra Pradesh. Total acquired land is 9 acres. Total cost of the project is Rs. 30 Crore. Rs. 3 Crore is earmarked towards capital cost for pollution control measures. No forest land is involved. No court case/litigation is pending against the project. Following products will be manufactured:

S.N.	Details	Existing Project	Proposed project for environmental clearance
1	Rolling Mill	36000 TPA ( MS Bars, Angles, Channels,	49000 TPA ( MS Bars, Angles, Channels, Round & Patties)

		Round & Patties)	
2	Induction Furnace	--	12 TPCx2=72000 TPA ( MS Ingots/Billets)
3	Ferro Alloy ( Silico Manganese)	--	12 MVAx2=140 TPD/42000 TPA

Sponge iron and pig iron/steel scrap from local market, Manganese from Kadapa Mines, AP, Coke from local market, limestone from Tandur and Quartz from Kunool will be used as raw materials. Slag will be crushed and segregated into metallic and non metallic. The Mill scale from rolling mill is reused in the induction furnace as M S scrap. Greenbelt will be developed in 3.3 acres land.

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

1. Executive summary of the project
2. Photographs of the proposed plant area.
3. A line diagram/flow sheet for the process and EMP
4. Coal linkage documents
5. A site location map on Indian map of 1:10, 00,000 scale followed by 1:50,000/1:25,000 scale on an A3/A2 sheet with at least next 10 Kms of terrains i.e. circle of 10 kms and further 10 kms on A3/A2 sheets with proper longitude/latitude/heights with min. 100/200 m. contours should be included. 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. A photograph of the site should also be included.
6. Present land use should be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same should be used for land used/land-cover mapping of the area.
7. Topography of the area should be given clearly indicating whether the site requires any filling. If so, details of filling, quantity of fill material required, its source, transportation etc. should be given.
8. Location of national parks/wildlife sanctuary/reserve forests within 10 km. radius should specifically be mentioned. A map showing land use/land cover, reserved forests, wildlife sanctuaries, national parks, tiger reserve etc in 10 km of the project site.
9. A certified report of the status of compliance of the conditions stipulated in the environmental clearance and Consent to Operate for the ongoing / existing operation of the project by the Regional Office of the Ministry of Environment and Forests and SPCB.
10. Project site layout plan to scale using AutoCAD showing raw materials, fly ash and other storage plans, bore well or water storage, aquifers (within 1 km.) dumping, waste disposal, green areas, water bodies, rivers/drainage passing through the project site should be included.
11. Coordinates of the plant site as well as ash pond with topo sheet co-ordinates of the plant site as well as ash pond with topo sheet should also be included.
12. Details and classification of total land (identified and acquired) should be included.
13. Rehabilitation & Resettlement (R & R) should be as per policy of the State Govt. and a detailed action plan should be included.
14. Permission from the tribals, if tribal land has also to be acquired along with details of the compensation plan.
15. Permission and approval for the use of forest land, if any, and recommendations of the State Forest Department. .

16. A list of industries containing name and type in 25 km radius should be incorporated.
17. Residential colony should be located in upwind direction.
18. List of raw material required, analysis of all the raw materials and source along with mode of transportation should be included. All the trucks for raw material and finished product transportation must be "Environmentally Compliant".
19. Petrological and Chemical analysis and other chemical properties of raw materials used (with GPS location of source of raw material) i.e. ores, minerals, rock, soil, coal, iron, dolomite quartz etc. using high definition and precision instruments mentioning their detection range and methodology such Digital Analyzers, AAS with Graphite furnace, ICPMS, MICRO-WDXRF, EPMA, XRD, Nano studies or at least as per I30-10500 and WHO norms. These analysis should include trace element and metal studies like Cr (VI) Ni, Fe, As, Pb, Zn, Hg, Se, S etc. Presence of radioactive elements (U, Th etc.), if applicable, should also be included..
20. Petrography, grain size analysis and Major element analysis of raw material and soil from project site and raw material should be done on the same parameters along with analysis for SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MgO, MnO, K<sub>2</sub>O, CaO, FeO, Fe<sub>2</sub>O<sub>3</sub>, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>O, CO<sub>2</sub>.
21. If the rocks, ores, raw material has trace elements their petrography, ore microscopy, XRD, elemental mapping EPMA, XRF is required to quantify the amount present in it and hence future risk involved while using it and management plan.
22. Action plan for excavation and muck disposal during construction phase.
23. Studies for fly ash, muck, slurry, sludge material disposal and solid waste generated, if the raw materials used has trace elements and a management plan should also be included.
24. Manufacturing process details for all the plants should be included.
25. Mass balance for the raw material and products should be included.
26. Energy balance data for all the components of steel plant including proposed power plant should be incorporated.
27. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be collected.
28. Data generated in the last three years i.e. air, water, raw material properties and analysis (major, trace and heavy metals), ground water table, seismic history, flood hazard history etc.
29. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
30. Ambient air quality at 8 locations within the study area of 10 km., aerial coverage from project site with one AAQMS in downwind direction should be carried out.
31. The suspended particulate matter present in the ambient air must be analyzed for the presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction. Chemical characterization of RSPM and incorporating of RSPM data.
32. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features.
33. Air quality modeling for steel plant for specific pollutants needs to be done. APCS for the control of emissions from the kiln and WHRB should also be included to control emissions within 50 mg/Nm<sup>3</sup>.
34. Action plan to follow National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 should be included.
35. Ambient air quality monitoring modeling along with cumulative impact should be included for the day (24 hrs) for maximum GLC along with following :

- i) Emissions (g/second) with and without the air pollution control measures
  - ii) Meteorological inputs (wind speed, m/s), wind direction, ambient air temperature, cloud cover, relative humidity & mixing height using SODAR) on hourly basis
  - iii) Model input options for terrain, plume rise, deposition etc.
  - iv) Print-out of model input and output on hourly and daily average basis
  - v) A graph of daily averaged concentration (MGLC scenario) with downwind distance at every 500 m interval covering the exact location of GLC.
  - vi) Details of air pollution control methods used with percentage efficiency that are used for emission rate estimation with respect to each pollutant
  - vii) Applicable air quality standards as per LULC covered in the study area and % contribution of the proposed plant to the applicable Air quality standard. In case of expansion project, the contribution should be inclusive of both existing and expanded capacity.
  - viii) No. I-VII are to be repeated for fugitive emissions and any other source type relevant and used for industry
  - ix) Graphs of monthly average daily concentration with down-wind distance
  - x) Specify when and where the ambient air quality standards are exceeded either due to the proposed plant alone or when the plant contribution is added to the background air quality.
  - xi) Fugitive dust protection or dust reduction technology for workers within 30 m of the plant active areas.
36. A plan for the utilization of waste/fuel gases in the WHRB for generating power have to be set out.
  37. Impact of the transport of the raw materials and end products on the surrounding environment should be assessed and provided. The alternate method of raw material and end product transportation should also be studied and details included.
  38. One season data for gaseous emissions other than monsoon season is necessary.
  39. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008.
  40. Presence of aquifer(s) within 1 km of the project boundaries and management plan for recharging the aquifer should be included.
  41. Source of surface/ground water level, site (GPS), cation, anion (Ion Chromatograph), metal trace element (as above) chemical analysis for water to be used. If surface water is used from river, rainfall, discharge rate, quantity, drainage and distance from project site should also be included. Information regarding surface hydrology and water regime should be included.
  42. Ground water analysis with bore well data, litho-logs, drawdown and recovery tests to quantify the area and volume of aquifer and its management.
  43. Ground water modeling showing the pathways of the pollutants should be included
  44. Column leachate study for all types of stockpiles or waste disposal sites at 20°C-50°C should be conducted and included.
  45. Action plan for rainwater harvesting measures at plant site should be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources. Rain water harvesting and groundwater recharge structures may also be constructed outside the plant premises in consultation with local Gram Panchayat and Village Heads to augment the ground water level. Incorporation of water harvesting plan for the project is necessary, if source of water is bore well.
  46. Permission for the drawl of water from the State Irrigation Department or concerned authority and water balance data including quantity of effluent generated, recycled

- and reused and discharged is to be provided. Methods adopted/to be adopted for the water conservation should be included.
47. A note on the impact of drawl of water on the nearby River during lean season.
  48. Surface water quality of nearby River (60 m upstream and downstream) and other surface drains at eight locations must be ascertained.
  49. If the site is within 10 km radius of any major river, Flood Hazard Zonation Mapping is required at 1:5000 to 1:10,000 scale indicating the peak and lean River discharge as well as flood occurrence frequency.
  50. A note on treatment of wastewater from different plants, recycle and reuse for different purposes should be included.
  51. Provision of traps and treatment plants are to be made, if water is getting mixed with oil, grease and cleaning agents.
  52. If the water is mixed with solid particulates, proposal for sediment pond before further transport should be included. The sediment pond capacity should be 100 times the transport capacity.
  53. Wastewater characteristics (heavy metals, anions and cations, trace metals, PAH) from any other source should be included.
  54. The pathways for pollution via seepages, evaporation, residual remains are to be studied for surface water (drainage, rivers, ponds, and lakes), sub-surface and ground water with a monitoring and management plans.
  55. Ground water monitoring minimum at 8 locations and near solid waste dump zone, Geological features and Geo-hydrological status of the study area are essential as also. Ecological status (Terrestrial and Aquatic) is vital.
  56. Action plan for solid/hazardous waste generation, storage, utilization and disposal particularly slag from all the sources, char and fly ash. Copies of MOU regarding utilization of ash should also be included.
  57. Details of evacuation of ash, details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. need to be addressed.
  58. A note on the treatment, storage and disposal of all type of slag should be included. Identification and details of land to be used for SMS slag disposal should be included. Details of secured land fill as per CPCB guidelines should also be included.
  59. End use of solid waste and its composition should be covered. Toxic metal content in the waste material and its composition should also be incorporated particularly of slag.
  60. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
  61. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. should be included. The green belt should be around the project boundary and a scheme for greening of the travelling roads should also be incorporated. All rooftops/terraces should have some green cover.
  62. Detailed description of the flora and fauna (terrestrial and aquatic) should be given with special reference to rare, endemic and endangered species.
  63. Disaster Management Plan including risk assessment and damage control needs to be addressed and included.
  64. Occupational health:
    - a) Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
    - b) Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular

- defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
- c) Annual report of health status of workers with special reference to **Occupational Health and Safety**.
  - d) Plan and fund allocation to ensure the occupational health & safety of all contracts and sub-contract workers.
  - e) Action plan for the implementation of OHS standards as per OSHAS/USEPA.
65. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
  66. Impact of the project on local infrastructure of the area such as road network and whether any additional infrastructure needs to be constructed and the agency responsible for the same with time frame.
  67. Environment Management Plan (EMP) to mitigate the adverse impacts due to the project along with item wise cost of its implementation. Total capital cost and recurring cost/annum for environmental pollution control measures should be included.
  68. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines must be prepared.
  69. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on public hearing issues and item-wise details along with time bound action plan should be included. Socio-economic development activities need to be elaborated upon.
  70. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart.
  71. A note on identification and implementation of Carbon Credit project should be included.
  72. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof should also be included.

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

5.4.26. Single Super Phosphate, Sulphuric Acid Plant and Power plant at Village Kansaripatia, District Jagatsinghpur, Odisha by **M/s Three Seasons Fertilizers Pvt. Ltd.- regarding TORs.**

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

5.4.27. FSRU based LNG Terminal at Deep Water Port, Kakinada, East-Godavari District, Andhra Pradesh by **M/s APGDC Ltd. - regarding TORs.**

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

### 5.5.0 Reconsideration

#### 5.5.1 Expansion of Gas field Development in Tengakhat-Naharkatia-Jorajan area, Tinsukia-Dhola area and Dumduma-Pengeri area, Assam by **M/s Oil India Ltd. (TOR to EC)**.

Project proposal was considered in the 34<sup>th</sup> *Expert Appraisal Committee (Industry-2) meeting held during 13<sup>th</sup>-14<sup>th</sup> April, 2012 and the Committee desired following information:*

1. VOC and hydrocarbon to be rechecked in ambient air. One month fresh monitoring data in respect of PM<sub>10</sub>, PM<sub>2.5</sub>, VOC and hydrocarbon should be submitted.
2. Confirmation of any facilities including laying of pipeline through forest land.
3. Risk assessment scenario should include the possibility of failure of separator engulf by pool fire resulting to explosion thereof, consequence, safety features and remedial measures.
4. Approved HSE policy of the company and implications of the policy in operation.
5. Corrosion protection system for the pipelines and facilities and monitoring mechanism for checking its effectiveness.

Project proponent vide letter dated 7<sup>th</sup> January, 2013 submitted the above mentioned additional information.

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

- i. Prior clearance under the Wildlife (Protection) Act, 1972, should be obtained from the Standing Committee of the National Board for Wildlife as the project is locted within 10 Km distance of Eco-sensitive areas (Dehing Patkai WLS, Bherjan-Borajan-Podumoni WLS and Dibru-Saikhowa National Park).
- ii. As proposed, no facilities shall be developed in forest land.
- iii. Adequate buffer zone around the oil and gas facilities, as may be required as per OISD or other statutory requirements.
- iv. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The stack height shall be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.
- v. Regular ambient air quality monitoring of PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOCs and HC (Methane and Non-methane) should be monitored and displayed at a convenient location near the main gate of the company and at important public places. The location and results of existing monitoring stations should be reviewed in consultation with the concerned State Pollution Control Board based on the occurrence of maximum ground level concentration and downwind direction of wind. If required, additional stations should be set up. It will be ensured that at least one monitoring station is set up in up-wind & in down-wind direction along with those in other directions.

- vi. Regular monitoring of VOC and HC in the work zone area in the plant premises should be carried and data be submitted to Ministry's Regional Office at Shillong, CPCB and Assam Pollution Control Board.
- vii. Vapor recovery system shall be installed to prevent leakage of vapor from tank/ vessels/processing and filling areas to ensure no hydrocarbon vapors are released unchecked.
- viii. Total fresh water requirement from ground water source shall not exceed 18 m<sup>3</sup>/day per GCS, 17 m<sup>3</sup>/day per FGS around and 15 m<sup>3</sup>/day per CGGS & OTP and prior permission should be obtained from the concerned Authority.
- ix. The company shall construct the garland drain all around the project 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 streams. During rainy season, the storm water drains should be connected to oil water separator and passed through guard pond. Water quality monitoring of guard pond should be conducted.
- x. Wastewater separated during processing in GCSs/FGSs/CGGS shall be treated in efficient Effluent Treatment Plants and then routed to the nearby oil collecting station for injection in to underground structures at depth between 1000m to 1500 m. Water quality of treated effluent shall conform to CPCB standards. No effluent shall be discharged outside the premises.
- xi. Oil Industry Safety Directorate guidelines regarding safety against fire, spillage, pollution control etc. should be followed. Company should ensure no oil spillage occur during loading / unloading of petroleum products.
- xii. The project authorities should strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules 1989, as amended in 2000 and the Public Liability Insurance Act for handling of hazardous chemicals etc. All the hazardous waste should be properly treated and disposed of in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2008.
- xiii. Necessary approvals from Chief Controller of Explosives must be obtained before commission of project. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented.
- xiv. The company should obtain all requisite clearances for fire safety and explosives and should comply with the stipulation made by the respective authorities.
- xv. All storage tanks should be provided with design features based on applicable OISD standards.
- xvi. No change in the storage capacity and other facilities should be made without getting proper approval from the Ministry.



- xvii. Fully automated tank farm management system (TFMS) will be provided for accounting of products & reconciliation.
- xviii. Emergency Response Plan should be based on the guidelines prepared by OISD, DGMS and Govt. of India. Mock drill should be conducted once in a month.
- xix. Bottom oil sludge should be handled, stored and disposed as per CPCB/ MoEF guidelines. An action plan in this regard including bioremediation should be submitted to the Ministry and its Regional Office at Shillong within 3 months of issue of the letter.
- xx. Occupational health surveillance of worker should be done on a regular basis and records maintained as per the Factory Act.
- xxi. Green belt should be developed in 33% of the plot area to mitigate the effect of fugitive emission all around the plant in consultation with DFO as per CPCB guidelines. Thick green belt around POL depot should be ensured.
- xxii. All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 23<sup>rd</sup> August, 2011, 25<sup>th</sup> August, 2011 and 26<sup>th</sup> August, 2011 for Duliajan, Lahoal in District Dibrugarh and Tinsukia in District Dibrugarh shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- xxiii. At least 5 % of the total cost of the project shall be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xxiv. Company shall 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 shall 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 shall be available at the project site office.

### **5.6.0 Any Other Item**

#### **5.6.1 Exploratory Drilling and Testing of Hydrocarbon at North Cachar, Assam by M/s Oil India Ltd. (Extension of validity of TOR).**

Terms of Reference to the above proposal was accorded by MoEF vide letter no. J-11011/342/2010-IA II (I) dated 29.10.2010. The Project Proponent (PP) vide letter dated 2708.2012 requested MoEF for extension of validity of ToR. The PP also made a presentation before the Committee.

It was submitted by the proponent that EIA studies got delayed due to identification of drilling location of wells and logistic difficulty.

After detailed deliberations, the committee recommended for the extension of validity of TOR by a period of one year w.e.f from 29.10.2012 subject to the specific and general environmental conditions.

#### 5.6.2 Proposed laying of 330 Km long Hydrocarbon pipeline system from Paradip to Haldia by **M/s Indian Oil Corporation Ltd. Amendment in EC**

M/s Indian Oil Corporation Ltd has proposed to augment the capacity of "Paradip - Haldia-Barauni Pipeline System" from 11.0 MMTPA to 15.2 MMTPA. IndianOil had earlier laid 18" OD, 498 Kms long, 4.2 MMTPA capacity cross-country pipeline from Haldia to Barauni for transportation of crude oil for its refinery located at Barauni. Later, capacity of Haldia -Barauni pipeline was augmented to 7.5 MMTPA with addition of pumping units at existing Haldia & Bolpur pump stations and by laying of loop-lines in parallel to the mainline. This was done to meet the requirement of additional quantum of crude oil for Bongaigaon Refinery beside the Barauni Refinery, utilizing the existing pipeline of M/s Oil India Ltd for transportation of crude oil from Barauni to Bongaigaon. Subsequently, a 30" OD, 328 Kms long crude oil pipeline was also laid from Paradip to Haldia with transportation capacity of 11.0 MMTPA and connected to the Haldia -Barauni crude oil Pipeline to feed three refineries located at Haldia, Barauni and Bongaigaon. The pipeline system has thus jointly been named as **Paradip - Haldia Barauni Pipeline (PHBPL) system** to handle crude oil received through tankers at Paradip and Haldia ports. Following environmental clearances have been accorded by the MoEF:

- i. *EC for 'Laying of 330 Km long hydrocarbon pipeline system from Paradip to Haldia' was obtained vide letter J-11011/159/2003- IA II (I) dated 11.6.2004.*
- ii. *EC for 'Augmentation of Haldia-Barauni crude oil pipeline' was accorded vide letter No. J-11011/34/99- IA II dated 14.3.2000.*
- iii. *EC for 'New crude oil pipeline from Haldia to Barauni for 4.2 MMTPA capacity was accorded vide letter No. J-11011/18/94- IA II dated 2.12.1994.*

The Committee noted that the project does not require acquisition of any land and thus no rehabilitation and resettlement is involved. The proposed looplines shall not be passing through any national parks/sanctuaries/coral reefs/ecologically sensitive areas. We accordingly understand that EC from MoE&F, Gol is not required for the subject augmentation project as per the provisions of EIA notification dated 14<sup>th</sup> Sept'2006. However, as per general condition at S.N. (ii) of the existing environment clearance, prior approval of the MoEF is required for any change in the pipeline route, design capacity.

The scheme for augmentation of PHBPL would broadly involve the following:

- **Paradip-Haldia section**

- Installation of 2 motor-driven pumping units (MLPUs) at Paradip and replacement of existing pumps (3 Nos.) with higher capacity pumps alongwith installation of 2 additional booster pumping units.
- Installation of 5 tanks of 60,000 kl capacity each adjacent to the existing tank-farm at Paradip.
- Conversion of existing scraper station at Balasore to an intermediate pump station having 3 motor driven pumping units.

- **Haldia-Barauni section**

- Laying of about 64 km loop line in the existing Right-of-Way to extend the existing loop-lines laid in between Haldia to Bolpur and Bolpur to Barauni sections, upto their respective terminal stations at Bolpur and Barauni .
- Installation of one engine driven MLPU at Haldia and replacement of existing mainline pumps (4 Nos.) with higher capacity pumps alongwith installation of 2 new booster pumping units.
- Installation of two engines driven MLPUs at Bolpur and replacement of existing mainline pumps (4 Nos.) with higher capacity pumps.
- Installation of one crude oil tank of 40,000 KI capacity to act as line-balancing tank at existing tank-farm of Barauni refinery.

It is also noted that project proponent has separately applied for clearance for construction of crude oil storage tanks & allied facilities at Paradip. The Committee noted that following EMP will be implemented for augmentation of PHBPL:

- Maximum allowable operating pressure of the existing PHBPL system shall remain unchanged @ 72% SMYS of the pipe material.
- All the safety factors like wind load, seismic factor, soil bearing capacity etc. shall be taken into account while designing the facilities.
- Existing facility of fire detection & alarm system, provision of hydro-carbon detectors, CO<sub>2</sub> extinguishing system and foam flooding system shall be suitably extended in the premises for the proposed additional tanks.
- Up-gradation of Leak Detection System, modification of Programmable Logic Controls & SCADA system shall be suitably done.
- Fire fighting facilities including water storage facility shall be meeting the requirement of revised OISD 117 guidelines.
- All construction activities shall be undertaken in adherence to the recommendations of OISD standards and following other national & international codes of practices.
- No chemical or physical processing is involved during the handling of crude oil.
- A provision of Rs.2 Crores has been kept towards community development programme under Corporate Social Responsibility during construction phase of the project.

After detailed deliberations, the Committee recommended the amendment in the above EC to augment the capacity of “Paradip - Haldia-Barauni Pipeline System” from 11.0 MMTPA to 15.2 MMTPA subject to implementation specific conditions and general conditions. However, other statutory clearances under the Wildlife (Protection) Act, 1972, Air and Water Act, CRZ Notification, Forest Conservation Act as may be required in this case shall be obtained. All the necessary safety precautions should be adopted during laying of the pipeline.

### 5.6.3 Distillery (60 KLPD) and 19.5 MW CO-gen Power Plant at Village Chadchan, District Bijapur, Karnataka by **M/s India sugar Manufacturing Co. Ltd. - regarding amendment in EC Condition.**

Environment clearance was accorded vide MoEF's letter no. J-11011/673/2008 –IA II (I) dated 11<sup>th</sup> September, 2009 for the setting up of molasses based distillery (60 KLPD) and

Cogeneration power plant (19.5 MW) with following specific condition for spent wash treatment:

- i. The spent wash generated after bio-methanation shall be concentrated in the multiple effect evaporator. The concentrate spent wash shall be bio-composted with press mud to achieve zero discharge.

Now, project proponent vide their letter dated 8<sup>th</sup> September, 2012 has requested for following amendment in the spent wash treatment :

- i. Spent wash will be evaporated in the MEE and the evaporated/concentrated spent wash will be incinerated in the dedicated boiler.
- ii. Condensate from the MEE will be treated in UASB followed by Ultra filtration.

After detailed deliberations, the Committee recommended the proposal for amendment in the spent wash treatment process. The Committee suggested that spent wash effluent shall not be used for ferti-irrigation.

**5.6.4 Expansion of Fertilizer Unit by Installing Production Stream of Ammonia (2200 MTPD) and Urea (3500 MTPD) at Thal Fertilizer Complex, District Raigad, Maharashtra by M/s Rashtriya Chemicals & Fertilizers Ltd- Amendment in Environmental Clearance reg.**

Environment clearance was accorded vide MoEF's letter no. J-11011/1291/2007 –IA II (I) dated 10<sup>th</sup> September, 2012 for the expansion of Fertilizer Unit by Installing Production Stream of Ammonia (2200 MTPD) and Urea (3500 MTPD) at Thal Fertilizer Complex.

Now, project proponent has proposed to change the capacity of Urea Plant to 3850 MTPD in place of earlier 3500 MTPD in line with new investment policy declared by GOI on 03.01.2013. The capacity of ammonia plant remains unchanged at 2200 MTPD. Earlier it was proposed to convert only 2000 MTPD of ammonia to urea leaving 200 MTPD for other use. However, now it is proposed to convert entire 2200 MTPD to Urea. Following are the change in configuration of the plant :

S. N.	Plant	EC obtained for Thal-III	Change in Configuration of the plant
1	Ammonia	2200 MTPD	2200 MTPD
2	Urea	3500 MTPD	3850 MTPD
3	Power Generation	1x18 MW GT+ 1x 12 MW TG set	1x18 MW GT+ 1x 12 MW TG set
4	DG set	2x1000 KVA	2x1600 KVA

The Committee considered the proposal and exempted from EIA report preparation/public hearing as per para 7 (ii) of EIA Notification, 2006 due to following reasons:

- a). There is no additional land requirement.
- b). No change envisaged in the generation of solid waste such as spent catalyst, spent resins, activated carbon, metal scrap.
- c). There is slight change in the emission (from 0.48 Kg/MT to 0.49 Kg/MT) of Urea dust in Urea prilling tower. However, urea dust concentration level will be 47 mg/Nm<sup>3</sup>, which is well within the norms.
- d). There is no change in water consumption quantity. There is reduction of 0.95 m<sup>3</sup> of water per MT of urea after implementation of the proposed project.
- e). There is no change in wastewater generation.

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

**5.6.5 Distillery (Grain based, 60 KLPD, ENA), CPP (2 MW) and Fish Feed Plant (144 TPD) at Sy. No. 37, Village Thummalapalli, Tehsil Nandivada, District Krishna, Andhra Pradesh by M/s HRUDAI Bio Tech Pvt. Ltd. – Amendment in Environmental Clearance reg.**

Environment clearance was accorded vide MoEF's letter no. J-11011/504/2010 –IA II (I) dated 14<sup>th</sup> January, 2013 for setting up of Distillery (Grain based, 60 KLPD, ENA), CPP (2 MW) and Fish Feed Plant (144 TPD).

Now, project proponent vide letter dated 21<sup>st</sup> January, 2013 has requested for following amendment:

- i. Cogeneration should be mentioned as captive.
- ii. Anaerobic treatment followed by aeration and tertiary treatment should be mentioned as ETP without methane recovery system.
- iii. Water requirement should be 690 m<sup>3</sup>/day instead of 660 m<sup>3</sup>/day.

Further, project proponent clarified that major effluent generated from grain based distillery is spent wash which is treated and converted to DDGS by decantation followed by MEE and drying. There is no change in the spent wash treatment process. The other effluent generated from various source like spentlees from distillation, process condensate from evaporation, blow down & equipments washing. Now, it is proposed to treat other effluent in ETP comprising equalization, neutralization, extended aeration, secondary clarification, chlorination, sand filtration, activated carbon filter.

After detailed deliberations, the Committee recommended for the following amendment in the EC:

Para 3.0; 4 and 7.0;A;vii;3 :

**For :**

“*Cogeneration*”

**Read:**

“Captive”

Para 1;3; 8 and 7.0;A;ix;4 :

**For :**

“Anaerobic treatment followed by aeration and tertiary treatment”

**Read:**

“ETP based on extended aeration and tertiary treatment”

.....**XXXX**.....

**LIST OF PARTICIPANTS**

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