MINUTES OF 1st RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY) MEETING HELD DURING 24th -25th SEPTEMBER, 2012

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

TIME 10.00 A.M.

1.0 Opening Remarks of the Chairman

At the outset, Chairman welcomed the members of the Expert Appraisal Committee (Industry). He mentioned that he looks forward to utilize the experience of the menbers of the multidisciplinary Expert Appraisal Committee in the delibrations of appraising the projects for environmental clearance. The members introduced themselves. After introduction, the Member Secretary gave brief introduction of the EIA Notification, 2006 and procedure to be followed for appraisal of the 'A' category projects requiring environmental clearance from the Ministry of Environment and Forests. Shri R K Garg is nominated as Vice Chairman of the Committee. Thereafter, agenda items were taken up for discussion. The delibrations held and decisions taken are as under.

24th September, 2012

1.1.0 Consideration of the Projects:

1.1.1. **Molasses based Distillery (60 KLPD), Expansion of Sugar (from 2500 TCD to 5000 TCD), CPP (30MW +2MW) at Villages Kuppatgiri, Doddhasur, Baloga and Mansapur, Tehsil Khanpur, District Belgaum, Karnataka by M/s Laila sugars (P) Ltd. (TOR)**

The project authorities and their consultant (Team Labs, Hyderabad; S.No. 25) 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 molasses based distillery are listed at S.N. 5(g) under Category 'A' and appraised at the Central level.

M/s Laila Sugars (P) Ltd. have proposed for setting up of Molasses based Distillery (60 KLPD) unit, Sugar (from 2500 TCD to 5000 TCD), CPP (30MW +2MW)at villages Kuppatgiri, Doddhasur, Baloga and Mansapur, Tehsil Khanpur, District Belgaum, Karnataka. No forest land is involved. No court case is pending against the project proposed. Total plant area is 98.26 acres. River Molaprabha is flowing at 1.5 Km distance. Bhimgad wildlife sanctuary is located at 12.5 Km distance. Bhimgad open forest is located at 8.5 Km distance. Cost of project is Rs. 220 crores.

CPP capacity is revised from (24 MW + 2 MW) to (30 MW to 2 MW). Distillery capacity has been revised from 30 KLPD to 60 KLPD. ESP will be provided to boiler (130 TPH) and wet scrubber will be provided to boiler (20 TPH) to control particulate emissions. Fresh water requirement is 3894 m3/day. Effluent from sugar unit will be treated in anaerobic biological plant. Effluent from co-generation unit from utilities will be treated and reused for onland irrigation. Spent wash will be sent to evaporator. The part of condensate from evaporator will be reused and concentrated and will be sent for incineration in boiler.

Bagasse will be used as fuel for the boiler. Press mud will be sold to farmers. Yeast sludge will be sold to farmers as manure. Used oil /batteries will be sent to authorized recyclers Ash from boiler will be sold to brick manufacturing and cement units. Bagasse / coal /concentrated spent wash will be used as fuel. Greenbelt will be developed in 33 acres of the plant area. DG Sets (2x375 KVA + 1x500 KVA+1x1000KVA) will be installed for emergency load shut down.

After deliberations, the Committee prescribed the following TORs for the preparation of draft EIA/EMP subject to submission of revised form1 for the revised capacity of distillery unit and CPP:

1. Executive summary of the project.
2. Compliance of environmental conditions prescribed by the SPCB for the existing sugar unit
3. Detailed breakup of the land area along with latest photograph of the area.
4. Present land use based on satellite imagery.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. Information regarding eco-sensitive area such as national park / wildlife sanctuary / biosphere reserves within 10 km radius of project area.
7. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
8. List of existing distillery units in the study area alongwith their capacity.
9. Number of working days of the proposed sugar unit, distillery unit and CPP.
10. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
11. Manufacturing process details of sugar plant, distillery plant and CPP alongwith process flow chart.
12. Details of raw materials and source of raw material sugarcane, molasses, bagasse etc.
13. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO_2 emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
14. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for $PM_{10,}$ $PM_{2.5}$, SO_2 and NO_X as per GSR 826(E) dated 16th November, 2009.
15. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, NO_X and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
16. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
17. An action plan to control and monitor secondary fugitive emissions from all the sources.
18. Details of boiler and its capacity. Details of the use of steam from the boiler.
19. Ground water quality around existing /proposed spent wash storage lagoon and the project area.
20. Details of water requirement, water balance chart for Sugar Plant (5000 TCD), Molasses based Distillery (60 KLPD), Co-generation plant (30 + 2 MW). Measures for conservation water by recycling and reuse to minimize the fresh water requirement.

21. Water requirement should not exceed 12 Kl/Kl of alcohol for distillery including cogeneration unit and prior 'permission' for the drawl of total fresh water. Details of source of water supply.
22. Hydro-geological study of the area for availability of ground water.
23. Spentwash generation from molasses based should not exceed 8Kl/Kl of alcohol production.
24. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees), 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. Land available for bio-composting. Details of lining to be provided in the compost yard.
28. Green belt development as per the CPCB guidelines.
29. List of flora and fauna in the study area.
30. Noise levels monitoring at five locations within the study area.
31. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
32. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
33. Details of bagasse storage. Details of press mud requirement.
34. 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 and its fire fighting facility as per norms.
36. 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.
37. 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.

38. Details of socio-economic welfare activities to be provided.
39. 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.
40. Action plan for post-project environmental monitoring.

Corporate Environmental Responsibility

41. (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.

42. 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.
43. Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
44. Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof.
45. Public hearing issues raised and commitments made by the project proponent on the same should be included separately in EIA/EMP Report in the form of tabular chart with financial budget for complying with the commitments made.
46. A tabular chart with index for point-wise compliance of above TORs.

The following general points should be noted:

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

1.1.2. Environmental Clearance for proposed Integrated Steel plant(1.0 MTPA capacity)with 200 MW captive power plant at Village-Paraghat and Beltukri, Tehsil-Masturi, District-Bilaspur in Chhattisgarh by **M/s Rashi Strips Pvt. Ltd. (TOR to EC).**

The committee noted that the coal linkage is not available which is required for the Steel Plant. The information regarding water requirement, solid waste management etc. is incomplete. The Committee noted that proposal is premature and is deferred for consideration after submission of the revised complete EIA/EMP report and coal linkage documents etc.

1.1.3. Leather Processing Unit (Wet blue to finish) at Plot No-2345, 2344, 2342, 2319, 2320, 2321, 2322, M.I.E Part (B), Bahadurgarh Jhajjar, Haryana by **M/s Unique Enterprises (TOR to EC).**

The project authorities and their consultant, M/s Perfact Enviro Solutions Pvt. Ltd. Delhi gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 10th Meeting of the Expert Appraisal Committee (Industry-1) held during 17th & 18th May, 2010 for preparation of EIA/EMP. Leather/skin/hide processing industry is listed at Item 4(f) of the schedule of EIA Notification, 2006 and categorized as A or B depending on the location of the unit in notified industrial area. The project site is located at a distance of 0.25 km from the interstate boundary of Delhi and attracts the General Condition.

M/s Unique Enterprises have proposed for Leather Processing Unit (Wet Blue to Finish) at Plot No. Plot No. 2345, 2344, 2342, 2319, 2320, 2321, 2322, M.I.E Part (B), Bahadurgarh, Jhajjar, Haryana. Total project area is 1,598.675 m^2 and Green belt will be developed in 239.80 m^2 which is 15 % of the total area. There are no National Parks/Wildlife Sanctuaries within 10 km of the project site. Sultanpur Reserve Forest is located at 10.5 km and Hasanpur Village & Baba Haridas Nagar are at 1.5 km distance. Total cost of the project is Rs. 82.00 lakhs and Rs. 15.7 lakhs & Rs. 5.8 lakhs will be used towards capital cost and recurring cost per annum for pollution control measures. It was confirmed that, no court case/ litigation is pending against the project.

The capacity of the unit will be 1,000 skins/day based on wet blue to finished leather product. Sheep/Goat skin (wet blue – 1000 kg/d), fat liquor (120 kg/d), dye stuff (18 kg/d), Syntana (60 kg/d), pigments (20 kg/d) and dye solutions (5 kg/d) will be used as raw materials. The power requirement of 120 KVA will be met from the Haryana State Electricity Board. D.G. sets (2x75 KVA) will be installed. The manufacturing process will involve sun drying of wet blue skin (preprocessed skins of goat and sheep) to evaporate water content (seeming), trimming to remove long shanks and other unwanted areas (shaving), dyeing and heating through thermic fluid boiler, softening of the skin by seeming and straitening, drying by air and hooking. Dry milling of the skin will be done by putting the skin in a rotating drum with rubber balls. Heating of the skin will be done on toggling board with the help of toggling clips. Finishing of skin will be done in auto spray machine. Dry milling, shaving and toggling will be repeated to convert wet blue to finished leather.

Ambient air quality monitoring was carried within the study area for PM_{10}, $PM_{2.5}$, SO_2 and NOx. The maximum values of these parameters are 168.1 µg/m^3, 71 µg/m^3, 17.3 µg/m^3 and 39.8 µg/m^3 respectively. The concentrations of PM_{10} and $PM_{2.5}$ are beyond the NAAQS. The maximum predicted incremental concentration of PM would be 1.29 µg/m^3 at the project site. Stack of 12 m height above ground level will be provided to Thermic Fluid Heater. Stack of 2 m height each above roof level will be provided to DG sets (2x75 KVA).

Total water requirement of 28.2 m^3/d will be met from the HUDA supply. The industrial wastewater of 24.0 m^3/d will be treated in an ETP and 3.3 m^3/d of treated wastewater will be reused and the rest will discharged to the nearby industrial drain. Domestic effluent will be treated in septic tank followed by soak pit. The committee recommended that, the treated wastewater shall not be disposed to Najafgarh drain and zero discharge shall be implemented. Municipal solid waste (3 kg/d) will be sent to municipal land fill site. ETP sludge (5 kg/d) and process sludge (1 kg/d) will be stored in HDPE bags and sent to approved hazardous waste

land fill site. Process waste (25 kg/d) will be given to secondary users. Acoustic enclosure will be provided to DG sets.

Public Hearing/Public Consultation was not required if a Gazette Notification for the Industrial Area is submitted. After the issuance of ToRs, the proponent submitted a copy of Gazette Notification and sought PH exemption. It was noted that the Notification was just Section 4 of the land acquisition Act with intention to acquire land and no decision was taken by MoEF in this regard. The EIA report was submitted without conducting PH. The land allotment documents from HUDA were submitted by the proponent. The Committee decided that, MoEF shall write to Director (Industries) of the State Govt. for clarification regarding Notified Industrial Area.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to submission of data on PM_{10}, $PM_{2.5}$ after monitoring the same for minimum one month. However, the proposal shall be placed before the Committee after having clarity on exemption of Public Hearing/Public Consultation.

1.1.4. Proposed Ferro Alloys manufacturing Unit (4x9 MVA Submerged Electric Arc Furnaces) at Sy. No.191 & 192, Sancham Village, Ranastalam Mandal, Srikakulam District, Andhra Pradesh by **M/s Refulgent Alloys N Steel Limited- (TOR to EC)- (TOR to EC).**

The project authorities and their consultant, M/s Sri Sai Manasa Nature Tech Pvt. Ltd., Hyderabad gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 19th Meeting of the Expert Appraisal Committee (Industry-1) held during 22nd & 23rd February, 2011 for preparation of EIA/EMP. All the Ferro Alloy Plants are listed at S.No. 3(a) in Primary Metallurgical Industries under category 'A' of the Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Refulgent Alloys N Steel Ltd. has initially proposed for Ferro Alloy manufacturing unit of 4 x 9 MVA Submerged Electric Arc Furnaces and 4 x 4 MVA Induction Furnaces at Village Sancham, Mandal Ranastalam, District Srikakulam, Andhra Pradesh. The proponent informed that the proposal for induction furnaces is dropped. The total project area is 11.42 acres, which has been acquired and green belt will be developed in 3.88 acres (33%) of plant area. There are no National Parks/Wildlife Sanctuaries/ Forests within 10 km of the project site. The Committee recommended that, the Nala passing nearby the project site should not be disturbed. Total cost of the project is Rs. 96 Crores and Rs. 6 Crores & Rs. 20 lakhs will be used towards capital cost and recurring cost per annum for pollution control measures. It was confirmed that, no court case/ litigation is pending against the project.

The manufacturing process will involve preparation of raw material, electric smelting, casting and finishing. Fe-Mn – 77,890 TPA/Si-Mn – 57,400 TPA/ Fe-Si – 27,264 TPA will be manufactured. No ferro chrome will be manufactured. Manganese Ore, Coal, Coke, Quartz, Magnesite and Electrode Paste are the raw materials that will be used, which are transported through covered trucks. Ambient air quality monitoring was carried out within the study area for PM_{10}, $PM_{2.5}$, SO_2 and NOx. The maximum values of these parameters are 44.5 µg/m^3, 26.5 µg/m^3, 8.5 µg/m^3 and 12.3 µg/m^3 respectively. The results of the modeling study indicates that the maximum increase of GLCs due to the proposed project are 3.19 µg/m^3, 8.03 µg/m^3 and 4.29 µg/m^3 for PM_{10}, SO_2 and NOx respectively. The resultant GLCs are within the NAAQS.

Fugitive dust will be controlled by water spraying, fully enclosing the transfer points, paving of roads, covering the conveyors etc. Water sprinkling would be done for dust suppression. Fume extraction and cleaning system with Pulse Jet Bag Filters will be provided for the SEAF along with a stack of 30 m height to control the PM levels below 50 mg/Nm^3. Total fresh water requirement is 34 m^3/day, will be sourced from ground water through bore wells. Approval of Ground Water Department, Govt. of A.P has been obtained. No process wastewater will be generated. Water used for cooling purpose will be recirculated. Domestic wastewater will be treated in septic tank followed by soak pit. Fe-Mn slag will be used in the manufacture of Si-Mn. Si-Mn slag, Fe-Si slag and dust from bag filters will be used in brick and cement manufacturing.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Andhra Pradesh Pollution Control Board on 10th February, 2012. The issues raised in the public hearing were regarding provision of pollution control measures, employment and training to locals, CSR activities etc. which were addressed in the EIA/EMP report.

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

- The representations received during Public Hearing along with their English translation
- Windrose data needs to be rechecked and resubmitted. AAQ data also needs to rechecked as values of $PM_{2.5}$, PM_{10}, SO_2 and NOx are reported to be low.
- Mn ore analysis in ppms/absolute values.
- Management plan for high levels of fluoride in the ground water and Deflouridation/fluoride management plan as part of CSR.
- The water requirement needs to be reworked.
- Management plan for CO in the flue gas genrating from the furnace.

1.1.5. Expansion of Sugar Factory (2,500-6,000 TCD) and Co-Generation Plant (15 MW to 31.5 MW) at Plot No. 588-590, 592 & 645, Village Bhandarkavathe, Tehsil South Solapur, District Solapur, Maharashtra by **M/s Lokmangal Sugar Ethanol & Co-Generation Industries Ltd. (TOR to EC).**

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 24th Meeting of the Expert Appraisal Committee (Industry) held during 22nd–23rd June, 2011 for preparation of EIA/EMP.

All the Sugar Industries are listed at S.N. 1(d) under Category 'B' and appraised at the state level. However, due to project being located within 10 Km from interstate border viz. (Karnataka), project is treated as category 'A' and appraised by the Expert Appraisal Committee (Industry) in the Ministry.

M/s Lokmangal Sugar Ethanol & Co-Generation Industries Ltd have proposed for the expansion of Sugar Factory (from 2,500TCD to 6,000 TCD) and Co-Generation Plant (15 MW to 31.5 MW) at Plot No.588-590, 592 & 645, Village Bhandarkavathe, Tehsil South Solapur, District Solapur, Maharashtra. Karnataka State boundary is at 7 km. Total plot area is 100 ha. 7 ha is earmarked for bagasse storage. Bhima River is at 4.18 km. No national park/wild life

sanctuary/ bio-sphere reserves are located within 10 Km. Environmental clearance for the existing sugar unit (2,500TCD) and Co-generation plant (15 MW) is accorded by the Ministry vide letter No.J-11011/1034/2007-IA.II(I) dated 10th December, 2008 and point-wise compliance report is submitted. Total cost of the project for expansion is Rs. 171.31 Crores. PAs confirmed that Rs. 2 Crores and Rs. 0.6 Crore are earmarked towards capital cost and recurring cost/annum for pollution control measures. Sugar unit will be operated for 200 days.

Cane will be used as raw materials. Cane will be subjected for extraction of juice in Milling System. Bagasse will be generated as by product and used in boiler as fuel. The juice will be heated and subjected to automatic liming and sulphitation process to keep pH of the juice as neutral. The sulphited juice will be heated and settled in clarifier. The supernetant will be taken for evaporation and will be concentrated upto 60°C and passed for crystallization in the vacuum pans to produce while sugar crystals. Heat energy in the boiler will be converted into the mechanical energy in the turbine and further into the electrical energy in the alternator.

Additionally, the proponent informed the Committee that ambient air quality monitoring was carried out at 10 locations during December, 2010 – February 2011 and submitted data indicates PM_{10} (21- 49ug/m^3), SO_2 (5.0-9.0 ug/m^3) and NO_x (12.00-27.00 ug/m^3). Incremental concentration due to proposed project was estimated to be SPM (18.78 ug/m^3).

Electrostatic precipitator alongwith stack height of 84 m will be provided to boiler (90 TPH). However, the Committee asked to install bag filter in the proposed expansion. Additional boiler with stack (84 m) will be installed. SO_2 generated in the process will be scrubbed**.**

Total water requirement after expansion from Bhima River will be 2978 m^3/day (1503 m^3/ day for existing and 1475 m^3/day for expansion). Industrial effluent generation will be increased from 455 m^3/day to 810 m^3/day. Industrial effluent will be treated in Effluent Treatment Plant comprising anaerobic digester followed by aeration. Domestic effluent (102 m^3/day) will be treated in STP. Existing ETP capacity is 710 m^3/day and can handle additional effluent load.

Fly ash (33.5 MTPD) generated will be provided to brick manufacturers and also used for composting/manure. Press mud is sold as manure. ETP sludge (650 kg/month), waste oil (2.60 MTPM) will be burnt with bagasse in boilers. Bagasse (1800 TPD) will be required for 31.5 MW CPP.

Out of 100 ha. of land, 35 ha. is earmarked for green belt development. Power requirement will be increased from 4.7 MW to 9.7 MW and sourced from own co-generation plant. Extra power will be transmitted to the grid. In off season, power requirement will be 3.3 MW. Bagasse (1670 MTPD) will be used as fuel. PAs confirmed that no coal will be used as fuel.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 3rd December, 2011. The issues raised during public hearing were supply of treated effluent of sugar unit for cultivation, selection of ESP and bagfilter, boiler fuel, TDS level in ground water, etc. 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. Recheck data on ambient air quality in respect of PM_{10}, SO_2, NOx for one month.

2. A certified copy of compliance check of existing environmental clearance by the Regional Office at Bhopal.

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

1.1.6. Calcined Petroleum Coke Plant of 4,60,000 tonnes per annum capacity along with process waste heat recovery based Power Plant of 25 MW at Sy No. 335, 323 (P), 334(P) and 336(P), Village Chatametta, Mandal Rambilli, District Visakhapatnam, Andhra Pradesh by **M/s Sanvira Industries Limited (TOR to EC)**

The project authorities and their consultant, M/s BS Envi Tech Pvt. Limited Ltd., Hyderabad gave a detailed presentation on the salient features of project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 33rd Meeting of the Expert Appraisal Committee (Industry-1) held during 27th & 28th February, 2012 for preparation of EIA/EMP report. The project activity is listed at Item 4(b) in Category A of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s. Sanvira Industries limited have proposed for Calcined Petroleum Coke (CPC) Plant with a capacity of 4,60,000 TPA along with Waste Heat Recovery Power plant of 25 MW at Sy No. 335, 323 (P), 334(P) and 336(P), Village Chatametta, Mandal Rambilli, District Visakhapatnam in Andhra Pradesh. Total project area is 14.35 Ha which is non forest & barren land and is acquired by the proponent. No R&R is involved. There are no National Parks/Wildlife Sanctuaries within 10 km of the project site. Nearest forest is Pudimadaka Reserved Forest at 3 km. Gokivada, Panchadarla, Rambilli and Kalavapalli RFs are also located within 10 km. Sharada River flows at a distance of 8.3 km from the project site. The total project cost is Rs. 334 Crores. It was confirmed that there is no litigation/court case pending against the project.

The major raw material for the unit is Green Petroleum Coke (0.575 MTPA) which is imported from Refineries producing Anode grade Green Coke like KPC's Mina Abdullah Refinery, Sinopec Refineries in China, Exxon Mobil's Baton Rouge Refinery in the US, Conoco Philips Immingham Refinery in UK. The proposed calcination process is based on Shaft Kiln Technology. Green Petroleum Coke (GPC) is fed to Shaft kiln for calcining. Green coke in the shaft kiln is indirectly heated up to around 1250 ^{0}C by high temperature. Calcination will remove moisture and volatiles efficiently, improve real density, electrical conductivity and mechanical strength. Volatiles evolved are introduced to the flue for complete combustion with the preheated air without any external fuel. CPC from shaft kiln is indirectly cooled in chute with water jacket and is discharged at regular intervals. CPC is dispatched from the plant in bulk.

Flue gases from calcination will be passed through the Heat Recovery Boilers (HRBs) for 25 MW power generation, thus no fuel is required for calcination and power generation. Closed conveyors will be used for material handling and storage will be of closed type. All material handling points and transfer points will have bag filters. The emissions from all the pollution control equipment i.e. bag filters are restricted to less than 50 mg/nm^3. Individual stack of 75 m height will be connected to each of the three lines. Ambient air quality monitoring was carried out within the study area during December 2011 to February 2012 for PM_{10}, $PM_{2.5}$, SO_2 and NOx. The maximum values of these parameters are 69 µg/m^3, 38 µg/m^3, 10.6 µg/m^3 and 12.1 µg/m^3 respectively. The results of the modeling study indicates that the maximum increase of

GLCs due to the proposed project are 0.41 µg/m^3, 0.16 µg/m^3, 22.59 µg/m^3 and 4.38 µg/m^3 for PM_{10}, $PM_{2.5}$, SO_2 and NOx respectively. The resultant GLCs are within the NAAQS.

The total water requirement of 1,180 m^3/d and will be sourced from APIIC water supply. There would be no generation of wastewater from the calcining process. 112 m^3/d of wastewater (cooling tower blow down etc.) will be generated, will be used for green belt development, dust suppression and for floor wash. Domestic wastewater (7.6 m^3/d) will be sent to septic tank followed by soak pit. Zero discharge will be adopted. There will be no solid waste generation from the plant.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Andhra Pradesh Pollution Control Board on 6th June, 2012. The issues raised in the public hearing were regarding provision of pollution control measures, cumulative impacts due to the nearby industries, effect on fishermen community, R&R, green belt development, implementation of CSR activities etc. which were addressed in the EIA/EMP report.

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

i. Measures shall be taken to mitigate PM levels in the ambient air. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided.

ii. Stack monitoring facilities for all the major stacks and adequate air pollution control systems viz. dust extraction system, bag filters etc. to control particulate emissions within the prescribed limits shall be provided. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standards notified under Environment (Protection) Act, 1986 shall be followed. The reports shall be submitted to the Ministry's Regional Office at the Bangalore, CPCB and SPCB.

iii. Measures shall be taken to prevent leakages from the Calcined Petroleum Coke Plant.

iv. In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.

v. Secondary fugitive emissions shall be controlled within the prescribed limits, regularly monitored and records maintained. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.

vi. Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product. Efforts shall also be made to reduce impact of the transport of the raw materials and end products on the

surrounding environment including agricultural land. All the raw materials shall be transported in covered trucks only and shall not be overloaded. Vehicular emissions shall be regularly monitored and records kept.

vii. Total requirement of the water shall not exceed 1,180 m^3/day. Necessary permission from the concerned authotrity for water drawal shall be obtained. All the treated wastewater shall be recycled for dust suppression and green belt development. Domestic wastewater shall be treated in septic tank followed by soak pit. Zero effluent discharge shall be strictly followed and no wastewater shall be discharged outside the plant premises.

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

ix. Coke fines shall be recycled and reused in the process. The waste oil shall be properly disposed of as per the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008.

x. As proposed, green belt shall be developed in 33% of plant area within and around the project site to mitigate the impact of fugitive emissions as per the CPCB guidelines in consultation with local DFO.

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

xii. All the commitments made during the public during the Public Hearing / Public Consultation meeting held on 6th June, 2012 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bangalore.

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

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

1.2.0 Reconsideration

1.2.1. Organic Chemical Manufacturing Unit (65 MTPM) at C-1-214/3, Sarigam GIDC, District Valsad, Gujarat by **M/s Integrated Pesticides Pvt. Ltd. (TOR to EC).**

Project proposal was considered in the 23rd *Expert Appraisal Committee (Industry-2) meeting held during 30th -31st May, 2011 and the C*ommittee desired following information:

1. Prepare HAZOP analysis report.
2. Prepare piping & instrumentation (P&I) diagram for the whole project.
3. Details for transfer of Br_2 from ISO tank and details of process area.
4. System to ensure that no Br_2 vapour will be be emitted in the environment beyond permissible limit.
5. Containment system for Br_2 leak.
6. A copy of the Notification issued by the State Govt., if the unit is located in the notified industrial area

Project proponent vide letter no. SC/Integrated/2K12/01 dated 6th June, 2012 received in Ministry on 6th June, 2012 has submitted above additional information.

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

i) Water scrubber followed by alkali dipping tank to control process gas emission from manufacturing of Methyl Bromide. The scrubbed solution should be recovered as byproduct. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped.

ii) All necessary steps should be taken for monitoring of Br_2 in the proposed plant. Continuous monitoring system alongwith alarm arrangement should be provided at all the important places in the plant.

iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by GPCB.

iv) Total fresh water requirement from GIDC water supply shall not exceed 9.0 m^3/day and prior permission shall be obtained from the concerned Authorities.

v) Industrial effluent shall be treated in the ETP. Treated water shall be recycled/reused within the plant premises. No effluent shall be discharged outside the factory premises. Water quality of treated effluent shall be monitored regularly and monitoring report shall be submitted to the GPCB.

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

vii) Green belt shall be developed in 8.25 acres out of 25 acres.

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

ix) All Equipment and Hardware employed in "Transportation, Unloading, Storage and Distribution of Bromine in the Plant" shall be designed and constructed as per applicable relevant International Code of Practice for safety.

1.2.2. Conversion of Feed Stock from Naphtha to NG/RLNG in the Fertilizer Plant and Fuel from Furnace Oil to NG/RLNG in Steam Generating Boilers and Captive Power Plant and Enhancement in the production of Ammonia, Urea and Ammonium bicarbonate at Parambur, Mangalore, Dakshin Kannada, Karnataka by **M/s Mangalore Chemicals and Fertilizers Ltd. (TOR to EC).**

Project proposal was considered in the 33rd *Expert Appraisal Committee (Industry-2) meeting held during 21st – 22nd March,* 2012 *and the C*ommittee desired following information:

1. Recollect ambient air quality data for 1 month that include $P_{2.5}$, SO_2 and VOC. Also compare these data collected by the State Pollution Control Board.
2. Details of water balance chart indicating intake, loss and effluent generation for the existing and proposed expansion.
3. Details regarding existing wastewater generation (domestic & industrial) and its treatment scheme vis-à-vis with new proposal.
4. Risk assessment along with existing/proposed unit.

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

The Committee deliberated upon the compliance status report of the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Regional Office on 8th May, 2012. It was noted that the main products produced by MCF are ammonia, urea, ammonium bi-carbonate (ABC), Di-ammonium phosphate (DAP), sulphuric acid, speciality mixtures of plant nutrients and sulphonated naphthalene formaldehyde. The liquid effluent generated from ammonia, urea and water treatment plants. Urea hydrolyser stripper has been installed. Unit has also installed a effluent recovery unit. The DAP plant is provided with suitable designed cyclones, wet scrubbers, mist eliminator and ventury scrubbers. In the urea plant, Prilling tower with 49.14m height has been provided. Ammonia synthesis converter internals, purge gas recovery unit, Low NOx burner, ammonia stripper, high efficiency reator trays etc have neen provided in the plant to control air pollution. Compliance status of the conditions stipulated in the existing environmental clearance letters has been reported satisfactory.

After detailed deliberations, the Committee found additional information satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions:

i) All the conditions stipulated in environmental clearance No. J-11011/105/2007-IA (II) dated 18th July, 2007, No. J-11011/113/2009-IA (II) dated 3rd June, 2009 and SEIAA:8:IND:2009 dated 30th July, 2009 accorded for the existing projects shall be implemented.

ii) The gaseous emissions (SO_2, NOx, NH_3, HC and Urea dust) and particulate matter from various process units shall conform to the norms prescribed by the CPCB/SPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective units shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored regularly.

iii) Adequate stack height shall be provided to Ammonia plant reformer, NG/ RLNG fired gas turbine and Prilling Tower. Low NOx burners shall be provided to control NOx emissions.

iv) In Urea Plant, particulate emissions shall not exceed 50 mg/Nm^3. Monitoring of Prilling Tower shall be carried out as per CPCB guidelines.

v) Ambient air quality data shall be collected as per NAAQS standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th September, 2009. The levels of PM_{10} (Urea dust), SO_2, NOx, Ammonia, Ozone and HC shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the Karnataka State Pollution Control Board (KSPCB).

vi) In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions should conform to the limits stipulated by the KSPCB.

vii) As proposed, there is no additional water requirement due to NG conversion project. Water requirement from Mangalore City Corporation after NG conversion should not exceed 8448 m^3/day and prior permission shall be obtained from concerned Authority and a copy submitted to the Ministry's Regional Office at Bangalore.

viii) Industrial wastewater shall be treated in the ETP. As proposed, Urea plant process condensate shall be treated in a deep hydrolyser followed by stripping. Ammonia plant process condensate (APC) shall be stripped with steam followed by activated carbon and demineralization. Treated condensate shall be recycled/reused in the process. Utilities wastewater shall be treated in the ETP and treated effluent shall be recycled/ reused. Treated effluent shall also be monitored for the parameters namely ammonical nitrogen, Nitrate, Fluoride, pH etc. As proposed, no effluent shall be discharged outside the factory premises and zero discharge concept shall be adopted. Sewage shall be treated in STP and treated water shall be recycled/reused within factory premises to achieve zero discharge except rainy season.

ix) All the effluents after treatment shall be routed to a properly lined guard pond for equalization and final control. In the guard pond, automatic monitoring system for flow, and relevant pollutants (i.e. pH, ammonical nitrogen, nitrate nitrogen etc) shall be provided with high level alarm system.

x) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes. Measures shall be taken for fire fighting facilities in case of emergency.

xi) Spent catalysts and used oil shall be sold to authorized recyclers/re-processors only.

xii) The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).

xiii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the OISD 117 norms.

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

xv) Green belt shall be developed in 33 % of the plant area. Selection of plant species shall be as per the CPCB guidelines.

1.2.3. Modernization of existing 70 KLPD Molasses based Distillery to 70 KLPD Molasses, Grain/Juice (juice Slurry) based distillery and to use Grain, Cane Juice (Juice Slurry) as raw material to produce Rectified Spirit/ENA Spirit Ethanol at Village Hamjheri, Jakhal Road, Patron, District Patiala, Punjab by **M/s Piccadilly Sugar & Allied Industry Ltd. Amendment reg.**

Project proposal was considered in the 35th *Expert Appraisal Committee (Industry-2) meeting held during 11th – 12th May,* 2012 *and* committee decided that inspection may be carried out by the Ministry's Regional Office at Chandigarh regarding compliance status of the existing unit.

Northern Regional Office Chandigarh vide letter no. 5-56/2004-RO (NZ). Part.II dated 3rd July, 2012 submitted the inspection report. It is reported that pollution control equipments such as biomethanation plant and MEE have been commissioned.

After detailed deliberations, the Committee found inspection report satisfactory and recommended the proposal for amendment to the existing environmental clreance by adding alternate feed stock (Grain) in the existing Molasses Distillery unit keeping the production capacity of 70 KLPD with following specific conditions:

i) Distillery (70 KLPD) unit shall be based on Molasses / Grain only and production of the plant shall not exceed the maximum capacity defined i.e. shall never exceed 70 KLPD.

ii) Total fresh water requirement from ground water source for grain bsed distrillery shall not exceed 10 KL/KL of alcohol (i.e. 700 m^3/day).

iii) Spent wash generation grain based distillery shall not exceed 6 Kl/Kl of alcohol. Spent wash from grain based shall be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS to achieve zero discharge.

iv) DWGS shall be sold as cattle feed.

1.2.4. Grain based Distillery Unit (45 KLPD) and Captive Power Plant (1.2 MW) at Village Bhanglan, Tehsil Nalagarh, District Solan in Himachal Pradesh by **M/s Kala Amb Distillery and Breweries Pvt Ltd. (TOR to EC).**

Project proposal was considered in the 32nd *Expert Appraisal Committee (Industry-2) meeting held during* .16th -17th February, 2012 *and the C*ommittee desired following information:

1. Toposheet map of Survey of India indicating industries, village, water bodies, forests etc within 10 Km.
2. Google Map of 10 km from project site indicating indicating industries, village, water bodies, forests etc within 10 Km.
3. Recollect ambient air quality data for 1 month including methane and non methane hydrocarbon.
4. Market survey report for availability of grains.
5. A note on flyash disposal.

Project proponent vide letter dated 7th May, 2012 has submitted above mentioned additional information.

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

i. Distillery unit should be based on Grain based only and no Molasses based distillery unit should be operated without prior approval of the Ministry.

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

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

iv. Total fresh water requirement from ground water source should not exceed 8.9 KL/KL of alcohol (i.e. 400 m^3/day) for distillery and captive power plant (1.2 MW). Prior permission for drawl of water should be obtained from CGWA/SGWA.

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

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

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

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

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

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

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

xii. Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.

xiii. As proposed, ash will be transferred in the covered truck. Ash shall be transferred to the brick manufacturing. A tie-up should be made with brick manufacturer.

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

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

xvi. As proposed, thick green belt in 33 % will be developed all round the plant boundary to act as noise attenuator and plantation shall be done as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around the proposed distillery to mitigate the odour problem.

xvii. All the commitments made to the public during public hearing/public consultation meeting held on 23rd July, 2011 should be satisfactorily implemented and adequate budget provision should be made accordingly.

1.2.5. Agrochemical & Intermediates Manufacturing Plant (3650 TPA) at Plot No. K6-K10, UPSIDC, Tehsil Sandila, District Hardoi, Uttar Pradesh by **M/s India Pesticides Limited. (TOR to EC).**

Project proposal was considered in the 33rd *Expert Appraisal Committee (Industry-2) meeting held during 21st -22nd March,* 2012 *and the C*ommittee desired following information:

1. Total no. of products and quantity to be manufactured at a time.
2. Break up of project cost.
3. Wastewater segregation based on high COD effluent stream, high TDS effluent stream and low COD &TDS effluent stream. Based on segregation, its treatment scheme.
4. Note on the action plan or steps/measures taken for reclamation of 12000 Tonnes chemical spillage in the hazardous waste dump site of the existing unit at Lucknow.
5. Odour Control measures
6. Details of incineration following the CPCB guidelines alongwith pollution control measures.
7. Raw materials details.
8. Chlorine storage and handling.
9. Total hydrocarbon to be rechecked in ambient air. One month fresh monitoring data should be submitted.

Project proponent vide letter dated 27th June, 2012 submitted the above mentioned additional information. Project proponent informed that M/s Ramky is lifting and disposing the stabilized waste from Lucknow site of M/s India Pesticides Ltd. An action plan and pert chart for further remdiation of contamination soil hs been submitted.

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. State Pollution Control Board shall grant consent to operate after ensuring complete shifting of hazardous waste from Lucknow project site to secure landfill site.

ii. National Emission Standards for Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3rd February, 2006 and amended time to time shall be followed by the unit.

iii. Multicyclone followed by bagfilter alongwith adequate stack height shall be provided to rice husk fired boiler and thermic fluid heater to control particulate emissions.

iv. Two stage water scrubber followed by alkali scrubber shall be provided to process vent to control SO_2, HCl, HBr, H_2S and Cl_2 emissions. Two stage water scrubber shall be provided to process vent to control NH_3 emissions. P2O5 shall be controlled by water scrubber followed by demister. The scrubbed water should be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped.

v. In order to control odour, outlet of process vents should be connected to the incinerator.

vi. Incinerator should be designed as per CPCB guidelines. SO_2, NOx, HCl and CO emissions shall be monitored in the stack regularly.

vii. Chilled brine circulation system should be provided to condensate solvent vapors and reduce solvent losses. It should be ensured that solvent recovery should not be less than 95%.

viii. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits stipulated by GPCB.

ix. All necessary steps should be taken for monitoring of chlorine, HCl and HBr as well as VOCs in the proposed plant.

x. A proper Leak Detection and Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per the CPCB guidelines.

xi. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.

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

xiii. Total water requirement from ground water source should not exceed 135 m^3/day and prior permission should be obtained from the CGWA/SGWA.

xiv. As proposed, industrial effluent generation should not exceed 60 m^3/day. Effluent should be segregated into High COD, High TDS and low COD/TDS effluent streams. High COD effluent /mother liquor should be incinerated. High TDS effluent should be treated through stripper followed by MEE. Low COD/TDS effluent should be treated in ETP. Treated effluent shall be recycled/reused within the factory premises. Water quality of treated effluent shall be monitored regularly and monitoring report shall be submitted to the UPPCB.

xv. No effluent shall be discharged outside the premises and 'Zero' discharge concept shall be adopted.

xvi. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary movement) Rules, 2008 for management of hazardous wastes and prior permission from UPPCB should be obtained for disposal of solid / hazardous waste in the TSDF. The concerned company should undertake measures for fire fighting facilities in case of emergency.

xvii. As proposed, ETP sludge and incineration ash should be sent to TSDF site. High calorific value waste such as spent organic should be incinerated.

xviii. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

xix. The company should make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.

xx. Green belt should be developed at least in 33 % of the plant area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Selection of plant species should be as per the CPCB guidelines.

1.2.6. Bulk Drug Manufacturing Unit (21 MTPM) at Sy. No. 888 & 901, Village Jangam, Mandal Bhikunoor, District Nizamabad, Andhra Pradesh by M/s **Maa Laboratories Pvt. Ltd**. **(TOR to EC).**

Project proposal was considered in the 32nd E*xpert Appraisal Committee (Industry-2) meeting held during 16th – 17th February, 2011 and the C*ommittee desired following information:

1. Water balance should be rechecked and submit correct details.
2. Consequence analysis considering all the leakages during transportation, storage of toxic chemicals to be done by the expert in risk assessment.

Project proponent vide letter received in Ministry on 15th May, 2012 submitted above mentioned additional information.

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

i) Multi-cyclone followed by bag filter should be provided to the boiler to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/APPCB guidelines.

ii) The levels of PM_{10}, SO_2, NO_X, VOC, NH_3 and HCl should be monitored in ambient air.

iii) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution should be provided to process vents to control SO_2. Two stage scrubber with chilled water media should be provided to process vents to control NH_3. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.

iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by APPCB.

v) Total fresh water requirement from ground water source sho`uld not exceed 48.77 m^3/day and prior permission should be obtained for drawl of 48.77 m^3/day ground water from the CGWA/SGWA.

vi) Trade effluent should be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream should be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.

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

viii) As proposed, process organic residue and spent carbon should be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The ash from boiler should be sold to brick manufacturers/cement industry.

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

x) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.

xi) Solvent management should be as follows :

- Reactor should be connected to chilled brine condenser system
- Reactor and solvent handling pump should have mechanical seals to prevent leakages.
- The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
- Solvents should be stored in a separate space specified with all safety measures.
- Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
- Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

xiii) As proposed, green belt should be developed in 10,536 m^2 out of total 21,125 m^2.

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

xv) All the commitments made to the public during public hearing/public consultation meeting held on 9th June, 2011 should be satisfactorily implemented and adequate budget provision should be made accordingly.

1.2.7. Bulk Drugs (30.85 MTPM) Manufacturing Unit at Plot No. 27, Raichur Growth Centre Industrial Area, Village Chicksugur, District Raichur, Karnataka by **M/s Trimax Bio Sciences Pvt. Ltd. (TOR to EC).**

Project proposal was considered in the 32nd *Expert Appraisal Committee (Industry-2) meeting held during 16th – 17th February,* 2012 *and* Committee desired following information:

1. Water balance should be rechecked and submit correct details.
2. Consequence analysis considering all the leakages during transportation, storage of toxic chemicals to be done by the expert in risk assessment.

Project proponent vide letter received in Ministry on 29th August, 2012 has submitted above mentioned additional information.

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

i) Multi-cyclone followed by bag filter should be provided to the boilers to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/KSPCB guidelines.

ii) The levels of PM_{10}, SO_2, NO_X, VOC, NH_3 and HCl should be monitored in ambient air.

iii) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution should be provided to process vents to control SO_2. Two stage scrubber with chilled water media should be provided to process vents to control NH_3. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.

iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by KSPCB.

v) Total fresh water requirement from KIDB water supply should not exceed 60 m^3/day and prior permission should be obtained for drawl of 60 m^3/day from the concerned Authorities.

vi) Trade effluent should be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream should be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.

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

viii) As proposed, process organic residue and spent carbon should be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The ash from boiler should be sold to brick manufacturers/cement industry.

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

x) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.

xi) Solvent management should be as follows :

- Reactor should be connected to chilled brine condenser system
- Reactor and solvent handling pump should have mechanical seals to prevent leakages.
- The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
- Solvents should be stored in a separate space specified with all safety measures.
- Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
- Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

xii) As proposed, green belt should be developed in 1,2347.20 m^2 out of total land 32,956.00 m^2.

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

1.2.8. Bulk Drugs (10.50 TPM) Manufacturing Unit at Plot No. 28, Raichur Growth Centre Industrial Area, Village Chicksugur, District Raichur, Karnataka **by M/s Vaidhatru Pharma (Pvt.) Ltd. (TOR to EC).**

Project proposal was considered in the 32nd *Expert Appraisal Committee (Industry-2) meeting held during 16th – 17th February,* 2012 *and the C*ommittee desired following information:

1. Water balance should be rechecked and submit correct details.
2. Consequence analysis considering all the leakages during transportation, storage of toxic chemicals to be done by the expert in risk assessment.

Project proponent vide letter received in Ministry on 15th May, 2012 has submitted above mentioned additional information.

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

i) Multi-cyclone followed by bag filter should be provided to the boiler to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/KSPCB guidelines.

ii) The levels of PM10, SO2, NOX, VOC, NH3 and HCl should be monitored in ambient air.

iii) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution should be provided to process vents to control SO2. Two stage scrubber with chilled water media should be provided to process vents to control NH3. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.

iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by KSPCB.

v) Total fresh water requirement from KIADB water supply should not exceed 58 m3/day and prior permission should be obtained from the concerned Authorities.

vi) Trade effluent should be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream should be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.

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

viii) As proposed, process organic residue and spent carbon should be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The ash from boiler should be sold to brick manufacturers/cement industry.

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

x) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy

season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.

xi) Solvent management should be as follows :

- Reactor should be connected to chilled brine condenser system
- Reactor and solvent handling pump should have mechanical seals to prevent leakages.
- The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
- Solvents should be stored in a separate space specified with all safety measures.
- Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
- Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

xii) As proposed, green belt should be developed in 20,524.35 m^2 out of total land 31,896.00 m^2.

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

1.2.9. Bulk Drugs Manufacturing Unit (15 MTPM) at Sy. No. 888, 889 & 901, Village Jangam, Tehsil Bhikunoor, District Nizamabad, Andhra Pradesh by **M/s Vijaya Sai Laboratories Pvt. Ltd. (TOR to EC).**

Project proposal was considered in the 32nd *Expert Appraisal Committee (Industry-2) meeting held during 16th – 17th February,* 2012 *and the C*ommittee desired following information:

1. Water balance should be rechecked and submit correct details.
2. Consequence analysis considering all the leakages during transportation, storage of toxic chemicals to be done by the expert in risk assessment.

Project proponent vide letter received in Ministry on 15th May, 2012 has submitted above mentioned additional information.

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

i) Multi-cyclone followed by bag filter should be provided to the boiler to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/APPCB guidelines.

ii) The levels of PM_{10}, SO_2, NO_X, VOC, NH_3 and HCl should be monitored in ambient air.

iii) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution should be provided to process vents to control SO_2. Two stage scrubber with chilled water media should be provided to process vents to control NH_3. The scrubbing media should be sent to effluent treatment

plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.

iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by APPCB.

v) Total fresh water requirement from ground water source should not exceed 37 m^3/day and prior permission should be obtained for drawl of 37.0 m^3/day ground water from the CGWA/SGWA.

vi) Trade effluent should be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream should be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.

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

viii) As proposed, process organic residue and spent carbon should be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The ash from boiler should be sold to brick manufacturers/cement industry.

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

x) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.

xi) Solvent management should be as follows :

- Reactor should be connected to chilled brine condenser system
- Reactor and solvent handling pump should have mechanical seals to prevent leakages.
- The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
- Solvents should be stored in a separate space specified with all safety measures.
- Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
- Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

xvi) As proposed, green belt should be developed in 15085 m^2 out of total 23163 m^2.

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

xviii) All the commitments made to the public during public hearing/public consultation meeting held on 9th June, 2011 should be satisfactorily implemented and adequate budget provision should be made accordingly.

1.2.10. Expansion of Trichloroethylene (7200 MTPA to 15480 MTPA), Poly Vinyl Chloride (90,000 MTPA to 150,000 MTPA), Captive Power Plant (58.27 MW to 108.27 MW) and addition of Chlorinated Poly Vinyl Chloride (14,400 MTPA) Unit at Village Kayalpattinam North, Tehsil Tiruchendur, District Toothukudi, Tamil Nadu by **M/s DCW Ltd. (TOR to EC).**

Project proposal was considered in the 35th E*xpert Appraisal Committee (Industry-2) meeting held during 11th – 12th May,* 2011/2012 *and the C*ommittee desired following information:

1. Layout map of the unit indicating all the existing units and proposed units.
2. Details of Eco-sensitive zone within 15 Km from the project site on the Toposheet map duly authenticated by the Chief Wildlife Warden of the area concerned.
3. One month fresh ambient monitoring data in respect of PM_{10}, $PM_{2.5}$, SO2, fluoride, NOx, Cl2, HCl and VOC.
4. Point-wise compliance report w.r.t issues raised during site visit undertaken by the Sub-committee on 11th July, 2011
5. Compliance to the condition stipulated in the last EAC meeting that "the company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the State Pollution Control Board. The levels of PM 10, SO2, fluoride and NOx (ambient levels) and emissions from the stacks (Cl_2, HCl and SO2) shall be monitored and displayed at a convenient location near the main gate of the company and at important public places."
6. Status of recovery of Ferric Chloride and action plan.
7. Details of old mercury sludge storage along with design. Monitoring action plan of the storage area. Details of monitoring status.
8. List of hazardous chemicals along with chemicals storage areas. Storage area should be indicated.
9. Layout map indicating Greenbelt area developed in the existing factory and proposed expansion.
10. A comprehensive quantitative risk assessment shall be carried out to include the possible accident scenarios (including worst consequence) and shall include VCM unloading at DCW Toticorin storage facilities, handling & transportation to plant.
11. The Risk assessment shall determine "individual risk levels" as well as "societal risk" of following scenarios:
    a) "Entire VCM & associated product existing facility with the proposed expansion.
    b) Ship unloading, storage, transportation & unloading at plant of VCM.
    c) The " list of near misses in the plant" in last three years shall be provided.

d) List of major accidents in VCM Industry in last 10 years.

12. List out all the pollution issues raised during public hearing and give present status in details including measures taken as well as monitoring data.
13. Details of all the environmental clearance obtained for the existing plant as well as compliance report.
14. Compliance status of the existing unit shall be obtained from the Ministry's Regional Office at Bangalore.

Project proponent vide letter dated 7th July, 2012 submitted the above mentioned additional information. Project proponent informed that as per the District Planning Map published by Survey of India, DST, Govt of India, the nearest island (Vaan Island), as part of the Gulf of Mannar National Park, is located at about 31.5km from the existing DCW Limited plant (Sahupuram). Therefore, no national park/eco-sensitive area is located within 10 Km from the project site. Unit has already uploaded the compliance status of the earlier EC on the company website (www.dcwltd.com). The print-screen of the website information confirming the status of the EC compliance is submitted. As regard to issue raised during public hearing "the sea water turned to red colour due to discharge of industrial effluent", project poponent informed that soil is rich in iron content in the project area and hence exhibits red coloured terrain. During rainy season the water discharge from the catchment area may turn sea water into red colour. The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's regional office, Bangalore on 8th August, 2012. It is reported that unit has provided air pollution control systems (ESP) as well as online stack monitoring system for the parameters viz. PM, SO2, NOx in the Co-gen plant. Unit has installed three stage advanced absorption system for chlorine absorption in the sodium hypo-chloride plant and wet scrubber in the tail tower of the HCl furnace to absorb HCl vapor have been installed. Chlorine sensors have been installed at 11 locations. Regarding liquid effluent, unit has achieved zero effluent discharge norms by segregating high and low TDS effluent stream and treated in appropriate ETP followed by RO. RO rejects is sent to evaporation pan. The brine sludge generated earlier from mercury cell has been stored in the secured landfill and capped. Fly ash is being sent to cement plant. Unit has committed that iron oxide plant is scheduled to be commissioned by November, 2013. Compliance reports seem to be satisfactory.

The Committee also deliberated on the issues raised by Shri S Joel vide letter dated 18th July, 2012. As regard to environmental safety regulations, project proponent informed that all the stipulated environmental conditions in the environmental clearance are being followed. Regarding mercury bearing sludge, it was informed that mercury cell based plant was stopped in the year 2007 and no mercury bearing sludge was generated from the existing facility therforafter. Old mercury sludge is capped in secured landfill site at the project as per CPCB guidelines. The central facilities of the existing DCW Ltd. are located beyond 5 Km from the Tambraparani River. Project proponent informed that GO. (3D) No. 41 dated 1st August, 2007 of Govt. of Tamil Nadu clarifies that Government orders GO Ms No. 213 dated 30th March,1989 and GO Ms. No. 127 dated 8th May, 1998 are not covering the expansion of existing industrial units which were set up before the issue of these Government orders. Health survey report

carried out for the plant and people living in 5 Kms radius surrounding the unit is also submitted and reported satisfactory.

The Committee found additional information satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

1. Compliance to all the environmental conditions stipulated in the environmental clearance letter nos. J-11011/4/97-IA-(II) dated 4th November, 1997 and J-11011/426-2006-IA-II(I) dated 7.6.2007, 22.10.2007, 31.05.2010 and 21.10.2010 shall be satisfactorily implemented.

2. The process emissions (SO_2, NOx, HC (Methane & Non-methane) and VCM from various units should conform to the standards prescribed under the Environment (Protection) Rules,1986 or Norms stipulated by the TNPCB whichever is stringent. At no time, the emission levels should go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.

3. Electrostatic Precipitator alongwith adequate stack height (93 m) shall be provided to coal fired boiler.

4. Continuous ambient air quality monitoring stations for [PM10, PM2.5, VCM, NOx, CO, HC(Methane & Non-methane)] shall be set up in consultation with CPCB/TNPCB. Unit shall follow CPCB/MoEF calibration protocol for the calibration of continuous stack as well as ambient air quality monitoring analyzer installed in all stations. Data of stack monitoring and ambient air shall be displayed on web as well as outside the premises at prominent place for public viewing. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and TNPCB.

5. Ambient air quality data should be collected as per NAAQES standards notified by the Ministry on 16th September, 2009 and trend analysis w.r.t past monitoring results should also be carried out. Adequate measures based on the trend analysis should be taken to improve the ambient air quality in the project area.

6. Monitoring of fugitive emissions should be carried out as per the guidelines of CPCB by fugitive emission detectors and reports should be submitted to the Ministry's Regional Office at Bangalore.

7. Fugitive emissions of HC and VCM from product storage tank yards etc. must be regularly monitored. As proposed, acetylene sensor shall be installed in the generation area. Sensors for detecting HC and VCM leakage should also be provided at strategic locations. Leak Detection and Repair programme should be implemented to control HC/VOC & VCM emissions. Work zone monitoring should be carried out near the storage tanks besides monitoring of HC/VOC & VCM $_s$ in the work zone.

8. Total fresh water requirement from Thamirbarani River after expansion should not exceed 11822 m^3/day and prior permission should be obtained from the competent authority.

9. Industrial effluent generation shall not exceed 4237 m^3/day after expansion. Effluent shall be treated in effluent treatment plant and treated water will be passed through reverse osmosis. The RO rejects will be sent to Solar Evaporation Pond for evaporation.

10. As proposed, no effluent should be discharged outside the factory premises and 'Zero water discharge concept' will be adopted.

11. The project authorities must strictly comply with the rules and regulation with regard to handling and disposal of Hazardous Waste (Management, Handling and Trans Boundary Movement) Rules, 2008 wherever applicable. Authorization from the State Pollution Control Board must be obtained for collections / treatment / storage / disposal of hazardous wastes.

12. The company should strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).

13. The Company should take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed.

14. To prevent fire and explosion at oil and gas facility, potential ignition sources should be kept to a minimum and adequate separation distance between potential ignition sources and flammable material should be in place.

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

16. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines should be implemented.

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

18. All the commitments made to the public during public hearing/public consultation meeting held on 29th November, 2011 should be satisfactorily implemented and adequate budget provision should be made accordingly.

1.2.11. Modification in Manufacturing Process for Carbon Fibre and addition of New Products related to Epoxy Resins, Hardener & Prepreg Plant at Plot No. 112, 114, 116/P/1, 116.P/2, 117, 118, 128, 192/1, 194/2, 195, 196, 197/1, 199, 201, 202, 203, 206 and 205/2, Village Asoj, Tehsil Vaghodiya, District Vadodara, Gujarat by **M/s Kemrock Industries & Exports Ltd**.

Project proposal was considered in the 36th *Expert Appraisal Committee (Industry-2) meeting held during 11th – 12th June,* 2012 *and* Committee decided that on the amendment of

existing EC will be taken by the EAC after obtaining letter from NAL indicating increase in utilities. Accordingly, project proponent has submitted a certificate no. MSD/MKS dated 25th May, 2012 issued by the Project Director, Carbon Fibre Programme, NAL indicating that during detailing of plant, it was found that consumption of water, steam, exahaust gas generation, effluent and waste generation would be higher compared with original stipulated data.

After detailed deliberations, the Committee found additional information satisfactory and recommended the proposal for amendment to the existing environmental clreance with following specific conditions:

i. Adequate stack height shall be provided to Gas/LDO fired thermic fluid heater and boilers (1x8 TPH + 2 x 8 TPH).
ii. As proposed, bagfilter should be provided to belt conveyor in polymer plant.
iii. Additional incinerator (2 Nos) should be installed at carbon fibre plant as per CPCB guidelines.
iv. Total fresh water requirement from Sardar Sarovar Narmada Canal/ground water source shall not exceed 1535.5 m^3/day.
v) Industrial effluent generation shall not exceed 321.6 m^3/day. As proposed, industrial effluent shall be treated in the ETP and treated water shall be recycled/reused within the factory premises. No effluent shall be discharged outside the factory premises.
vi) ETP sludge and evaporation salt shall be sent to TSDF. Recovered solvent shall be sent to common incineration facility.

1.2.12. Increase in production of Pentaerythritol (450 MTPM to 560 MTPM) and Sodium Formate (275 NTPM to 335 MTPM) at Plot No.B5-B10, Sy.No.126-131, 137 & 165 at village Kudikadu, Mandal & District Cuddalore, Tamil Nadu **by M/s Asian Paints Limited (TOR to EC).**

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

1. As per the MoEF's circular dated 30th May 2012, a certified report by RO, Bangalore on status of compliance of the existing operating unit to be submitted.
2. Stack monitoring report of the wet scrubber to be submitted.
3. Details of existing and proposed ETP. Water quality monitoring report of the existing ETP.

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

The Committee deliberated upon the compliance status report to the environmental conditions stipulated in the existing EC, which were monitored by the Ministry's regional office Bangalore on 14th August, 2012. It is reported that multicyclone followed by bagfilter are provided to boiler. Online stack monitoring system has been installed to the boilers. Effluent is treated in combined effluent treatment plant. Treated effluent is conforming to the standards prescribed by TNPCB. Hazardous waste from process is being sent to TSDF.

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

i Bagfilter alongwith adequate stack height should be provided to coal fired boiler to control particulate emissions.

ii Vapour emissions from the process vents should be controlled by installation of suitable scrubbers and condensers

iii VOCs detectors shall be installed in the work zone. When monitoring results indicate the levels above the permissible limits, effective measures shall be taken immediately.

iv All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

v The levels of PM_{10}, SO_2, NO_X, VOC and HC (Methane and Non-methane) in ambient air shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.

vi Total fresh water requirement from SIPCOT water supply shall not exceed 437.7 m^3/day and prior permission shall be obtained from the concerned authority and a copy submitted to the Ministry's Regional Office at Bangalore. No ground water shall be used.

vii Total industrial wastewater generation should not exceed 380 m^3/day. Industrial effluent should be treated in ETP followed by Reverse Osmosis. Treated effluent should be recycled/reused within factory premises after achieving desired water quality for various purposes. Rejects from RO should evaporated in MEE followed by ATFD.

viii No effluent shall be discharge outside the factory premises and zero discharge concept shall be adopted.

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

x Proper spillage control management plan should be prepared and implemented.

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

xii The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per norms.

xiii Fire hydrant system shall be provided alongwith fire monitor and flame detection system in the process as well as storage areas.

xiv Greenbelt shall be developed in 15.7 acres out of total land 29.2 acres.

1.2.13. Setting up of POL Terminal for Storage and Marketing of Petroleum Products at Khunti, Ranchi, Jharkhand by **M/s Indian Oil Corporation Ltd.**

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

1. Details of monitoring period of ambient air quality and all background the monitoring data w.r.t site. Analytical report of nearby water bodies e.g. river and lakes.
2. Layout out plan of the project site indicating distance of facilities from the boundary wall.
3. Details of water requirement and effluent generations and its proposed treatment.
4. Ensure no truck washing shall be carried out and vehicle to be at least Euro-3 compliant.
5. Submit Risk assessment report after appropriate revision and with an appropriate Executive Summary.

6. Public hearing issues raised and commitments made by the project proponent on the same should be submitted.
7. Plan for control of fugitive emission from process areas.

Project proponent vide letter dated 25th May, 2012 submitted above mentioned additional information.

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

i. Adequate buffer zone around the Pipeline Oil Terminal, as may be required as per OISD or other statutory requirements.

ii. Regular ambient air quality monitoring of PM_{10}, SO_2, NO_x, 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.

iii. 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 Bhubaneswar, CPCB and Jharkhand State Pollution Control Board. Quarterly monitoring for fugitive emissions should be carried out as per the guidelines of CPCB and reports submitted to Ministry's Regional Office at Bhubaneswar.

iv. Vapor recovery system should be installed to prevent leakage of vapor from tank/ vessels/processing and filing areas to ensure no hydrocarbon vapors are released unchecked.

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

vi. 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.

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vii. Effluent from washing of storage tanks in POL Depot should be properly treated in oil water seperator and treated wastewater should conform to CPCB standards. As proposed, separate treatment system should be provided for white oil and black oil effluent streams. No effluent should be discharged outside the premises.

viii. 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.

ix. 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.

x. 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.

xi. The company should obtain all requisite clearances for fire safety and explosives and should comply with the stipulation made by the respective authorities.

xii. All storage tanks should be provided with design features based on applicable OISD standards.

xiii. No change in the storage capacity and other facilities should be made without getting proper approval from the Ministry.

xiv. Fully automated tank farm management system (TFMS) will be provided for accounting of products & reconciliation.

xv. 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.

xvi. 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 Bhubaneswar within 3 months of issue of the letter.

xvii. Occupational health surveillance of worker should be done on a regular basis and records maintained as per the Factory Act.

xviii. 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.

xix. The Company should harvest surface as well as rainwater from the rooftops of the buildings proposed in the project and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.

xx. All the recommendations mentioned in the EMP/DMP should be implemented.

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

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

xxiii. Under Corporate Social Responsibility (CSR), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.

1.2.14. Expansion of Synthetic Organic Chemical Plant at Sy.No.385/1P at village Dadra, District Silvassa, U.T. of Dadar & Nagar Haveli by **M/s Polygel Industries Pvt. Ltd. (TOR to EC).**

The project authorities and their consultant (Unistar Environment & Research Labs Pvt. Ltd. '59') 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 synthetic organic chemical units in Industrial zone are listed at S.N. 5(f) under Category 'B' but proposed plant ;is located 0.5 km from the Gujarat State boundary and therefore, categorized in Category 'A' due to applicability of specific condition and is appraised by the Expert Appraisal Committee in the Ministry.

The committee delebrated upon the issue related to show cause directions under section 5 of the Environmental (Protection) Act, 1986 issued by the CPCB vide their letter dated 23rd March, 2012. Compliance of the direction under section 5 of the E(P)A, 1986 was received from CPCB vide their letter B-29016/04/06/PCI-I/1667 dated 24th September, 2012. It was noted that compliance was checked by Pollution Control Committee, DD & DNH, Daman. Electricity of the unit was restored and asked the unit to manufacture the products other than the organic titanates. Regarding construction status, it is reported that unit has already constructed a new production facility of Organi Titnates without obtaining environmental clearance. The project proposal has been considered in this meeting for appraisal as per the Ministry's O.M. dated 16th November, 2010 regarding consideration of proposals involving violation of the Environment (Protection) Act, 1986 or Environment Impact Assessment (EIA) Notification, 2006, which refers that such cases may be referred to respective EAC for consideration based on the merit of the proposal.

M/s Polygel Industries Pvt. Ltd have proposed for the expansion of Synthetic Organic Chemical Plant at Sy. No. 385/1P at Village Dadra, District Silvassa, U.T. of Dadar & Nagar Haveli. Proposed expansion will be carried out in the existing campus. Silvassa is at 6 km and the Vapi at 12 km. Daman Ganga River and reservoir is at 2.5 and 6.5 km. respectively. Dadra village is at 0.5 km. Total plot area is 7700 m^2. A copy of the letter issued by Planning and Development Authority, Silvassa indicating location of the project is notified industrial zone is submitted. Total cost of the project is Rs. 3.47 Crores. Rs. 62.00 Lakhs and Rs. 20.00 Lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures. Dadar & Nagar Haveli Wildlife sanctuary is located within 10 km. Following are the details of existing and proposed products:

S. N.	Name of Products	Existing Production (TPA)	Expansion Production (TPA)	Total Production after expansion (TPA)
1	Organic Titanates i) Tetra isopropyle Titanate (TiPT) ii)Tetra n-Butyl Titanate (TnBT)	200.00	5800.00	6000.00
2	Cable filling Compound	9600.00	-	Stopped manufacturing
3	Cable flooding compound	1200.00	-	"
4	Pharma jelly	240.00	-	"
5	Others industrial jelly	120.00	-	"
6	Sealant and adhesive	1500.00	-	1500.00
	Total	**12860.00**	**5800.00**	**7500**
Name of by-products:				
1	Ammonium Chloride	137.64	4006.32	4143.93

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during October 2011 – December 2011 and submitted data indicates as PM_{10} (40–80 ug/m^3), $PM_{2.5}$ (9–30 ug/m^3), SO_2 (21 – 31 ug/m^3), NO_x (16-20 ug/m^3) and CO (0.1 to 0.18 mg/m^3). Titanium Tetra Chloride (3,551.76 MTPA), Isopropyl Alcohol (2,455.90 MTPA), n-Butyl alcohol (2522.75 MTPA) and Ammonia (1275.48 MTPA) will be used as raw materials. Chilled Titanium Tetra chloride will be reacted with isopropyl alcohol to form Tetra Isopropyl Titanate (TPT) in a closed reactor. Adequate stack height will be provided to thermoac heater and steam boiler. Adequate scrubber will be provided to control process emissions viz. HCl and NH_3. Fresh water requirement from ground water source will be increased from 6.55 to 14.55 m^3/day after expansion. Industrial effluent will be increased from 1 m^3/day to 2.7 m^3/day after expansion. Industrial effluent will be treated in ETP. Treated effluent will be used for gardening/plantation. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' discharge will be adopted. ETP waste (1 MTPA), distillation residue (1.0 MTPA) will be sent to TSDF site of M/sGEPIL, Silvassa. Membership to M/s GEPIL, Silvassa is obtained. Waste/used oil (200 l/hr) will be sold to authorized recyclers / re-processors. Out of 7700 m^2, green belt is developed in 2,854.53 m^2 and will be developed in 33% area. Power (400 KVA) will be sourced from Electricity Board, Silvassa. D.G. set (1x500 KVA) will be installed as standby arrangment. LDO (1500 l/day) for boiler & thermopack and HSD (100 l/h) for D.G. set will be used as fuel.

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

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

i) 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 Dadar and Nagar Haveli Wildlife Sanctuary.

ii) Adequate stack height should be provided to oil fired thermic heater / steam boiler.

iii) The levels of PM_{10}, SO_2, NO_X, CO, HCl, NH_3 and VOC should be monitored in ambient air.

iv) Adequate scrubber shall be provided to process vents to control HCl and NH_3. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.

v) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by PCC.

vi) Total fresh water requirement from ground water source should not exceed 14.55 m^3/day and prior permission should be obtained from the concerned Authority.

vii) Industrial effluent generation shall not exceed 2.7 m^3/day. Effluent shall be treated in ETP Treated effluent shall be recycled/reused within factory premises.

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

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

x) Green belt should be developed in 33 % of the total land.

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

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

1.2.15. Synthetic Organic Chemicals Unit (1600 kg/day) at Sy.No.279 part, Village Ramanthpur, Tehsil Yeldurthy Mandal, District Medak, Andhra Pradesh by **M/s Relixier Pharmaceuticals Pvt. Ltd. (TOR to EC)**

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

1. Risk assessment to be redone considering realistic scenarios & avoiding unrealistic scenarios e.g.:
    a. BLEVE of atmospheric tank
    b. VCE with acetic acid.
2. In the risk assessment with different considered scenarios should be listed.
3. An Executive summery not more than one page to be given status :
    a. The hazards chemicals considered.
    b. Worst scenario.
    c. Measures to contain the consequence of worst scenarios.

Project proponent vide letter dated 10th July, 2012 has submitted following additional information.

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

i) Multi-cyclone followed by bag filter should be provided to the coal fired boiler to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/APPCB guidelines.

ii) The levels of PM_{10}, SO_2, NO_X, VOC,and CO should be monitored in ambient air.

iii) Two stage scrubber with caustic lye media solution should be provided to process vents to control SO_2. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.

iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by APPCB.

v) Total fresh water requirement from ground water source should not exceed 48.47 m^3/day and prior permission should be obtained from the CGWA/SGWA.

vi) Trade effluent should be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream should be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused

within factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.

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

viii) As proposed, process organic residue and spent carbon should be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The fly ash from boiler should be sold to brick manufacturers/cement industry.

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

x) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.

xi) Solvent management should be as follows :

- Reactor should be connected to chilled brine condenser system
- Reactor and solvent handling pump should have mechanical seals to prevent leakages.
- The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
- Solvents should be stored in a separate space specified with all safety measures.
- Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
- Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

xix) As proposed, green belt should be developed in 33% of the total land.

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

xxi) All the commitments made to the public during public hearing/public consultation meeting held on 15th November, 2011should be satisfactorily implemented and adequate budget provision should be made accordingly.

1.2.16. Bulk Drug Manufacturing Unit (510 TPM or 6120 TPA) and CPP (3.00 MW) at Sy.No.291/1 to 5, 290/1 to 4, 289/1 & 3, 288, 287, 286, Village Sancham, Mandal Ranasthalam, District Srikakulum, Andhra Pradesh by **M/s Hyacinths Pharma Pvt Ltd. (TOR to EC)**

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

1. Adequate water balance with justification indicating intake, losses and discharge.
2. Quantity and quality of segregated effluent streams into high TDS and low TDS. Treated water quality.
3. Compliance of EC and consent to establish/operate w.r.t. existing plant issued by the MoEF/SPCB to be ascertained.
4. Actual source of water supply and its permission.
5. Ensure online continuous pH, TOC meter and flow-meter in the guard pond.
6. Correct hazardous waste generation quantity.
7. Risk assessment to be redone considering actual layout of the hazardous chemicals storage area, sizes & type of tanks. The minimum no. of scenarios to be considered are :
   a. Pool fire of inflammable material e.g. methanol, Tolune etc.
   b. VCE-Acetone.
   c. Toxic release-MDC.

   Revised EIA report to be submitted.

Project proponent vide letter dated 25th July, 2012 submitted following additional information.

1. The total water required for the proposed project is 830 m^3/day, the fresh water requirement is 640 m^3/day and the remaining 190 m^3/day is treated water recycled.

2. All process streams containing high TDS>10000 ppm (total solids) are segregated, stage wise product wise details of high TDS streams are given as Table 2. The domestic wastewater diverted to STP for treatment and treated water used for greenbelt development. The treated water characteristics are given in Table 4.

3. The compliance of EC and Consent to Establish/Operate is not applicable as the proposed project is Greenfield project.

4. The actual source of water is borewell water from the project premises. However if APIIC supplies the water, the same will be used in future.

5. As instructed continuous recording online pH, TOC and flow meter will be provided to the guard pond.

6. Corrected and revised hazardous waste generation quantity with related schedule nos as per “The hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008” is given below Table -5.

7. Risk Assessment has been redone considering actual layout of the hazardous chemicals storage area, sizes & type of tanks by considering the following three scenarios depending upon the type of solvent

   a. Pool fire of inflammable material e.g. methanol, Tolune etc.
   b. VCE-Acetone.
   c. Toxic release- MDC.

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

i) CRZ clearance under the CRZ Notification, 2011 shall be obtained for effluent discharge into sea through pipeline.

ii) Multi-cyclone followed by bag filter should be provided to the coal fired boiler to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/APPCB guidelines.

iii) The levels of PM_{10}, SO_2, NO_X, VOC, HCl and CO should be monitored in ambient air.

iv) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution should be provided to process vents to control SO_2 and SO_3 emission levels should go beyond the prescribed standards.

v) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by APPCB.

vi) Total fresh water requirement from ground water source / APIIC/Municipal supply should not exceed 640 m^3/day and prior permission should be obtained from the CGWA/SGWA.

vii) Trade effluent should be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream should be treated in ETP and treated water will be routed through guard pond and discharge into sea through own pipeline.

viii) online pH, TOC and flow meter shall be installed in the guard pond to monitor water quality of treated effluent.

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

x) As proposed, process organic residue and spent carbon should be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The fly ash from boiler should be sold to brick manufacturers/cement industry.

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

xii) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.

xiii) Solvent management should be as follows :

- Reactor should be connected to chilled brine condenser system
- Reactor and solvent handling pump should have mechanical seals to prevent leakages.
- The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
- Solvents should be stored in a separate space specified with all safety measures.
- Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
- Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

xxii) As proposed, green belt should be developed in 19.55 acres out of total plot area (59.10 acres).

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

xxiv) All the commitments made to the public during public hearing/public consultation meeting held on 23rd November 2011 should be satisfactorily implemented and adequate budget provision should be made accordingly.

1.2.17. Expansion of Specialty Chemicals Manufacturing Unit at Plot No. 1454-147, 229, 230, Village Panelav, P.O. Tajpura, Tehsil Halol, District Panchmahal, Gujarat **by M/s Paushak Ltd. (TOR to EC).**

Project proposal was considered in the 31st *Expert Appraisal Committee (Industry-2) meeting held during* 12th–13th JANUARY, 2012 *and* Committee desired compliance monitoring report by the Ministry's Regional Office at Bhopal.

The Committee deliberated upon the compliance monitoring report submitted by the Ministry's Regional Office. It was noted that Phosgene Plant was revamped with new CO generator, CO Holder and new pipe rack. The phosgene plant was also replaced recently leading to this being almost as completely new plant. A new CO compressor and molecular sieves would be added by July 2012. The civil structure of ISO-I Plant was made as recent as 2004/5 and it was again refurbished and upgraded the plant in 2011-12 with new clean areas. The structure of ISO-II Plant was totally renovated with new scrubbers, structure and reactors as submitted. The old part of SP Chem Plant was dismantled and cleaned and the other part is revamped. The revamping of TCC plant

shall be taken up once the ongoing activities in the Phosgene and ISO- II plant are completed. New reactors & condensers have been added and scrubbing system and vacuum system have been improved. It was noted that unit has complied with the most of observations made by the Sub-committee during their visit.

After detailed deliberations, the Committee found the compliance report satisfactory and recommended the project for environmental clearance subject to stipulation of following specific conditions alongwith other specific and general conditions:

i. 'Consent to operate' shall be granted only after ensuring that all pollution equipments are installed and in working condition.

ii. Bag filter alongwith stack of adequate height shall be provided to coal fired boiler to control particulate emissions within 50 mg/Nm^3. Adequate stackheight shall be provided to oil fired boiler.

iii. Adequate scrubbing arrangement should be provided to process vents to control HCl, Cl_2 etc. The scrubbing solution shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards.

iv. Chilled brine circulation system should be provided to condensate solvent vapors and reduce solvent losses. It should be ensured that solvent recovery shall not be less than 95%.

v. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits stipulated by GPCB.

vi. Continuous monitoring system for phosgene, VOCs, CO and chlorine shall be installed at all important places/areas. Effective measures shall be taken immediately, when monitoring results indicate above the permissible limits.

vii. A proper Leak Detection And Repair (LDAR) Program for proposed industry shall be prepared and implemented as per CPCB guidelines. Focus shall be given for prevention of fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to.

viii. Proper hood alongwith suction facility and scrubbing arrangement should be provided in the chlorine storage area.

ix. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.

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

xi. Total fresh water requirement from ground water source should not exceed to 144 m^3/day after expansion and prior permission should be obtained from CGWA/SGWA.

xii. Industrial wastewater generation should not exceed 95 m^3/day m^3/day. Effluent should be treated in ETP comprising primary, secondary and tertiary treatment facility. Cyanide effluent stream should be treated separately. Treated effluent from ETP should be discharged into CETP after conforming to the standards prescribed for the effluent discharge and obtaining permission from the GPCB. Domestic sewage should be treated in STP.

xiii. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Transboundary movement) Rules, 2008 for management of hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. The concerned company should undertake measures for firefighting facilities in case of emergency.

xiv. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

xv. The company should make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.

xvi. Green belt should be developed at least in 33 % of the plant area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Selection of plant species should be as per the CPCB guidelines.

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

Project proposal was considered in the 32th *Expert Appraisal Committee (Industry-2) meeting held during* 16th – 17th February, 2012 *and* the Committee desired following information:

i) Entire project status (existing and proposed facilities) including all future developments associated with the CPCL.
ii) Compliance report dated 14th December, 2011 of conditions stipulated in the environmental clearance dated 3rd July, 2008 has been submitted. Compliance statement submitted by the project proponent seems to be satisfactory. Compliance report dated 14th December, 2011 of conditions stipulated in the environmental

clearance dated 29th July, 2005 has been submitted. Compliance statement submitted by the project proponent seems to be satisfactory.

iii) Compliance report for new environment standards for effluent standards, emissons standards for FCC Regenerators, SRU Standards, Truck loading, fugitive emissions as well as LDR measurement.

iv) A current status of action plan submitted by TNCB to CPCB has been submitted.

v) Quantitative Risk Assessment Report Dec'11 is submitted.

vi) Updated EIA Report till December, 2011 is submitted.

vii) Report on implementation status of action plan for Manali Industrial Area, Chennai is submitted.

Project proponent vide letter dated 17th August, 2012 has submitted action taken report. It was noted that Housekeeping has been improved and all unwanted material has been removed from working areas. Annual maintenance contract is lined up for regular calibration of all instruments and all instruments are regularly calibrated and records maintained. Proper arrangement for storage of sludge removed from tanks has been made. Automation will be incorporated in the system for treatment of sludge from tanks in future. SO_2 emissions from SRU have been considered in the calculation. Existing SRUs do not have space to install tail gas recovery units. However, the New SRU of Resid Upgradation is designed for 99.9% of sulphur recovery. Refinery CPP generates entire power requirement and fuel indicated is inclusive of power generation also. Water balance chart is submitted. Out 45 heaters, low Nox burners exist in 21 heaters & for 4 heaters job is in progress and for balance 19 heaters replacement with low Nox burners will be completed during their next revamp. Details of Nox emission limits for other Refineries, collected from respective units, are submitted. The environment Cell presently headed by a Deputy General Manager and consists of 5 personnel on a dedicated basis. Steps are initiated to strengthen it futher by induction of two more qualified Environment Engineers. Latest status of implementation of CEPI action plan is submitted.

Therefore, the Committee decided that a sub-committee and a representative of the Ministry will visit the plant to assess the existing pollution control measures adopted in the existing plant and suggest additional pollution control measures to be adopted during proposed expansion, if any.

1.2.19. Enhancement of the Ammonia Storage Capacity at Udyogmandal Kerala by **M/s The Fertilizers and Chemicals Travancore Limited (FACTS).**

Project proposal was considered in the 26th *Expert Appraisal Committee (Industry-2) meeting held during 17th – 18th August 2011 and* the Committee desired following information:

1. Additional safety measures in design.
2. In worst case scenario, details of proposed preventive measures.
3. Possible reasons for leakage of NH_3 and immediate action to be taken in such situation to reduce NH_3 leakage.
4. A note on overall safety system and precautionary measures to be taken in routine and emergency.

Project proponent vide letter received in Ministry on 30th July, 2012 submitted above additional information.

After detailed deliberations, the Committee found additional information satisfactory and recommended for enhancement of storage capacity of ammonia from 5000 MT to 10000 MT subject to satisfactory compliance of following specific conditions alongwith other specific and general conditions:

i. No change in the storage capacity and other facilities should be made without getting proper approval from the Ministry.
ii. Unit shall carry out safety audit and report submitted to the Ministry and its Regional Office at Bangalore within six months.
iii. As proposed, periodical safety audit should be carried out and report submitted to Ministry's regional office, CPCB and SPCB.
iv. The company shall obtain all requisite clearances for safety and shall comply with the stipulation made by the respective authorities.
v. As proposed, a dedicated flare stack is provided for the ammonia storage for flaring ammonia in case of failure of the refrigeration.
vi. As proposed water curtains around the ammonia storage tanks.
vii. All the recommendations made in the risk assessment report shall be implemented.
viii. Regular on-site emergency mocl drill in ammonia storage and handling system shall be carried out.

1.2.20. Drugs Manufacturing unit (7 MTPM/84 MTPA) at Plot No. 439 & 440, Village Mahuakhara Ganj Tehsil Kashipur, District Udham Singh Nagar, Uttarakhand **by M/s Solitaire Drugs & Pharma Pvt. Ltd. (TOR to EC).**

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

1. Revised greenbelt plan indicating on layout map.
2. Revised water balance to be submitted.
3. Estimate of high TDS, high COD and low COD effluent streams.
4. Fresh effluent treatment scheme based on segregation of high TDS, high COD and low COD effluent streams.
5. List of solvents to be checked.
6. Hazardous waste quantity to be checked.
7. List of solvents to be checked.

Project proponent vide letter dated 8th August, 2012 submitted above additional information.

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

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

ii) The levels of PM10, SO2, NOX, CO and VOC should be monitored in ambient air.

iii) Adequate scrubber shall be provided to control gaseous emissions. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.

iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by SPCB.

v) Total fresh water requirement from ground water source should not exceed 24.5 m3/day and prior permission should be obtained from the CGWA/SGWA.

vi) Trade effluent should be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream should be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.

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

viii) As proposed, process organic residue and spent carbon should be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The flyash from boiler should be sold to brick manufacturers/cement industry.

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

x) Solvent management should be as follows :

- Reactor should be connected to chilled brine condenser system
- Reactor and solvent handling pump should have mechanical seals to prevent leakages.
- The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
- Solvents should be stored in a separate space specified with all safety measures.
- Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
- Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

xi) As proposed, green belt should be developed in 33% of total plot.

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

1.2.21. Enhancement of production capacity of writing & printing paper from30,000 TPA to 45,000 TPA atVillage-Ahmedgarh,District-Sangrur in Panjab by **M/S Shreyans Industries Ltd** (**TOR to EC**)

The project authorities and their consultant, M/s CPTL Envirotech Designers & Pollution Control Consultants, Chandigarh gave a detailed presentation on the salient features of project and proposed environmental protection measures to be undertaken as per Terms of Reference (TORs) awarded during the 17th Meeting of the Expert Appraisal Committee (Industry-1) held during 13th & 14th December, 2010 for preparation of EIA/EMP. The pulp and paper manufacturing industry is listed at S.No. 5(i) in Category A of the schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

M/s Shreyans Industries Limited have proposed for enhancement of production capacity of Writing & Printing paper from 30,000 TPA to 45,000 TPA at Village Ahmedgarh, District Sangrur in Punjab. No National Park/Wild Life Sanctuary/RF/PF are located within 10 km radius of the project site. Total project area is 61 acres which is already available for the existing plant and the proposed expansion will be carried within the existing plant premises. No additional land will be acquired for proposed expansion. Total cost of the project is Rs. 28.5 Crores and Rs. 2 Crores & Rs. 2.45 Crores will be used towards capital cost and recurring cost per annum for pollution control measures. It was informed that, environmental clearance was not required at that time for the existing unit. The consent to operate for the existing unit under Air Act, 1981, Water Act, 1974 and HW M&H Rules, 2008 is valid upto 30.9.2013, 1.12.2012 and 15.6.2013 respectively. The compliance to the conditions stipulated in the said consents was submitted and found to be satisfactory.

Wheat Straw, Sarkanda, Rice husk, Imported Wood Pulp, Caustic Soda, Chlorine (as elemental), Lime, Soapstone, Nutrients (Urea, DAP) and Paper Additives will be used as raw materials. The manufacturing process involves Pulping, Stock Preparation, Paper Making, Converting & Finishing. The industry has sanctioned load of 3.6 MW (4,000 KVA) from Punjab State Power Corporation Ltd. (PSPCL). The Power requirement for the existing plant is around 5 MW. The industry has already installed captive Co-generation plant of capacity 6 MW (one back pressure steam turbine of 2.5 MW capacity and another extraction cum condensing steam turbine of 3.5 MW capacity). The additional Power requirement for expansion/modernization will be around 2.5 MW which will be met from the existing captive Co-generation plant as well as through PSPCL against existing sanctioned load only. To meet steam requirement, the industry has 3 boilers of 10, 20 and 45 TPH steam generation capacity, which runs on rice husk as well as biogas generated from UASB digester. Out of the 3 boilers, 10 and 25 TPH boilers are kept as standby. The steam requirement for the enhanced capacity would be met from the existing boilers. No new D.G. set is proposed.

The 10 TPH & 20 TPH boilers have stacks height of 30 m & 42 m respectively and are equipped with multicyclones with wet scrubbing system and ESP. The 45 TPH steam boiler having stack height of 41 m is equipped with ESP and online monitoring system. The emissions from FBR in chemical recovery section are controlled through primary and secondary venturi-scrubbers. Dust collectors are provided at material transfer points. Ambient air quality monitoring

was carried out within the study area for PM_{10}, $PM_{2.5}$, SO_2 and NOx. The maximum values of these parameters are 83.31 µg/m^3, 42.8 µg/m^3, 8.6 µg/m^3 and 19.23 µg/m^3 respectively. The results of the modeling study indicate that the maximum increase of GLCs due to the proposed project is 3.29 µg/m^3 and 23.25 µg/m^3 for SPM and NOx respectively. The resultant GLCs are within the NAAQS.

Present consumption of water is 9,900 m^3/day. The consumption of water would be 11,750 m^3/day after expansion and the same shall be met from the existing bore wells. The daily requirement of water is met through existing bore wells having required capacity. The present mill effluent generation is approx. 8,270 m^3/day and after expansion will be approx. 10,000 m^3/day. The existing effluent treatment plant is adequate to treat the effluent after expansion. Out of above treated effluent, 500 m^3/day shall be recycled back to process and remaining 9,500 m^3/day shall be discharged for eucalyptus plantation and irrigation by farmers. In lean period, surplus effluent is discharged into drain and necessary permissions were obtained. The black liquor (1,150 m^3/day) from pulp washing shall be fed to incinerator for the recovery of chemicals. Solid waste in the form of ETP sludge (22 TPD), boiler ash (40 TPD) and lime sludge (0.011 TPD) shall be generated. ETP sludge is sold to Card board manufacturers, boiler ash will be used for filling of low lying areas and lime sludge is sent in HDPE bags to common TSDF. Used oil will be stored in drums and disposed to authorized recyclers.

The Committee deliberated on the issues raised during the Public Hearing / Public Consultation meeting conducted by the Punjab Pollution Control Board on 26th March, 2012. The issues raised in the public hearing were regarding provision of pollution control measures, cumulative impacts due to the nearby industries, effect on fishermen community, R&R, green belt development, implementation of CSR activities etc. which were addressed in the EIA/EMP report.

After detailed deliberation, 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.

1.2.22. Chlor-Alkali Manufacturing Unit (350 TPD) at Sy. No. 29, 30 & 32 at Village Talavali, District Raigad, Maharashtra **by M/s Aditya Birla Nuvo Limited (TOR to EC)**

Project proposal was considered in the 25th *Expert Appraisal Committee (Industry-2) meeting held during 28th – 30th July and the C*ommittee desired following information:

1. A commitment in the form of 'Resolution' from the Board that school located nearby in the downwind direction will be shifted before start of commercial production.
2. Reasons for high PM values and remedial measures to be adopted to reduce fugitive emissions.
3. Traffic management plan with complete details including no. and frequency of truck movement, impact on road due to construction and truck movement besides local traffic etc. Measures to be adopted for smooth traffic management.
4. Recollection of one month ambient air quality data for non-monsoon period.
5. A note on Chlorine emissions and handling.
6. Rechecking and recollection of data on ground water during non-monsoon period.
7. Action plan to maintain proper distance between storage tanks and Chlorine bullets.
8. Details of existing green belt indicating area covered and no. of trees planted so far alongwoth map showing the same and action plan for the development of green belt in 33 % area.
5. Point-wise commitment and clarifications given to public during public hearing/ consultation.

Project proponent vide letter received in Ministry on 31st August, 2012 has submitted following additional information. It was noted that project proponent has submitted undertaking which states that school located nearby in the downwind direction will be shifted before the start of commercial production of the plant. The action is already initiated by approaching the officials of Zilla Parishad with a suitable land in view. With an estimate, an amount of Rs. 120 lakhs (including 10% contingency) are earmarked for this purpose. On receipt of ZP's 'go ahed' the work will be expeditiously completed. Project proponent informed that no national park/wildlife sanctuary is located within 10 Km. Karnala bird sanctuary is located at 17 Km. River Patalganga is located at 3.10 Km from the project site. Project proponent also informed that RRZ policy of State Government satisfies the location criteria of 2 Km as project is located at 3.01 Km.

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

i. Consent to operate shall be granted after ensuring that school has been shifted.

ii. No mercury cell shall be used. Process of chlor alkali shall be based on membrane cell.

iii. Adequate scrubbing system should be provided in membrane cell caustic soda, stable bleaching powder plant, poly aluminium chloride plant and chlorinated paraffins plant to control Chlorine and HCl emissions. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped. Stack monitoring shall be done regularly and report shall be submitted to Maharashtra Pollution Control Board (MPCB) and the Ministry's regional office at Bhopal.

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

v. In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed

handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored and records maintained. The emissions shall conform to the limits stipulated by the MPCB.

vi. A proper Leak Detection And Repair (LDAR) Program for chloro-alkali industry shall be prepared and implemented as per CPCB guidelines. Focus shall be given for prevention of fugitive emissions for which preventive maintenance of pumps, valves, pipelines etc are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to.

vii. Continuous monitoring system for chlorine and HCl shall be installed at all important places/areas. Effective measures shall be taken immediately, when monitoring results indicate above the permissible limits.

viii. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.

ix. Total water requirement from surface water source shall not exceed 2000 m^3/day and prior permission shall be obtained from the concerned Authorities.

x. Industrial wastewater generation shall not exceed 260 m^3/day. Effluent shall be treated in ETP followed by RO. Treated water shall be recycled/reused within the factory premises. RO rejects shall be evaporated in MEE. Domestic wastewater should be treated in STP. Water quality of treated effluent shall be monitored regularly.

xi. No effluent shall be discharged outside the premises and 'Zero' discharge concept shall be adopted.

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

xvii) As proposed, ETP sludge, brine sludge and exhausted resins shall be sent to TSDF site. High calorific value waste shall be sent to cement factory/incinerated.

xviii) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 11989 *as* amended in October, 1994 and January, 2000. All Transportation of Hazardous Chemicals shall be *as per* the Motor Vehicle Act (MVA), 1989.

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

xx) Green belt shall be developed at least in 33 % of the plant area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around the proposed pesticide unit to mitigate the odour problem. Selection of plant species shall be as per the CPCB guidelines.

xxi) All the commitments made during the Public Hearing / Public Consultation meeting held on 21st December, 2010 shall be satisfactorily implemented and adequate budget provision should be made accordingly.

1.2.23. Coke Oven Plant (2,37,600 TPA), Coal Washery (66,000 TPA), Slurry Washery (5,28,000 TPA) and Captive Power Plant (WHRB, 6 MW) at Plot No. 116-178, 179(Part)189, 205-211, 294-331, 332(Part), 333 (Part), 334-360, 466-500, Village Hirodih, P.S. Jainagar, District Kodarma in Jharkhand by **M/s Jupiter Ispat Private Limited (TOR to EC)**

The above proposal was considered in the 37th Meeting of the Expert Appraisal Committee (Industry-1) held during 14th & 15th June, 2012. After detailed deliberation, the Committee recommended the project for environmental clearance subject to submission of revised diagram of coke oven plant and stipulation of specific conditions along with other environmental conditions.

The plant layout showing various facilities including the coke oven plant and the drawings of the coke oven plant were submitted by the proponent and found satisfactory by the Committee. The Committee recommended the project for environmental clearance subject to stipulation of following specific conditions along with other environmental conditions.

1. Measures shall be taken to mitigate PM levels in the ambient air. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided.

2. Stack monitoring facilities for all the major stacks and adequate air pollution control systems viz. dust catchers or cyclones, Multi stage scrubber, bag filters etc. to control particulate emissions t within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standards notified under E (P) Act shall be followed. The reports shall be submitted to the Ministry's Regional Office at the Bhubaneswar, CPCB and SPCB.

3. Multi stage scrubber shall be installed to control gaseous and dust emission from the coke oven stack. Measures shall be taken to prevent leakages from the coke oven plant.

4. The prescribed emission standards for coke oven plants, as notified vide notification no. GSR 46 (E) dated 3rd February, 2006 and subsequently amended shall be complied with.

5. In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.

6. Secondary fugitive emissions shall be controlled within the prescribed limits, regularly monitored and records maintained. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.

7. Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during

loading and unloading of the raw material and finished product. Efforts shall also be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. Vehicular emissions shall be regularly monitored and records kept.

8. Total requirement of the water shall not exceed 623 m^3/day. All the treated wastewater shall be recycled for dust suppression and green belt development. Domestic wastewater shall be treated in septic tank followed by soak pit and used for green belt development. Zero effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.

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

10. Waste from the hard coke unit, shall be provided to the briquette manufacturing units. Coal and coke fines shall be recycled and reused in the process. The bag filter dust shall be used for land filling. The waste oil shall be properly disposed off as per the Hazardous Waste (Management, Handling, Handling and Transboundary Movement) Rules, 2008.

11. As proposed, green belt shall be developed in 33% of plant area within and around the project site to mitigate the impact of fugitive emissions as per the CPCB guidelines in consultation with local DFO.

12. The recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Coke Oven Plants shall be implemented.

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

14. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 23rd October, 2011shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.

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

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.

1.3.0 Any Other Items

1.3.1. Amendment in Environmental Clearance ; M/S Kanishk Steel Industries Ltd., New No. 26,MookerNallamuthu Street, 2nd floor, Chennai-1 by **M/s Kanishk Steel Industries Ltd.- regarding Amendment in Environmental Clearance**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/61/2007-IA II (I), dated 29.5.2008. The PP has requested for amendment in the above EC for addition of two more kilns without increasing the production capacity. The reason given by the proponent for the said amendment is that, the existing sponge iron kilns are operating only at 60% efficiency and to meet the required waste heat, char & char fines for the CPP and the economic viability of project, the rated/consented/EC granted production capacity need to be met.

The committee did not accede to the requested amendment and recommended that, if desired, the proponent may submit revised proposal for replacement of old kilns with new kilns.

1.3.2. Amendment to the Environmental Clearance issued to the Cement Grinding Unit(2.2 MTPA) at Bhilai Steel Plant Complex,Bhilai in Chhattisgarh by **M/s BhilaiJaypee Cement Limited. -regarding Amendment in Environmental Clearance.**

The above proposal was accorded environmental clearance by MoEF vide letter no. J-11011/1001/2007-IA II (I), dated 1.5.2008 and an amendment dated 19.4.2012 for manufacture of PPC on need basis in addition to PSC. The PP requested for amendment in the above EC for storage of coal in covered sheds instead of silos. It was submitted that, in Table 2.5 of EIA report submitted prior to EC it was mentioned that coal would be stored in covered shed and it is technically not feasible to store the coal in silos due to increase in the probability of catching fire.

The Committee recommended the project for the amendment in environmental clearance dated 1.5.2008 for storage of coal in covered sheds instead 1of silos.

1.3.3. Extension of Validity of Terms of Reference(TOR) for further period of 2 years i.e. up to 15/07/2014 situated at Village –Thaiberna & Juniyani, Tehsil -Bonai, Distt.-Sundergarh,Orissa by **M/s Shyam Steel Industries Limited-regarding Extension of Validity**

The above proposal was accorded ToRs by MoEF vide letter no. J-11011/107/2010-IA II (I) dated 15.7.2010. The PP vide letter dated 26.3.2012 has requested for extension of validity of ToRs by 2 years for submitting the EIA report. It was informed that, out of the project area of 200 acres, only 142.12 acres was acquired through Govt. of Orissa. Balance 57.88 acres of Private/Govt. land acquisition is under process and will take further 6-9 months. The plant layout could not be finalized for the pending land acquisition.

The Committee noted that the land acquisition matter is subjudice in Hon'ble Supreme Court and hence, decision shall be taken after the Judgment/clear directions.

1.3.4. **Organic Chemical Manufacturing Unit (84,500 MTPA) at Plot No. N 73, Additional Ambernath Industrial Area, Tehsil Ambernath, District Thane, Maharashtra by M/s Godrej Industries Ltd. – regarding Amendment in Environmental Clearance.**

Environmental Clearance was accorded by the Ministry vide letter dated 13th September, 2012 for Organic Chemical Manufacturing Unit (84,500 MTPA).

Now, the project proponent informed that unit has acquired additional plot no. GB-1/1 from MIDC measuring 4.5 acres to develop greenbelt in 7 acres. The aforesaid information has been mentioned in the their various documents such as pre-feasibility report, additional information and salient features. Project proponent has also submitted a copy of possession receipt of the plot dated 28th July, 2010 by MIDC, plot plan by MIDC and agreement to lease dated 20.12.2010.

After detailed deliberations, the Committee recommended the proposal for amendment to the existing environmental clreance for inclusion of additional plot no. GB-1/1 from MIDC measuring 4.5 acres to develop greenbelt in 7 acres.

1.3.5. **Clarification on applicability of EIA Notification, 2006 regarding setting up of an industry to manufacture furnace oil and carbon black from used tyre and other rubbers.**

Department of Environment, Government of Maharashtra has requested for clarification regarding applicability of EIA Notification, 2006 regarding setting up of an industry to manufacture furnace oil and carbon black from used tyre and other rubbers. It is noted that unit has proposed to process recycled/used tyres/ other rubbers as raw materials for producing furnace oil and carbon black. The technology will be based on pyrolysis. Whereas petrochemicals are chemical products which are derived from petroleum and its derivatives. Therefore, processing of recycled/used tyres/ other rubbers for producing furnace oil and carbon black does not attract the provisions of EIA Notification, 2006. However, the unit is required to obtain the requisite consent to establish/operate under Water (Prevention & Control of Pollution) Act and the Hazardous Waste (Management, Handling and Transboundary) Movement Rules, 2008 as may be applicable in such cases.

1.3.6. **Clarification regarding requirment of environmental clearance for setting up a electronic waste dismantling and processing unit by M/s Tierra Enviro Pvt. Ltd.**

Rjasthan State Pollution Control Board has requested MoEF for clarification regarding requirment of environmental clearance for setting up an electronic waste dismantling and processing unit. It is noted that matter relates to set up a unit for electronic waste processing for recovery of copper, glass, iron, aluminium etc. Recycling and dismantling of e-waste are covered under e-waste (Management & Handling) Rules, 2011. Unit has to obtain authorization and registration from the State Pollution Control Board/Central Pollution Control Board as may be applicable under the Rules. With regard to the process specified under e-waste (Management & Handling) Rules, 2011, clearance under Environmental Impact Assessment Notification, 2006 is not required.

1.3.7. **API Bulk Drug Unit (1.455 TPM) at Plot No.A1/2110 & 2111, 3rd phase area, Notified Industrial Estate, Village GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat by M/s Swati Spentose Pvt. Ltd. –TOR reg.**

This project proposal was considered in 35th EAC (I-2) meeting held during 11th -12th May, 2012. Following correction may be done in para 1.0 of item no. 35.3.32 in the minutes of EAC meeting:

For :

" *All the Synthetic Organic Chemical (Bulk Drugs) Units located outside notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level*."

Read:

"*All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised by Expert Appraisal Committee*."

1.3.8. Formaldehyde Plant (150 TPD) at Plot No.34 (d), Phase-III, Tehsil Sitarganj, District U.S. Nagar, Uttarakhand by **M/s Balaji Action Buildwell. (TOR)**

This project proposal was considered in 36th EAC (I-2) meeting held during 11th -12th June, 2012. Following correction may be done in para 7.0 of item no. 36.4.11 in the minutes of EAC meeting:

For :

"After detailed deliberations, the Committee exempted the public hearing under 7 (ii) 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."

Read:

"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."

25th September, 2012

1.4.0 Reconsideration of proposals

1.4.1 Expansion of Kochi Refinery (9.5 MMTPA to 15.5 MMTPA) at Sy.No.206, Village Puthencruz, Taluka Kunnathanadu, Ambalamugal, District Ernakulam, Kerala by **M/s Bharat Petroleum Corporation Limited (TOR to EC)-Site Visit Report.**

As per the recommendation of the Expert Appraisal Committee (Industry -2) in its 34th meeting held during 13th -14th April 2012, a sub-committee comprising three EAC members and representative of the Ministry visited the project site to assess the existing environmental scenario and suggest additional measures to improve the environmental status.

Site visit was conducted by the subcommittee on 22nd June, 2012 and following officials were present:

(A) From BPCL-Kochi Refinery

1. Shri. John Minu Mathew = Executive Director – BPCL KR
2. Shri. Tomy Mathews = GM (Technical)
3. Shri. Prasad k Panicker = GM (Operations)
4. Shri. P. Kumaraswamy = GM (Projects)
5. Shri. Thomas Chacko = GM (E&AS)
6. Shri. A. Unnikrishnan = DGM(Projects)
7. Shri. P.S. Ramachandran = DGM(Projects)
8. Shri. P. Murali Madhavan = DGM(Projects)
9. Shri. P.K. Thampi = DGM(Manufacturing)
10. Shri. Radhakrishna Pillai = DGM(OM&S)

(B) From Central Pollution Control Board

1. Shri Paritosh Kumar.

(C) **From Kerala State Pollution Control Board**

1. Smt. Mythilli, Chief Engineer

(D) From Expert Appraisal Committee (Industry -2), MoEF

a). Shri M B Lal, Chairman

b). Shri R.K. Garg, Vice-Chairman
c). Shri Rajat Roy Choudhary, Member

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

1. A. N Singh, Dy. Director

Representatives from M/s Bharat Petroleum Corporation Limited welcomed the Sub-committee. They made a short power point presentation before the field visit. They informed the subcommittee that the capacity expansion by 6.0 MMTPA will be carried out by installing a new state of art Crude distillation unit (CDU) of 10.5 MMTPA so as to replace the existing old 4.5 MMTPA CDU-1 which is not energy efficient. Associated process units like Delayed Coker Unit (DCU), Petrochemical Fluidised Catalytic Cracker Unit (PFCC), Vacuum Gas Oil Hydro Treater (VGO HDT), Diesel Hydro Treater (DHDT), Sulphur Recovery Unit (SRU), Hydrogen Generation Unit (HGU), Sour Water Stripper, marketing terminal in Irumpanam etc are included in the project. Matching utilities and off site facilities are also envisaged as part of the project. The major facilities like Delayed Coker Unit, VGO Hydro Treater, Crude / Vaccum Distillation units, Diesel Hydrotreater, Delayed Coker Units etc are being conceived in an approx.. area of 140 acres adjoining the refinery in the existing housing colony. BPCL has also confirmed that no additional land will be acquired. The Subcommittee was informed that this area is adjoining the Fertiliser and Chemical Travancore Limited (FACT).
After presentation, the subcommittee went round the plants and specifically visited the following sections:

New Effluent Treatment Plant:
Detailed process was explained to the Sub-committee members and necessary clarifications were given. The treated water from the new ETP (ETP-IV) is passed through guard ponds (3 nos.) and then the final effluent is discharged to the common drain (i.e. Fertiliser and Chemical Travancore Limited) outside the battery limit of BPCL-KR, which is finally meeting into Chitrapuzha River.

Outlet –A:
Sub-committee were taken to this place where the final effluent alongwith overflow from the pondis discharged to drain leading to the nearby Chitrapuzha river. It was observed that an ultrasonic flow meter is provided at the outlet area to monitor the flow of the drain. The water sample was drawn for visual inspection of the members. The consented discharge quantity is 410 M^3/hr and the same quantity will be maintained post IREP also.

Eco Park:
Kochi Refinery has a well developed Eco Park with an area of around 6 acres.

Tank Farm area (Tanks 16/17/18):
There were 3 tanks in this area with a total capacity of 165000 M^3. The performace of the fire fighting system around these tanks was demonstrated.

New Crude Distillation Unit:
Subcommittee members were shown the crude distillation and vaccum distillation units.

Rain Water Harvesting Pond:
Kochi Refinery has a Rain water harvesting pond with a capacity of 175000 M^3, which was shown to the members.

OBSERVATIONS:

During site visit following observations were made:

1. Refinery is bisected by the PWD road. Major part of the refinery is adjoining FACT and HOC. However, in the other part, between HOC and Kochi Refinery there are some habitants. Area proposed for locating the expansion units is adjoining FACT and away from habitation.
2. While going round the plant the Committee found the housekeeping quite good.
3. General air environment in and around the plant (Refinery) did not show any major pollution problem except some odour typical of hydrocarbon at a few locations.
4. Sub-committee was informed by the State Pollution Control Board representative that the NEERI sponsored by the Board in respect of in the area found the ambient air quality well within the standards.
5. During expansion emissions load of the major pollutants namely SO_2 will increase marginally from the existing level (but lower than the existing consented figure) due to use of low sulphur containing fuel. However, further efforts have to be made to reduce the SO_2 load in the existing operation. Due to use of low NOx burner the emission of NOx is already low.
6. The total fresh water consumption after considering recycling/reuse of treated water will be increased from 30,890 m^3/day to 62,616 m^3/day after expansion. The Committee was informed that Govt. of Kerala has already approved upto 3083.3 m^3/hr. / 74,000 m^3/day.
7. During visit in the sludge handling area, it was found that some improvement is needed in handling and intermediate storage of sludge after oil extraction.
8. The Sub-committee was provided information about the earlier EC's:

S.N.	Plant	Dated
1	3 MMTPA capacity expansion project	20th August 1991
2	Diesel Hydo Desulphurisation Project	5th March 1997

3	Capacity Expansion cum Modernisation Project (Phase-1)	19th May, 2003
4	Capacity Expansion cum Modernisation Project (Phase-2)	2nd February, 2006
5	Bottoms Upgradation Project	18th February, 2009

The sub-Committee went through the compliance of the above existing environmental clearances dated 2nd February, 2006. Compliance of the above EC's conditions were discussed and replied by the project proponent satisfactorily. Kochi Refinery has provided online continuous monitoring facilities for SO_2, NOx and CO to all the stacks. Total 24 nos. of stacks are provided in the existing refinery. Total SO_2 load from the existing refinery is about 1200 Kg/hr against the stipulated limit of 1607 kg/hr, since low sulphur fuel is being used for heaters. Sulphur recovery unit and low NOx burners have been installed. Unit has installed 4 ambient air quality monitoring stations. One more AAQMS will be installed. Online data display arrangement is made at Office Gate. It was informed that 73 nos. of piezometer wells have been installed. Construction of STP based on extended aeration is in progress and same will be completed by 30th June, 2012. STP capacity is 250 m3/day Greenbelt has been developed in 116 ha. Besides, 33 % of the project area will be added as greenbelt. As informed, the environmental clearance accorded vide letter dated 18th February, 2009 for Bottoms Upgradation Project has not been implemented and this project is merged with the proposed integrated refinery expansion project (IREP).

9. The Committee discussed the issues related to pollution raised during public hearing with SPCB representatives. It was understood that except for odour problem other complaints did not appear to be based on factual data.

RECOMMENDATIONS:

Based on the observations of the Committee during the visit and discussion with project proponent and representatives from SPCB and CPCB, the Sub-Committee recommends environmental clearance for IREP (Integrated Refinery Expansion Project) from 9.5 to 15.5 MMTPA subject to the following conditions:

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

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

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

iv. SO_2 emissions after expansion from the plant shall not exceed 1582 kg/hr and further efforts shall be made for reduction of SO2 load through use of low sulphur fuel. Sulphur recovery units shall be installed for control of H_2S emissions.

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

vi. Total water requirement from River Pariyar after expansion shall not exceed 3083.3 m^3/hr and prior permission shall be obtained from the competent authority. Industrial effluent generation will be 1400 m^3/hr and treated in the effluent treatment plant. Treated effluent shall be recycled/reused within the factory premises and remaining treated effluent will be discharged into Chitrapuzha River, which shall not exceed 410 M^3/hr. Domestic sewage shall be treated in sewage treatment plant (STP).

vii. Acoustic enclosure /silencer should be installed wherever it is possible.

viii. A study should be conducted to identify the source of odour and remedial measures to control the odour problem should be taken.

ix. Flare gas recovery system shall be installed.

x. Improvement in the sludge handling area is required and scheme for final disposal of sludge shall be prepared and submitted to the Ministry's Regional Office at Bangalore.

xi. All the effluents after treatment shall be routed to a properly lined guard pond for equalization and final control. In the guard pond, automatic monitoring system for flowrate, pH and TOC shall be provided.

The Committee discussed the site visit report as well as additional information submitted by the project proponent and accepted the recommendations and suggested to stipulate above recommendations specific conditions alongwith other environmental conditions while considering the proposal for the environmental clearance.

1.4.2 Expansion of Chloromethanes (37,000 TPA to 50,000 TPA), HFC–134a (6,000 TPA to 12,000 TPA) and Fluorospeciality (2,500 TPA to 3,000 TPA) at Village & P.O. Jhiwania, Tehsil, Tehsil Tijara, District Alwar, Rajasthan **by M/s SRF Limited(TOR to EC)-Site Visit Report.**

As per the recommendation of the Expert Appraisal Committee (Industry -2) in its 32nd meeting held during 16th–17th February, 2012, a sub-Committee comprising Shri M B Lal, Cairman, Dr. RaghunathRaje, Member and representatives of Ministry of Environment & Forests visited the project site to assess the pollution control measures being adopted in the existing plant and to suggest additional pollution control measures to be adopted in the proposed plant. Sh. S. K. R.K. Garg, Member, Dr. P. S. Dubey, member, Dr. B. Sengupta, member, EAC could not join the visit due to some unavoidable reasons.

Site visit was conducted by the subcommittee on 25th May, 2011 and following officials were present:

(F) **From M/s S R F Limited**

1. Mr. Rajeev Marwah, VP & Head of the Works
2. Mr. H. S. Dua, AVP (HR & Admin)
3. Mr. HimanshuShukla, AVP (TS, EHS & Projects)
4. Mr. K. Chalam, AVP (Production-FC)
5. Mr. Manoj Mishra, AVP (Production –FC)
6. Mr. A K Goel, AVP (Production – FS)
7. Mr. Shyam Singh Rathore, CM (Administration)
8. Mr. Sanjay Katiyar, Manager (EHS-FC)
9. Mr. Vishal Kumar Choubey, Manager (EHS-FS)
10. Mr. Anil Ojha, Manager (TS)

(G) From Ministry of Environment & Forests

1. Sri LalitBokolia, Member Secretary, EAC

2. Sri A. N. Singh, Dy. Director.

Representatives from M/s SRF Limitedwelcomed the sub-Committee. They made a short power point presentation before the field visit. They informed about the existing and proposed facility. Its chemicals business unit at Alwar is presently dealing in Refrigerant-22, Chloromethanes, HFC-134a, fluorospeciality& Hydrofluoric Acid. Unit is now proposed for expansion in production capacities. Following products will be manufactured:

S. N.	Products	Existing Capacity (TPA)	Proposed Expansion (TPA)	Capacity after expansion (TPA)
1	Chloromethanes	37,000	13,000	50,000
2	HFC - 134a	6,000	6,000	12,000
3	Fluorospeciality	2,500	500	3,000
4	Hydrofluoric Acid Plant	12,000	Nil	12,000

Unit has also proposed for expansion of CPP (from 7.2 MW to 10.2 MW), which will be based on coal and rice husk as fuel.They mentioned about the pollution control measures taken by them such as process emission control system, treatment of industrial effluent, safety, ETP sludge & fly ash management and green belt development etc.

After presentation, the subcommittee went round the plants, specifically visited the following areas:

Effluent treatment plant, Chlorine gas handling area, CPP/boiler and production areas. During site visit following observations were made:

i. On the whole, plant area housekeeping was found to be good. Layout of plant appears to be well planned and spacious.

ii. Chlorine storage and handling facility has been created to handle bullets (2 nos. 90 MT) and 190 tonners. Operation area has been provided with flexible hood, suction device alonwith hypo scrubber. Water sprinkling system for safety was found in working condition. Chlorine sensors (4 nos.) have been found installed. Subcommittee suggested that some valves of chlorine areas need to be painted.

iii. Process effluent (200 m^3/day) is being treated in the effluent treatment plant. As informed existing ETP capacity is 350 m^3/day. ETP is based on chemical treatment. Sludge drying beds (6 nos.) have been provided. ETP sludge contains CaF_2 is recycled back to the process.

iv. Existing capacity of coal fired CPP is 7.2 MW. It was informed that unit has existing coal fired (30 TPH) boiler from which 7.2 MW power is being generated. Besides, coal fired boiler (15 TPH) and husk fired boiler (15 TPH) are installed for steam generation, which will be used for power generation. Therefore, expansion of the CPP will be done without new installation. Fly ash is stored in silo (2nos. x 150 T) and transferred from boiler to silo in a closed conveyor. It was informed that unit has made agreement with cement plant namely Shree cement.

v. It was informed that greenbelt is developed in 12.24 ha. It was observed that there is gap in plantation around the manufacturing unit. Therefore it was suggested that focus should be given to thick greenbelt around the plant.

Ministry has accorded environmental clearance for the following existing unit:

S.N.	Project	File No.	Dated
1	Expansion of multipurpose Fluorinated Speciality (Organic) Chemicals Plant	J-11011/472/2007-IA II (I)	19th/25thMarch, 2008

The sub-Committee went through the compliance of the above existing environmental clearances.Ventury scrubber & absorption system have been installed for absorbing HCl& Cl_2in CMS (Chloro-methanes) plant, HF in HF & HFC 134 a plant, HF, HCl and Cl_2 in MPP/FCP(Multi-purpose Plant/Fluorospeciality)Plant. Online monitoring system for the process emissions viz HF in stack attached central absorption system, Cl_2 in the vent of wet scrubber for hypo plant and PM in boiler stack have been provided.Lean HCl, dilute HF & ETP sludge contains $CaF_2$are being recycled/reused within the process. Process effluent is treated in ETP. Sewage is treated in STP. Treated effluent is recycled /reused within factory premises. Fly ash is sent to the brick /cement manufacturers. The compliance report was found to be satisfactory. Subcommittee also enquired about one of the issues raised during public hearing i.e. accident leakages of the gas causing damage to the crop. It was clarified that the issue raised is 18 years old and were addressed by the unit. After discussion with the project authorities and visit to the plant, the Sub-committee recommends following:

The proposed expansion of unit may be recommended with the following stipulations:-

i) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended time to time shall be followed by the unit.

ii) Adequate scrubbing system shall be provided to the process vents to control process emissions. The scrubbing media shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters.

iii) Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th September, 2009. The levels of PM_{10}, SO_2, NO_X, CO, HCl, Fluoride, Chlorine and VOC shall be monitored in the ambient air and emissions from the stacks and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the RSPCB.

iv) Continuous monitoring system for VOCs and chlorine shall be installed at all important places/areas. Effective measures shall be taken immediately, when monitoring results indicate above the permissible limits.

v) Proper hood alongwith suction facility and scrubbing arrangement should be provided in the chlorine storage area. Alarm for chlorine leakage if any in the liquid chlorine storage area shall be provided alongwith automatic start of the scrubbing system.

vi) Stack monitoring of incinerator shall be carried out as per CPCB guidelines.

vii) Solvent management shall be carried out as follows :

a) Reactor shall be connected to chilled brine condenser system

b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.

c) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery

d) Solvents shall be stored in a separate space specified with all safety measures.

e) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.

f) Entire plant shall be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

viii) Total fresh water requirement from ground water source shall not exceed to 2921 m^3/day after expansion and prior permission shall be obtained from the concerned department.

ix) As proposed, Industrial wastewater generation shall not exceed 1419 m^3/day. Process effluent and utility effluent shall be segregated and treated in ETP. Treated effluent shall reused/recycled within factory premises. Domestic sewage shall be treated in STP. Water quality of treated effluent shall be monitored regularly and monitoring report shall be submitted to the RSPCB.Water quality of treated effluent shall be monitored regularly.

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

xi) As proposed, process effluent sludge containing CaF_2 shall be recycled 100% into the process. Spent oil shall be sent to authorized recyclers.

xii) Greenbelt should be developed in 33 % of total land. Thick greenbelt shall be developed around the factory premises.

The Committee discussed the site visit report as well as additional information submitted by the project proponent and accepted the recommendations and suggested to stipulate above recommendations specific conditions alongwith other environmental conditions while considering the proposal for the environmental clearance.

1.4.3 Setting up of 0.3 MTPA Non-recovery Coke Oven Plant along with 25 MW waste heat recovery Captive Power Plant at Blast Furnace Unit, Plot No. 456 & 457, Baikampady Industrial Area, Panambur, District Mangalore, Karnataka State by **M/s KIOCL Limite (TOR to EC).**

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

1.5.0 Consideration of the Projects:

1.5.1 **Pesticides Manufacturing unit (18800 MTPA) at Plot No. 772 P, GIDC Industrial Estate, Jhagadia, District Bharuch Gujarat by M/s Yogleela Cropscience Pvt. Ltd. (TOR to EC)**

The project authorities and their consultant (Eco Chem Sales & Services "20") gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 22nd Meeting of the Expert Appraisal Committee (Industry) held during 29th– 30th April, 2011 for preparation of EIA/EMP. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Yogleela Cropscience Pvt. Ltd. has proposed for setting up of Pesticide Manufacturing Unit at GIDC Industrial Estate, Tehsil Jhagadia, District Bharuch, Gujarat. Umravati river is flowing about 5 Km. Ankleshwar is located at 15 Km. No national park /wildlife sanctuary is located within 10 Km. Total plot area is 25,702.5 m^2. Total project cost is Rs. 3265.00 Lakhs. Rs. 3.00 Crore and 80 Lakh are earmarked towards capital cost for pollution control measures and recurring cost per annum. A copy of land possession letter by the GIDC is submitted. Following products will be manufactured:

S.N.	Products	Production Capacity (MTPA)
1	Metribuzin	200
2	Pendimethalin	200
3	Pretilachlor	200
4	TrichlopyrButotyl	100
5	ClodinafopPropargite	100
6	Mancozeb	10000

	or Maneb	6000
	Or Zineb	6000
	Or Propineb	6000
7	Difenoconazole	100
8	Hexaconaole	100
9	Propiconazole	100
10	Tebuconazole	100
11	Tricyclazole	100
12	Buprofezin	100
13	Hexythizox	100
14	Methamidophos	100
15	Monocrotophos	2400
16	Poly Phenol Methane Sulphonate Sodium Salt	2400
17	Poly Naphthalene Methane Sulfonate Sodium Salt.	2400
	Total	18,800

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during October, 2011 – December 2011 and submitted data indicates PM_{10} (60-85ug/m^3),$PM_{2.5}$ (29.10-48ug/m^3), SO_2 (8.20-12.4ug/m^3) and NO_x (10.4-15.70ug/m^3). Incremental concentration due to proposed project was estimated to be SPM (0.353ug/m^3), SO_2 (0.113ug/m^3),NOx (1.08ug/m^3), HBr (0.043ug/m^3) and HCl(0.092ug/m^3).Water scrubber alongwith stack height will be provided to Herbicide plant and Fungicide plant to control process emissions i.eHCl and HBr. Caustic scrubber alongwith adequate stack height will be provided to Incinerator. Stack height (30 m) will be provided to gas fired Boiler 1 & Boiler 2. Stack height (30 m) will be provided to spray drier. Stack height (10 M) will be provided to tray drier. Water requirement from Jhagadia GIDC water supply will be 280.84 m^3/day. Industrial wastewater generation will be 261.79 m^3/day. The process wastewater will be segregated into toxic and non toxic effluent stream. Highly toxic wastewater stream will be incinerated. Toxic wastewater stream will be given primary treatment and treated water will be sent to steam stripper followed by MEE. Non toxic stream comprising domestic and utilities alongwith some stream of process and condensate from MEE will be treated in ETP comprising biological treatment and tertiary treatment. Treated wastewater will be discharged to GIDC drain.

ETP sludge and incineration residue will be sent to TSDF. Waste oil/ spent oil will be used as GPCB recycler/re-processor. Used filters/filter cloths, used hy-flow material, residue incineration and expired pesticides will be incinerated. HCl, HBr, NABr, KBr, Ammonium Sulphate will be used as byproduct. Green belt will be developed in 8525 m^2 of the plant area. Power requirement will be 1000 KVA, which will be met from Dakshin Gujarat Vij Company Ltd. DG set (350 KVA) will be installed for emergency back up.

After deliberations, the Committee desired following additional information:

1. BOD, DO and COD to be monitored in the surface water.
2. Ground water analysis shall be rechecked.
3. Effluent characteristics for toxic, high TDS and low TDS effluent stream shall be estimated. Effluent treatment scheme shall be provided based on the effluent characteristics.
4. Solvent residue to be given to cement plant.
5. Layout map indicating greenbelt shall be submitted. Greenbelt width to be mentioned.

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

1.5.2 Pesticide Manufacturing Unit and Phosphoric Acid Plant (50 TPD) at Sy. No. 179,178,176 (Dontamuru Village) & 4 (Balabhdrapuram) Mandal Bikkavolu & Rangapet, District East Godavari, Andhra Pradesh by **M/s K.P.R. Chemical Limited (TOR to EC)**

The project authorities and their consultant (Pioneer Enviro "70") gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 24th Meeting of the Expert Appraisal Committee (Industry) held during 22nd–23rd June, 2011 for 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 K.P.R. Chemical Limited has proposed for setting up of Pesticide Manufacturing Unit and Phosphoric Acid Plant (50 TPD) at 179,178,176 (DontamuruVillage) & 4 (Balabhdrapuram) MandalBikkavolu&Rangapet, District East Godavari, Andhra Pradesh. Total plot area is 138.6 acres. Project cost is Rs. 400.00 Crores. Rs. 22.00 Crores and Rs. 4.15 Crores are earmarked towards capital cost and recurring cost/annum respectively. No forest land is involved. No Notional parks/Wildlife sanctuary/ Eco- sensitive area is located within 10 Km. Following products will be manufactured:

S.N.	Products*	Capacity (MTPA)
1.	Acephate	1800
2.	Profenofos	1800
3.	Hexaconozole	480
4.	Buprofezine	600
5.	Propiconozole	480
6.	Tricyclazole	600
7.	Thiophenate Methyl	360
8.	Metalaxyl	600
9.	Pretillachlor	1800
10.	Metribuzin	120
11.	Difenthiuron	240
12.	Cypermethric Acid Chloride	1800
13.	Meta PhenoxyBenzaldehyde	1800
14.	Cypermethrin	1200
15.	Alpha cypermethrin	300
16.	Permetrin	600
17.	Delta methrin	120
18.	Trichlopyr Acid	360
19.	Trichlopyr-butoxyester	360
20.	Dichlorovos	840
21.	Atrazine	1200
22.	Glyphosate	1200
23.	Bis-pyribac Sodium	120
24.	Trizophos	600
25.	Methamidophos	1200
26.	Acetamiprid	300

27.	Imidachloprid	360
28.	Indoxycarb	120
29.	Lamda-Cyhalothrin	240
30.	Lufenuron	120
31.	Chloropyrifos	1800
32.	Sodium salt of HTCP	1200
33.	Thiomethoxam	240
34.	Cyproconozole	120
35.	Cartap Hydrochloride	1200
36.	Phosphoric Acid	16500

*At a time, 20 products will be manufactured with maximum production capacity 800 MTPM.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 9 locations during September, 2011 – November, 2011 and submitted data indicates $PM_{2.5}$ (14.3-18.9ug/m^3), PM_{10} (26.1-37.2ug/m^3), SO_2 (7.8-11.9ug/m^3) and NO_x (9.2-13.5ug/m^3). Incremental concentration due to proposed project was estimated to be SPM (1.2ug/m^3), SO_2 (2.5ug/m^3) and NOx (2.3ug/m^3).Multi-cyclone followed by bagfilter will be provided to coal/husk fired boiler to control particulate emissions within 50 mg/Nm^3. 4 stage scrubbing system will be installed in the pesticides unit to control Cl2, HCl, HBr, SO_2 and CH3Cl emissions. 3 stage venture scrubbing system will be installed in phosphoric acid plant to control Fluorine emission. All process vent of tanks, reactors and the scrubbing system will be taken to standby incinerator through flame arrestor. 2 stage incinerator will be installed and design will be done as per CPCB guidelines. Solvent recovery will have three condensers with circulation of cooling water, chilled water and in tertiary condenser chilled brine is circulated to maximize solvent recovery and it also ensure no traces are released from the system.

Total water requirement from Godavari River will be 1200 m^3/day. Total effluent generation will be 500 m^3/day. Industrial effluent will be segregated into high TDS/COD effluent stream and low COD/TDS effluent stream. High TDS/COD effluent stream will be treated in ETP followed by stripper, MEE and ATFD. Low TDS/COD effluent stream will be treated in ETP comprising equalization, anaerobic digestor, primary clarifier, anaerobic oxidation, secondary clarifies followed by RO. ETP Sludge, salt from ATFD and incineration ash will be sent to TSDF. Waste lube will be sent to authorized re-processor. Organi waste will be incinerated. Ash from boiler will be sent to brick manufacturers/cement plants. Green belt will be developed in 46 acre out of 138.6 acre. Total power requirement will be 26 MW and will be met from proposed power plant at 3.0 km. Out of which, 9 MW will be required for pesticide and phosphoric plant. Coal (50 TPD) will be used as raw material.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board on 15thFebruary, 2012. The issues raised during public hearing were conversion of agriculture land into industrial, odour control facility, locking system, land for greenbelt, CSR, rain water harvesting, local employment, development of surrounding villages etc. and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

After detailed deliberations, the Committee found the EIA/EMP report adequate and recommended for environmental clearance subject to stipulation of following specific conditions alongwith other specific and general conditions:

i. Unit shall manufacture fertilizer grade phosphoric acid plant.

ii. National Emission Standards for Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3rd February, 2006 and amended time to time shall be followed by the unit.

iii. Bag filter alongwith stack of adequate height shall be provided to coal/husk fired boiler to control particulate emissions within 50 mg/Nm^3.

iv. As proposed, 4 stage scrubbing system shall be installed in the pesticides unit to control Cl2, HCl, HBr, SO_2 and CH3Cl emissions. 3 stage venture scrubbing system shall be installed in phosphoric acid plant to control Fluorine emission. The scrubbing solution shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards.

v. In order to control odour, outlet of process vents should be connected to the incinerator.

vi. Chilled brine circulation system should be provided to condensate solvent vapors and reduce solvent losses. It should be ensured that solvent recovery should not be less than 95%.

vii. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits stipulated by APPCB.

viii. All necessary steps should be taken for monitoring of chlorine& Bromine as well as VOCs in the proposed plant.

ix. Proper hood alongwith suction facility and scrubbing arrangement should be provided in the chlorine storage area.

x. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.

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

xii. Total fresh water requirement from Godavari River water supply should not exceed to 1200 m^3/day and prior permission should be obtained from the concerned department. No ground water should be used.

xiii. Industrial wastewater generation should not exceed 500 m^3/day. Effluent should be segregated into High COD, High TDS and low COD/TDS effluent streams. High TDS/COD effluent stream should be treated in ETP followed by stripper, MEE and ATFD. Low TDS/COD effluent stream should be treated in ETP comprising primary, secondary and tertiary treatment (RO).

xiv. No effluent from factory premises should be discharged outside the premises and Zero discharge should be adopted.

xv. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Transboundary movement) Rules, 2008 for management of hazardous wastes and prior permission from APPCB should be obtained for disposal of solid / hazardous waste in the TSDF. The concerned company should undertake measures for firefighting facilities in case of emergency.

xvi. Incinerator should be designed as per CPCB guidelines. SO_2, NOx, HCl and CO emissions shall be monitored in the stack regularly.

xvii. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

xviii. Bromine should be transferred in iso tanks through GPS fitted truck.

xix. The company should make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.

xx. Green belt should be developed at least in 33 % of the plant area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Selection of plant species should be as per the CPCB guidelines.

1.5.3 Expansion of Synthetic Organic Chemicals Manufacturing Unit at Plot No. 313/1, 40 shed area, GIDC Vapi, Taluka Pardi, District Valsad, Gujarat **by M/s S.M. Chemicals (TOR to EC).**

The project authorities and their consultant (Unistar Environment & Research Labs Pvt. Ltd "94") 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 27th Meeting of the Expert Appraisal Committee (Industry) held during 21st – 22nd September, 2011 for preparation of EIA/EMP.

All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised at Central Level. No public hearing/consultation is required due to project being located in notified GIDC as per stage Section 7 (i), III Stage (3), Para (i)(b) of EIA

Notification 2006. A copy of Gazette Notification dated 31st August, 2005 issued by Industries and Mines Department, Govt. of Gujarat is submitted.

M/s S.M. Chemicals has proposed for expansion of Synthetic Organic Chemicals Manufacturing Unit at Plot No. 313/1, 40 shed area, GIDC Vapi, Taluka Pardi, District Valsad, Gujarat. Total plot area is 2197 m^2 and no additional land is required. Total project cost is Rs. 197.59 lakh. Rs 9.75 lakhs and Rs 19.00 lakhs are earmarked towards capital cost and recurring cost per annum. Dadar Nagar Haveli wildlife sanctuary is located at 12 Km. Hence, no wildlife sanctuary is located within 10 Km from the project site. Damanganga River is flowing at 3.3 Km. A copy of consent order no. AWH-40619 dated 11th February, 2011 accorded by GPCB for Triphonyl Phosphita is submitted. Project proponent explained compliance status of the existing project. Following products will be manufactured:

S. N.	Products	Existing Production (MTPM)	Expansion Production (MTPM)	Total Production after expansion (MTPM)
1	Tri-phenyl phosphite	60	90	150
2	Poly phosphoric acid	00	30	30
3	Plastic Additive (i.e. Diphenyl Isodecyl phoshite, Diphenyl 2-ehtyl hexyl phosphate, Phenyl Di- isodecyl phosphate, Tri–decyl phosphate, Tri trisdecyl phosphate Tris nonyl phenyl phosphate	00	120	120
Byproducts :				
1	Hydrochloric Acid (25% - 30% Solution)	70 MT	117 MT	187

Phenol, ISO decanol, 2-ethyl hexanol, Phosphorus trichloride, phosphorous pentaoxide, phosphoric acid, Tris decyl alcohol and Tri-nonyl will be as raw materials.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during 1st October, 2011 – 31st December, 2011 and submitted data indicates PM_{10} (36-125 ug/m^3), SO_2 (16-42 ug/m^3), NO_x (13-29 ug/m^3) and VOC (4-16 ug/m^3. Incremental concentration due to proposed project was estimated to be PM10 (0.16 ug/m^3) and SO_2 (0.165 ug/m^3). Stack height (11 m) will be provided to gas fired steam boiler (1 TPH). Two stage water scrubbers are provided to glass line reactor to control HCl and Cl_2. Fresh water requirement from GIDC water supply will be increased from 20.5 m^3/day to 30.5 m^3/day. Utility wastewater will be used for make up water in scrubber. In emergency disposal of effluent will be done in CETP. Domestic wastewater will be disposed off through septic tank. 'Zero' effluent discharge will be adopted. Discarded containers will be sold to re-conditioners. Used oil will be sold to the registered refiners. A copy of membership no. 798 issued by M/a Vapi Waste & Effluent Management Co. Ltd. for disposal of hazardous waste is submitted.

Green belt is developed in 736 m^2 out of total land 2197 m^2. Power requirement from Dakshin Gujarat vij co. Ltd. will be increased from 45 KVA to 150 KVA. DG set (125 KVA) will be installed.

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

i) Ambient air quality data should be collected as per NAAQES standards notified by the Ministry on 16th September, 2009.

ii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.

iii) Stack of adequate height should be installed to gas fired boiler.

iv) As proposed, adequate scrubbing system shall be installed in to control HCl and Cl_2 emissions. The scrubbing solution shall be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards.

v) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by GPCB.

vi) Total fresh water requirement from GIDC water supply should not exceed 30.5 m^3/day after expansion and prior permission should be obtained from the concerned Authority.

vii) Industrial effluent shall be treated in ETP and treated effluent shall be discharged to the CETP after conforming the norms prescribed by GPCB. Water quality of treated effluent should meet the norms prescribed by CPCB/SPCB.

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

ix) Green belt should be developed in 33 % of the plot area.

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

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

Project proponent did not attend the meeting. The Committee decided that proposal should be considered afresh as per the priority whenever requested.

1.5.5 Bulk Drugs Manufacturing Unit (551 MTPA) at Plot No.24, 25 & 26, Raichur Growth Centre, Village Chicksugar, Tehsil & District Chicksugur, Karnataka by **M/s Raichem Medicare (P) Ltd. (TOR to EC).**

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 24th Meeting of the Expert Appraisal Committee (Industry) held during 22nd–23rd June, 2011 for preparation of EIA/EMP.

All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of specific condition due to interstate boundary within 10 km, proposal is treated as category 'A' and appraised at Central level.

M/s Raichem Medicare (P) Ltd. has proposed for setting up of Bulk Drugs Manufacturing Unit (551 MTPA) at Plot No. 24, 25 & 26, Raichur Growth Centre, Village Chicksugar, Tehsil & District Chicksugur, Karnataka. Total plot area is 15 acres. Krishna River is flowing at 7.4 Km. Karnataka and AP border is at 5.3 Km. No national park/wildlife sanctuary is located. Total cost of the project is revised from Rs. 450.00 Lakhs to Rs. 4350 Lakhs. Rs. 247.5 Lakhs and Rs. 20.35 Lakhs are earmarked toward capital cost and recurring cost per annum for pollution control measures. No court case/ litigation is pending against the project. PAs confirmed that no national park/wildlife sanctuary/ reserve forest is located within 10 Km. A copy of lease cum agreement between project proponent and Karnataka Industrial Area Development Board executed on 17th March, 2011 is submitted. Following products will be manufactured:

S.N.	Products	Production Capacity (MTPA)
1	Nifedipine	15
2	Phenyl ephedrine HCl	18
3	Sildenafil Citrate	18
4	Ursodeoxycholic acid	500
	Total	551

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during December, 2011 to February, 2011 and submitted data indicates as PM10 (31–60 ug/m3), PM2.5 (11–19 ug/m3), SO2 (4.8 – 17.5 ug/m3), NOx (5.9-12.5 ug/m3) and CO (0.1-0.5 mg/Nm3). Predicted value due to proposed expansion is PM (1.67 ug/m^3), SO2 (5.14 ug/m3) and NOx (7.015 ug/m3). Scrubber (single stage counter flow packed bed type) 4 nos. and mist eliminator will be provided in the process section to control acid mist/ VOCs. Multicyclone followed by bagfilter will be provided to biomass fired steam boiler. Adequate stack height will be provided to furnace oilfired thermic fluid heater. All the solvent used in the process will be recovered and reused. Stack (7m) will be installed to DG set (2 x 625 KVA).

Water requirement from KIADB water supply will be 143 m^3/day. Industrial effluent (66.766 KLD) will be segregated into high TDS and low TDS effluent stream. High TDS effluent

stream will be treated in ETP followed by stripper and MEE. Low TDS effluent stream will be passed through reverse osmosis (RO). Rejects from RO will be sent to MEE. Treated water will be reused for cooling tower make up and landscape development. Sewage (7.65 KLD) will be treated in sequential batch reactor (SBR). Organic process residue, residue from solvent recovery & intermittent fraction spent from solvent distillation will be sent to cement kiln for co-incineration. Spent catalyst and spent oil will be sent to authorized recycler/re-processor. Sludge from MEE will be sent to TSDF. Green belt will be developed in 5 acres. Power requirement from Raichur Power Corporation will be 1500 KVA. DG set (2 x 65 KVA) will be installed. Diesel (146.875 LPH) will be used.

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

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

i) Multi-cyclone followed by bag filter should be provided to the biomass fired boiler to control particulate emissions within permissible limit. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/APPCB guidelines.

ii) The levels of PM_{10}, SO_2, NO_X, VOC and HCl should be monitored in ambient air.

iii) Adequate scrubbing system should be provided to process vents to control process emissions. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.

iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by APPCB.

v) Total fresh water requirement from KIADB should not exceed 143 m^3/day and prior permission should be obtained for concerned authority.

vi) Trade effluent should be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE. Low TDS effluent stream should be treated in ETP and then passed through RO system. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.

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

viii) As proposed, process organic residue and spent carbon should be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The ash from boiler should be sold to brick manufacturers/cement industry.

ix) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-

Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from APPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire-fighting facilities in case of emergency.

x) Boiler ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.

xi) Solvent management should be as follows :

- Reactor should be connected to chilled brine condenser system
- Reactor and solvent handling pump should have mechanical seals to prevent leakages.
- The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
- Solvents should be stored in a separate space specified with all safety measures.
- Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
- Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

xxv) Green belt should be developed in 5 acres.

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

1.5.6 Expansion of Dispersing Agent based on Naphthalene/Phenol & Leather Chemicals (150 TPM to 3,980 TPM) at Plot No. 1734, Village GIDC Vapi, Taluka Padri, District Valsad, Gujarat by **M/s Gujarat Polysol Chemicals Pvt. Ltd. (TOR to EC)**

The project authorities and their consultant (Eco Chem Sales & Services "20") gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 25th Meeting of the Expert Appraisal Committee (Industry) held during 28th–30th July, 2011 for preparation of EIA/EMP. All the Chemical units located in GIDC are listed at S.N. 5(f) under Category 'B' due to location of the project within 10 km of interstate boundary of Dadar, Nagar & Haveli, project is treated as Category 'A' and appraised at the Central level.

M/s Gujarat Polysol Chemicals Pvt. Ltd. have proposed for the expansion of Dispersing Agent based on Naphthalene / Phenol & Leather Chemicals (150 TPM to 3980 TPM) at Plot No 1734, Village GIDC Vapi, Taluka Padri, District Valsad, Gujarat. At present, various dyes, dye intermediates and Napthalene /Phenol based 'dispersing agents are manufactured and want to reduce some existing products and introduce new leather chemicals alongwith expansion of existing dispersing agents. Total plot area of existing project is 4696 m^2 and no additional land will be required for expansion. Allotment letter for existing land is submitted. No forest, wildlife sanctuary is located nearby. Damanganga River is at 3 km and Arabian sea at 15 km. 'Consolidated Consent' and Authorization (CCA)' has been accorded by the Gujarat Pollution Control Board for the existing plant vide letter dated 28th June, 2009. Project cost for expansion

work is Rs 110 Lakhs. Total project cost after expansion is Rs. 1256.82 Lakhs. Rs. 30.00 lakhs are earmarked for environmental Pollution control measures. Plant will be operated for 300 days per annum. Following products will be manufactured:

S. N.	Product	Quantity (TPM)			Remarks
		Existing	Proposed	Total	
1.	Disperse Dyes	15	-15	0	Discontinued
2.	Resist Salt	75	-75	0	Discontinued
3.	Metanilic Acid	30	-30	0	Discontinued
4.	Naphthalene Based Dispersing Agent (Liquid)	20	2480	2500	Expansion
5.	Phenol Based Dispersing agent (Liquid)	10	190	200	Expansion
6.	Phenol based Dispersing agent (Powder)	0	300	300	New Product
7.	Naphthalene based Dispersing Agent (Powder)	0	480	480	New Product
8.	Leather Chemicals (Powder) Syntan	0	300	300	New Product
9.	Leather Chemical (liquid) Fat Liquor	0.	200	200	New Product
	TOTAL	**150**	**3830**	**3980**	

PAs informed the Committee about the raw material required for all the products, storage and handling all the hazardous chemicals, manufacturing process details of all the products and mass balance of all the products.

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 6 locations during October, 2011 to December, 2011 and submitted data indicates as PM10 (54–86 ug/m3), PM2.5 (32.56–52 ug/m3), SO2 (16.52 – 37.00 ug/m3) and NOx (12.5-26.00 ug/m3). Predicted value due to proposed expansion is SO2 (0.07 ug/m3) and NOx (0.007 ug/m3). Emissions from Steam boiler, thermopack, hot air generator, spray dryer and D.G. sets due to natural gas and HSD firing will be generated. Stacks of adequate height (11m) will be provided to gas fired boiler. Acid followed by alkali scrubber will be provided to Sulphonator to control SO_2 emissions. Carbon absorption system will be provided to control HCHO. Total water requirement from GIDC water supply will be increased from 51 m^3/day to 70.5 m^3/day after expansion. No ground water will be used. Industrial effluent (5.5 m^3/day) will be treated in effluent treatment plant (ETP) consisting of primary, secondary and tertiary treatment facilities and finally discharged into under ground effluent drainage line to CETP, Vapi for further treatment and final disposal to estuary of River Damanganga for ultimate disposal into Arabian Sea. Domestic effluent will be treated in septic tank followed by soak pit.

Solid/hazardous waste will be disposed off into approved TSDF/CHWIF of M/s VWEMCL, GIDC, Vapi. Used filter closed, sludge from wet scrubber, ETC waste, used carbon from carbon absorber will be sent toTSDF, Vapi, Gypsum Waste will be either sold to cement industries to sent to TSDF, Vapi. 'Membership' for TSDF, Vapi viz. VWEMCL for existing is obtained vide letter dated 7th May, 2003. Waste / used / spent oil and used batteries will be sold to authorized recyclers / re-processors. Green belt will be developed in 1100 m^2 out of total 4,696 m^2. Acoustic enclosure will be provided to control noise. Power (400 HP) will be required and sourced from DGVCL. 5,600 SCM/day natural gas will be used after expansion. HSD (20 l/h) will be used in D.G. sets.

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

i) Adequate stack height will be provided to gas fired boiler.

ii) The levels of PM_{10}, SO_2, NO_X, CO, and VOC should be monitored in ambient air.

iii) Two stage scrubber with caustic lye media solution shall be provided to process vents to control SO_2. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.

iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by GPCB.

v) Total fresh water requirement from GIDC water supply should not exceed 70.5 m^3/day and prior permission should be obtained from the concerned Authority. No ground water should be used.

vi) Total effluent generation should not exceed 5.5 m^3/day. Effluent should be should be treated in ETP. Treated effluent should be discharged to CETP after conforming to the standards prescribed for norms for the effluent discharge and obtaining permission from the GPCB regarding. No process effluent shall be discharged in and around the project site.

vii) Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed.

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

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

x) Green belt should be developed in in 1100 m^2 out of 4696 m^2 total land.

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

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

1.5.7 Molasses/Grain based Distillery (45 KLD), Co-generation Plant (30 MW) and Power (1.5 MW) at S.F. No. 51, Village Makavalli, Tehsil Krishnarajpet, District Mandya, Karnataka **by M/s Coromandel Sugars Ltd. (TOR to EC).**

The project authorities and their consultant (Team Lab "25") 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 20th Meeting of the Expert Appraisal Committee (Industry) held during 3rd–4th March, 2011 for preparation of EIA/EMP. All molasses based distillery (>30 KLD) are listed at S.N. 5(g) under category 'A' and appraised at Central level.

M/s Coromandel Sugars Ltd have proposed for setting up of molasses/grain based Distillery (45 KLD), Co-generation Plant (30 MW) and CPP (revised from 2 MW to 1.5 MW) at S.F. No. 51, Village Makavalli, Tehsil Krishnarajpet, District Mandya, Karnataka. Co-generation plant will be attached to the existing sugar plant. No R & R is involved. No national park/wildlife sanctuary/reserve forest is located within 10 Km. PAs have existing sugar industry (3,500 TCD). Total plot area is 24.5 acres, which include co-generation unit (14.7 acres) and distillery unit (9.8 acres) respectively. Project cost of co-gen plant and distillery unit is Rs. 100.00 Crores and Rs. 60.00 Crores respectively. Rs. 512.00 Lakhs and Rs. 190.40 Lakhs are earmarked towards capital cost and recurring cost for pollution control measures. Number of days of operation will be 300 days.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during April, 2011 – June 2011 and submitted data indicates PM_{10} (39.5-61.2ug/m^3), SO_2 (10.8-18ug/m^3) andNO_x (20.8-33.7ug/m^3). Incremental concentration due to proposed project was estimated to be PM10 (1.2 ug/m^3).ESP alongwith stack (89 m) will be provided to the Co-gen boiler (140 TPH). Bag filter alongwith adequate stack height will be provided to boiler (18 TPH). Stack (13 m) will be provided to DG set (500 KVA). In the Distillery unit, water requirement from Hemavathi River will be 450 m^3/day. Spent wash (137 m^3/day) will be evaporated in the multistage evaporator and the concentrated spent wash will be burnt as fuel in the boiler to achieve 'zero' discharge. In co-generation unit, water requirement from Hemavathi River will be 900 m3/day (on season) and 2400 m3/day (off season). Trade effluent such as R.O. reject, boiler blow down, cooling tower bleed off and sewage will be treated by combined effluent treatment plant in sugar plant premises comprising units namely screen, mixing tank, anaerobic followed by 2-stage of aerobic and clarifier.

Ash from bagasse will be used as manure.Ash from coal will be sold to cement/brick manufacturer. Settled yeast sludge (3 TPD) will be used as poultry feed. Green belt will be developed in 8.33 acres out of 24.5 acres. Suitable acoustic, barriers and enclosure will be installed to control noise pollution. Power requirement will be 1.5 MW and met from incinerator boiler (22 TPH). Power generation (30 MW) will be exported to grid. Bagasse ((1560 TPD) and imported coal (576 TPD) will be used as fuel in boiler (140 TPH).Concentrated spent wash and coal/biomass will be used as fuel.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Karnataka State Pollution Control Board on 9th December, 2011. The issues raised during public hearing were air emissions from incineration boiler, social development programme taken up by the company, map of Hemavati River, excecutive summary to be prepared in Kannada, local villagers facing air and water problems

from other distillery units, CSR activities, plantation of local species, fly ash discharge from nearby unit, local employment etc.

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

i. Distillery unit should be based on Molasses (45 KLPD)/ Grain (45 KLPD) only and production of the plant should not exceed the maximum capacity defined i.e. should never exceed 45 KLPD.

ii. As proposed, Electrostatic precipitator (ESP) alongwith stack of adequate height should be provided to boiler (140 TPH) to control particulate emission within 50 mg/Nm^3. Bag filter alongwith stack of adequate height should be provided to boiler (18 TPH) to control particulate emission within 50 mg/Nm^3.

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

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

v. Total fresh water requirement from River Hemavathi should not exceed 10 KL/KL of alcohol (i.e. 450 m^3/day) for distillery and 900 m^3/day for cogeneration unit (30 MW + 1.5 MW) and prior permission for drawl of water should be obtained from the concerned authorities. No ground water should be used.

vi. Spent wash generation from molasses and grain based distillery should not exceed 8 Kl/Kl of alcohol and 6 Kl/Kl of alcohol respectively. Spent wash from molasses based distillery should be concentration and incinerated in the incineration boiler to achieve zero discharge. Spent wash from grain based should be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. DWGS should be dried in the dryer to form DDGS. Spentlees, effluent from utilities and cogeneration unit should be treated in effluent treatment plant (ETP) and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/ reuse.

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

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

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

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

xi. No bio-composting should be carried out.

xii. Boiler ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided. Bagasse ash and coal ash should be stored separately.

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

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

xv. All the issues raised during the public hearing/consultation meeting held on 9th December, 2011 should be satisfactorily implemented.

xvi. Green belt should be developed in 8.33 acres out of 24.5 acres to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO. Thick green belt with suitable plant species should be developed around the proposed distillery to mitigate the odour problem.

1.5.8 Grain based Distillery (100 KLPD) and CPP (2.5 MW) at Khasara No. 3/2, Village Kesala, Tehsil Itarasi, District Hoshangabad, Madhya Pradesh by **M/s Goel Agrigreen Fields Pvt. Ltd. (TOR to EC)**.

The project authorities and their consultant (Creative Enviro Services, Bhopal) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 20th Meeting of the Expert Appraisal Committee (Industry) held during **3rd–4th March, 2011** for preparation of EIA/EMP. All cane juice/non-molasses based distillery (>30 KLD) are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s GoelAgrigreen Fields Pvt. Ltd. have proposed for Grain based Distillery (100 KLPD) and CPP (2.5 MW) at Khasara no. 3/2, Village Kesala, Tehsil Itarasi, District Hoshangabad, Madhya Pradesh. PAs confirmed that this project is not located within 10 km distance from the

boundary of protected areas notified under the Wildlife (protection) Act 1972, critically polluted area, eco-sensitive area and interstate boundary. The total plot area is 78 acres. Total cost of the project is 90.00 Crores. Rs. 9.07Crores are earmarked for environmental protection measures. River Suki is located at 3 Km. No court case/litigation is pending against the project. The number of day of operation will be 300 days per annum. No rehabilitation & resettlement is involved. No national park and wildlife sanctuary are located within 10 km. Nilgarh RF (2.0 Km; NE), Ghoghra RF (5.5 Km S), DevriJhunkar RF (5.5 Km; SE) and Chaurasidev RF (6.5 Km, E) are located within 10 Km. Project proponent informed that capacity of CPP has been revised from 1 MW to 2.5 MW.

Grain (250 TPD) will be used as raw materials. The manufacturing process will consist namely milling, slurry preparation, saccharification and fermentation, yeast culturing, distillation and re-distillation.

Ambient air quality monitoring was carried out at 8 locations during March 2011 – June 2011 and submitted data indicates as PM_{10} (30–65ug/m^3), SO_2 (3.0 – 15.1ug/m^3), NO_x (5.4-18.2ug/m^3) and CO (less than 1 PPM). Predicted value of ground level concentration due to proposed project is SPM (0.49ug/m^3), NOx (10.31 ug/m^3) and SO_2 (11.17 ug/m^3). ESP will be provided to boiler (40 TPH) to control air emissions. Total ground water requirement will be 953 m^3/day. Spent wash (1013 m^3/day) will be passed through centrifuge decanter for separation of solid. The part of thin slop (309 m^3/day) from centrifuge will be recycled to process. The remaining slop (671 m^3/day) will be concentrated through multi-effect evaporator (MEE) to form DWGS (97 MTPD). Solid cake and syrup will be sold as cattle feed and yeast sludge will be added to the wet cake. 'Zero' discharge concept will be adopted. Storage capacity of spent wash holding tank will be for 5 days. Yeast sludge (2 TPD) will be used as poultry feed. Fly ash will be sent to brick manufacturers. Used oil will be sent to authorized recyclers/re-processors.

Green belt will be developed in 63,000 m^2 out of 1,57,000 m^2. Power requirement will be 2.5 MW, which will be met from MPSEB and CPP. DG set (1 x 1100 KVA) will be installed. Coal (140 TPD)/ husk (24 TPD) will be consumed.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the MP Pollution Control Board on 4th November, 2011. The issues raised during public hearing were regarding water requirement, source of water requirement, air pollution, local employment, water scarcity in the area, reserve forest, ash etc. The Committee deliberated on the issues raised during public hearing and complaint received from Sh. Sammer Singh Iwane, Former Sarpanch. As regard to source of water, Project proponent responded that water requirement will be met from ground water source and own water reservoir. Water reservoir having capacity of 125 days will be created in the own land. Besides, 6 water harvesting structures will be created. Regarding impact on forest area, project proponent informed that no forest land is involved in this project and adequate air pollution control equipments will be installed and grain based distillery is less polluting as compared to molasses based distillery. Project proponent also committed that local people should not be affected due to this project and various social and development activities will be carried out for surrounding villages. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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

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

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

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

iv. Total fresh water requirement from ground water source and water reservoir should not exceed 953 m^3/day for distillery and cogeneration unit and prior permission should be obtained from Central Ground Water/State Ground Water Authority.

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

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

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

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

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

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

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

xii. Boiler ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.

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

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

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

xv. As proposed, green belt should be developed in 63,000 m^2 out of 1,57,000 m^2. and plantation shall be done as per the CPCB guidelines in consultation with DFO. Thick greenbelt with suitable plant species shall be developed around the proposed distillery to mitigate the odour problem.

xvi. All the commitment made regarding issues raised during the public hearing/consultation meeting held on 4th November, 2011 shall be satisfactorily implemented.

1.5.9 Drilling of exploratory cum additional development 35 wells in Bakrol Oil & Gas Block, Cambay Basin (Onshore), Ahmedabad, Gujarat **by M/s Selan Exploration Technology Limited – (TOR to EC).**

The project authorities and their consultant (Kadam Environmental Consultants "6") 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 21st Meeting of the Expert Appraisal Committee (Industry) held during **23rd–24th March, 2011** for preparation of EIA/EMP. All the Offshore and Onshore oil and gas exploration, development and production projects are listed at S.N. 1(b) under Category 'A' and appraised at the Central level.

M/s Selan Exploration Technology Limited have proposed for the drilling of exploratory cum additional development wells (35) in Bakrol Oil & Gas Block, Cambay Basin (Onshore), Ahmedabad, Gujarat. Environmental clearance for drilling of 5-10 wells in the Block is accorded vide Ministry's letter No.J-11011/442/2007/IA-II-I dated 26th December, 2007. Drilling in 6 wells is carried out. Proposed 35 wells will be drilled upto 2,000 m depth below the ground level. Total project area is 36 sq. km. covering villages Bakrol, Bhavda, Dhamatvan, KuhaniMuvadi, Bhanvadani Muvadi, Kanhba, Kunjad. Ahmedabad city is 6 km (W) from Well BK-10# 8. Temporary 110 x 110 m land will be used for 1-2 months. In case of commercial discovery of oil and gas is made, site will be restricted to 70 m x 40 m for he life of the well. Production Sharing Comtract (PSC) was issued between GOI & SETL on 13th March, 1995 and physical possession was obtained from ONGCL on 17th October, 1995 for the development and production of Bakrol oil & gas field. Total cost of the project is Rs 172 Crores. No national park/wildlife sanctuary is located within 10 Km.Khari River, Meswa River, Vatrak and Sabarmati River are located within 10 Km. Coordinates of the Block are as follows:

S.N.	Name of the Field	Area (Sq. km.)	Block Coordinates		
			Points	Latitude	Longitude
1	Bakrol	36	A	23°00'38"	72°43'08"
			B	22°57'26"	72°43'08"
			C	22°57'26"	72°46'38"

			D	23°00'38"	72°46'38"

Proposed Well Locations Coordinates of Bakrol Field are as follows :

S.N	Name of Location	Latitude			Longitude		
		Deg	Min	Sec.	Deg	Min	Sec
1	BK-10 # 1	22	58	45.09	72	43	37.39
2	BK-10 # 2	22	59	9.77	72	43	25.49
3	BK-10 # 3	22	59	35.25	72	44	43.06
4	BK-10 # 4	22	59	7.14	72	45	7.07
5	BK-10 # 5	22	57	51.38	72	45	44.91
6	BK-10 # 6	22	57	44.55	72	44	51.14
7	BK-10 # 7	22	57	27.60	72	43	44.86
8	BK-10 # 8	22	59	24.36	72	43	24.04
9	BK-10 # 9	22	58	40.04	72	43	50.51
10	BK-10 # 10	22	58	18.60	72	43	11.45
11	BK-10 # 11	22	59	55.81	72	45	25.38
12	BK-10 # 12	22	58	3.49	72	44	33.67
13	BK-10 # 13	22	0	0.73	72	44	11.93
14	BK-10 # 14	22	57	40.55	72	43	18.77
15	BK-10 # 15	22	59	15.11	72	44	4.53
16	BK-10 # 16	22	59	26.11	72	45	25.30
17	BK-10 # 17	22	58	19.97	72	45	21.03
18	BK-10 # 18	22	58	29.39	72	44	31.31
19	BK-10 # 19	22	58	7.42	72	45	48.57
20	BK-10 # 20	22	59	45.30	72	45	55.97
21	BK-10 #21	22	57	42.25	72	46	11.21
22	BK-10 # 22	22	57	54.45	72	46	9.22
23	BK-10 # 23	22	57	33.80	72	43	32.81
24	BK-10 # 24	22	58	9.71	72	46	5.10
25	BK-10 # 25	22	58	22.14	72	45	36.67
26	BK-10 # 26	22	58	24.53	72	45	53.99
27	BK-10 # 27	22	59	1.60	72	43	39.14
28	BK-10 # 28	22	58	37.84	72	45	33.84
29	BK-10 # 29	22	58	40.15	72	45	51.24
30	BK-10 # 30	22	58	53.33	72	43	25.41
31	BK-10 # 31	22	59	9.86	72	45	26.98
32	BK-10 # 32	22	59	37.63	72	45	0.43
33	BK-10 # 33	22	59	32.87	72	44	25.74
34	BK-10 # 34	22	59	47.57	72	44	24.59
35	BK-10 # 35	22	58	16.50	72	44	8.57

Out of Bakrol 7 wells (Bakrol 7-14), 5 are producing oil and gas viz. BK-8,11,12,13 & 14. Earlier completed wells viz. BK-1, 2 & 5 are also revived. Now 35 wells will be drilled. In case of economic quantities of hydrocarbons are found, the well will be left with a well head in place but all drilling and testing equipment and materials will be removed from the site. Otherwise site will

be cleared, refurnished to present recovery to as near as possible the pre-existing local environment. In case of commercial discovery of hydrocarbon gas will be connected to Group Gathering Station (GGS) by 1 km long pipeline after procuring relevant clearance. Oil will be transported by tankers to Nawagam CTF of ONGC for onward transmission to Koyali Refinery of M/s IOCL at Baroda by underground pipeline. If natural gas is discovered, it will be transported to nearby trunk pipeline or marketed from well head to local consumer.

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 8 locations during summer season, 2011 and submitted data indicates as PM10 (32–84ug/m3), SO2 (8.0 – 12.5 ug/m3) andNOx (10-19.6 ug/m3). Emissions will be generated from D.G. sets. 1000-1500 m^3/day associated gas/well will be burnt through rigs equipment for 7-10 days. Total water requirement from surface water source will be 20 m^3/day per well. Effluent generation will be 5 m^3/day and stored in HDPE lined pit. Service water will be passed through oil separator to remove oil content in the effluent. Domestic effluent will be treated in septic tank followed by soak pit. No effluent will be discharged outside the premises and 'Zero' discharge will be adopted. Drilling well will generate drill cutting (50 MT) and drilling mud (500 MT) and discharged in HDPE lined pit. Disposal of drill cuttings and drill mud will be carried out in accordance wit h the GSR 546 (E) dated 30th August, 2005. Used oil will be sold to authorized recyclers. Acoustic enclosures will be provided to D.G. sets to reduce noise levels. HSD (170 l/hr) will be used in 2 DG sets during drilling operation. Blow-out-preventer (BOP) will be provided to present fluid from the formation gas gushing to the surface. Fire fightingequipments and safety measures will be as per Oil Mines Regulation, 1984.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 6thJanuary, 2012. The issues raised during public hearing were local employment, road condition, development activities, etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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

i. Ambient air quality should be monitored at the nearest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, CH_4, HC, Non-methane HC etc.

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

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

iv. The company should make the arrangement for control of noise from the drilling activity. Acoustic enclosure should be provided to DG sets and proper stack height should be provided as per CPCB guidelines.

v. Total water requirement should not exceed 25 m^3/day/well and prior permission should be obtained from the concerned agency.

vi. The company should construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage

system should be created for oil contaminated and non-oil contaminated. Effluent should be properly treated and treated wastewater should conform to CPCB standards.

vii. Drilling wastewater including drill cuttings wash water should be collected in disposal pit lined with HDPE lining evaporated or treated and should comply with the notified standards for on-shore disposal. The membership of common TSDF should be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill should be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Bhopal.

viii. Good sanitation facility should be provided at the drilling site. Domestic sewage should be disposed off through septic tank/ soak pit.

ix. Oil spillage prevention scheme should be prepared. In case of oil spillage/contamination, action plan should be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil should be disposed of to the authorized recyclers.

x. The company should comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.

xi. The Company should take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare should be explored. At the place of ground flaring, the overhead flaring stack with knockout drums should be installed to minimize gaseous emissions during operation.

xii. The company should develop a contingency plan for H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H_2S detectors in locations of high risk of exposure along with self containing breathing apparatus.

xiii. The Company should carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected should be submitted six monthly to the Ministry and its Regional Office at Bhopal.

xiv. Blow Out Preventer (BOP) system should be installed to prevent well blowouts during drilling operations. BOP measures during drilling should focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.

xv. Emergency Response Plan (ERP) should be based on the guidelines prepared by OISD, DGMS and Govt. of India.

xvi. The company should take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site should be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan should be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.

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

xviii. In case the commercial viability of the project is established, the Company should prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.

xix. Restoration of the project site should be carried out satisfactorily and report should be sent to the Ministry's Regional Office at Bhopal.

xx. Oil content in the drill cuttings should be monitored by some Authorized agency and report should be sent to the Ministry's Regional Office at Bhopal.

xxi. Under Corporate Social Responsibility (CSR), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.

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

xxiii. Company should prepare and circulate the environmental policy.

xxiv. Company should prepare operating manual in respect of all activities. It should cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual should be made available at the drilling site/ project site. Awareness should be created at each level of the management. All the schedules and results of environmental monitoring should be available at the project site office.

xxv. Remote monitoring of site should be done.

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

xxvii. Ground water analysis should be carried out at different depth to see stratification.

1.5.10 Particle Board, Pre-Lam Particle Board Pellet Board & Medium Density Fibre Board manufacturing unit at Village Anara District Kheda, Gujarat by **M/s Lavis Signature Panel Pvt. Ltd. (TOR to EC).**

The project authorities and their consultant (Anand consultants "3") gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 22ND Meeting of the Expert Appraisal Committee (Industry) held during 29th– 30th April, 2011 for preparation of EIA/EMP. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Lavis Signature Panel Pvt. Ltd. has proposed for setting up of manufacturing unit of Malamine Formaldehyde and Urea Formaldehyde at Village Anara, Tehsil Kathlal, District

Kheda, Gujarat. The total plot area is 67,523 m^2. A copy of the land registration document is submitted is submitted. No national park/wildlife sanctuary is located within 10 Km. No forest products and timber will be used. Total cost of the project is Rs. 22.65 Crores. Rs. 36.00 Lakhs and Rs. 7.17 Lakhs are earmarked towards capital cost and recurring cost/annum for pollution control measures. No court case/litigation is pending against the project. Following products will be manufactured:

S. N.	Products	Production Capacity
1	Particle Board and / or Pre-lam Particle Board and /or Pellet Board and /or Medium Density Fibre (MDF) Board	2,50,000 sheets/month (Maximum)
2	Melamine Formaldehyde	350 MTPM
3	Urea Formaldehyde	910 MTPM

Additionally, PAs informed the Committee that ambient air quality monitoring was carried out at 6 locations during post monsoon 2011 and submitted data indicates as PM10 (22.86–46.55ug/m3), SO2 (15.4 – 26.80ug/m3), NOx (26.2-44.43ug/m3) and VOC (BDL). Incremental ground level concentration due to proposed project is PM_{10} (0.34ug/m^3), SO_2 (0.06ug/m^3) and NOx (0.03ug/m^3). Dust collector alongwith stack (30 m) will be provided to coal (lignite)/firewood/saw dust/ agro waste fired thermic fluid heater and hot air generator. Stack (12 m) will be provided to DG set (500 KVA). Water requirement from ground water source will be 8.5 m^3/day. Total wastewater generation will be 4.5 m^3/day, out of which process effluent generation will be 0.5 m^3/day. Industrial effluent will be collected and pH will be corrected for 7.0. Thereafter effluent will be settled followed by evaporation of supernatant. No effluent will be discharged outside the plant premises. Domestic wastewater will be disposed off through a septic tank/ soak pit. ETP sludge will be sent to TSDF. Lubricating oil will be used for low grade lubrication of machinery. Waste board/ sheet cutting will be stored and reused in process or used as a fuel. Green belt will be developed in 23635 m^2 out of total 67,523 m^2 land area. Power requirement will be 1100 KVA, which will be met from the Madhya Gujarat Vij Company Ltd. Coal/firewood/saw dust/agro waste will be used as fuel.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 21st January, 2012. The issues raised during public hearing were local employment, use of agri waste as fuel, greenbelt, etc.and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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

i) As proposed, no phenol formaldehyde shall be manufactured.

ii) Ambient air quality data should be collected as per NAAQES standards notified by the Ministry on 16th September, 2009.

iii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.

iv) Bag filter alongwith stack of adequate height should be installed to coal (lignite)/firewood/saw dust/ agro waste fired thermic fluid heater and hot air generator to control particulate emission within 100 mg/Nm^3.

v) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by GPCB.

vi) Total ground water requirement should not exceed 8.5 m^3/day and prior permission should be obtained from the Central Ground Water Authority/State Ground Water Board.

vii) As proposed, Industrial effluent will be treated in ETP. Treated effluent should be reused/recycled within the factory premises. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.

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

xxvii) Green belt should be developed in 23635 m^2 of the plant area. The selection of the plant species shall be as per CPCB guidelines in consultation with DFO.

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

1.5.11 **Polyester Resin (3 MTPD) Manufacturing Unit at Block No. 441, Plot No. 12/A-1 to 12/A-7, Village Pipodara, Taluka Mongral, District Surat, Gujarat by M/s Satyam Chemical Industries. (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 the Synthetic Organic Chemical Units are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Satyam Chemical Industries have proposed for setting up of Polyester Resin (3 MTPD) Manufacturing Unit at Block No. 441, Plot No. 12/A-1 to 12/A-7, Village Pipodara, Taluka Mongral, District Surat, Gujarat. Total project cost is Rs. 25.0 Lakhs. No national park/reserve forest is located within 10 Km. River Tapi is flowing at 8 Km. Total plot area is 816 $m^{2.}$ Recurring cost of implementation of EMP is 2.0 lakh per annum.

Phthalic anhydride (655 kg/day), Malic Anhydride (425 Kg/day), Prophlene Glycol (35 Kg/day), Diethylene Glycol (550 Kg/day), Ethylene Glycole (145 Kg/day), stgrene Monomer(1100 Kg/day), Hydroguinon (150 Kg/day) will be used as raw materials. Multicyclone separator followed by Stack ht (30m) will be provided to Thermo Pack boiler. Water requirement will be 1.850 m^3/day. Coal (1 MTPD) will be used as fuel. Power requirement will be 30 HP. Power requirement will be 30 HP and Green belt will be developed in 250 m^2. used oil (50 LPA) will be sent to authorized recyclers/re-processor.

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

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework
5. A map indicating location of the project and distance from severely polluted area.
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
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 greenbelt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of two AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, NOx 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 water and noise monitoring should also be included.

19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
26. Permission for the drawl of 1.850 m^3/day water from the concerned authority. Water balance chart including quantity of effluent generated recycled and reused and discharged.
27. Action plan for Zero Discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out.
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. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
32. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
33. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
34. Risk assessment for storage for chemicals/solvents and phosgenes. Action plan for handling & safety system, whenever any cyanide is involved in process.
35. An action plan to develop green belt in 33 % area. Layout indicating proposed greenbelt should be submitted.
36. 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.
37. 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.

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
42. (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.
43. (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.

The following general points should be noted:

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

vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.

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

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 report alongwith Certificate of Accreditation issued by the QCI should be submitted to the Ministry for obtaining environmental clearance.

1.5.12 **Spur Line Project from Awa (District Pali) to Salawas, Near Jodhpur alongwith Augmentation of Tankages at Salawas, Rajastha by M/s Hindustan Petroleum Corporation Ltd. (TOR**)

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All oil & gas transportation pipeline (crude and refinery/petrochemical products), passing through national parks/sanctuaries/coral reefs/ecologically sensitive areas including LNG Terminal are listed at S.N.6 (a) under category 'A' and appraised at Central level.

M/s Hindustan Petroleum has proposed for spur line project from Awa (District Pali) to Salawas, Near Jodhpur alongwith augmentation of Tankages at Salawas, Rajasthan. The proposed pipeline rout does not cross any reserve / protected / social forest. However pipeline is passing through road side strip, which is declared as protected forest. The pipeline does not pass through any national parks/sanctuaries/coral reefs /ecological sensitive areas. Pipeline will be buried at a minimum depth of 1.2 m. Salawas village is declared as critically polluted area.

Proposed cross country multiproduct white oil spur pipe line will transport petroleum product like MS, HSD and SKO from the existing Awa pumping station of Mundra-Delhi Pipeline (MDPL) to existing marketing depot at Salawas (Near Jodhpur), Rajasthan.
Following facilities will be installed:-

(i) Underground cross country pipeline of 92.22 kms in length.

(ii) One no. of product dispatch station at Awa with a big launcher facility.

(iii) One no. of product receiving station at Salawas with big receiving facility.

(iv) Following tanks with additional infrastructure requirement at Salawas will be provided:

Product	Proposed New Tankage KL
MS	3 x 3500 KL
Sump tank	2 x 22 KL each at Salawas receiving station.

Water requirement during construction will be 100m^3/day and met from water tanker. Sewage will be disposed off through septic tank followed by soak pit. Power requirement at Salawas will be 250 KVA. DG Set (250 KVA) will be installed as standby arrangement.

The Committee noted that project proposal falls under critically polluted area, i.e. Salawas village. As per Ministry's O. M. dated 13th January, 2010, Ministry has imposed moratorium on consideration of project. As on date, moratorium has not been lifted in respect of Salawas village. Therefore, project can not be considered for award of TOR.

1.5.13 **Expansion of Drug Manufacturing Unit (from 655.40 MTPM to 1480 MTPM) at Block No. 21, Village Dabhasa, Taluka Padra, District Vadodara, Gujarat by M/s Lupin Limited. (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 Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central level.

M/s Lupin Ltd. has proposed for expansion of drug manufacturing unit (from 655.40 MTPM to 1480 MTPM) at Block No. 21, Village Dabhasa, Taluka Padra, District Vadodara, Gujarat. Total plot area is 1,17,293 m^2. No forest land is involved. No court case is pending against the project. Mahisagar River, Padra Pond and Dabhasa Pond are located within 10Km. Project cost of expansion is Rs. 190 Crores. Following products will be manufacturing:

GROUP	SR.NO	FINAL NAME OF PRODUCT LIST	EXISTING PRODUCTION (T/A)	TOTAL PROPOSED PRODUCTION (T/A)
		Category : I		
A	1	1-(3-CHLOROPHENYLE)-4-(3-CHLOROPROPYLE)PIPERAZINE HYDROCHLORIDE	42	**800**
	2	1-[4-CHLOROPHENYL)(PHENYL) METHYL] PIPERAZINE	48	
	3	1-CHLORO-4-	30	

		[CHLORO(PHENYL)METHYLE]BENZENE		
	4	(4-CHLOROPHENYL) (PHENYL) METHANOL	9	
	5	2-BENZHYDRYLSULPHINYLACETIC ACID	0	
	6	S-(+)-2-AMINOBUTYRAMIDE HYDROCHLORIDE	153	
		Total	**282**	
B		**Category : II**		**200**
	7	1-AMINO INDANE	2.4	
	8	LACOSAMIDE	1.2	
	9	4-IMINO-3-AMINO RIFAMYCIN-S	0	
	10	AMISULPRIDE	0	
	11	FLUPIRTINE MALEATE	1.2	
	12	QUETIAPINE FUMARATE	0.6	
	13	ATORVASTATIN CALCUIM	12	
	14	SIMVASTATIN	0	
	15	DESVENLAFLAXINE SUCCINATE		
	16	DESVENLAFLAXINE BENZOATE	0	
	17	PRASUGREL HYDROCHLORIDE	1.2	
	18	ILAPRAZOLE	0	
	19	ESLICARBAZEPINE ACETATE	1.2	
	20	FENOFIBRATE	0	
	21	ARIPIPRAZOLE	0.6	
		Total	**20.4**	
C		**Category : III**		**300**
	22	LEVETIRACETAM	6	

	23	RANOLAZINE	0	
	24	DULOXETINE HYDROCHLORIDE	0	
	25	IRBESARTAN	0	
	26	VENLAFLAXINE HYDROCHLORIDE	0	
	27	PENTOPRAZOLE SODIUM	0	
	28	AMLODIPINE BESYLATE	0	
	29	LEVOFLOXACIN	0	
	30	ESOMEPRAZOLE MAGNESIUM	0	
	31	PREGABALIN	0	
	32	OLMESARTAN MEDOXOMIL	0	
	33	CANDESARTAN CILEXETIL	2.4	
	34	ILOPERIDONE	1.2	
	35	FEBUXOSTAT	1.2	
	36	PROGLUMETACIN MALEATE	0	
	37	NIMORAZOLE	10	
	38	ENTACAPONE	0.6	
	39	ITOPRIDE HYDROCHLORIDE	0.3	
	40	ETIRACETAM	0.6	
	41	RIVASTIGMINE	0.6	
	42	EFLETIRIZINE	1.2	
	43	CARVEDILOL	1.2	
	44	RASAGILINE MESYLATE	1.2	
	45	PRAMIPEXOLE DIHYDROCHLORIDE	1.2	
	46	FLUPIRTINE BASE	0	
	47	TRIMETHOBENZAMIDE HYDROCHLORIDE	0	

	48	FASUDIL HYDROCHLORIDE	0	
	49	RAMOSETRONE HYDROCHLORIDE	1.2	
	50	LURASIDONE HYDROCHLORIDE	1.2	
	51	CICLETANINE HYDROCHLORIDE	0	
	52	CELECOXIB	0	
	53	OMEPRAZOLE MAGNESIUM	0	
		Total	**30.1**	
		Category : IV		
	54	CLOPIDOGREL BISULFATE	2	
	55	DESLORATADINE	0	
	56	SEVELAMER CARBONATE	0	
	57	CLINDAMYCIN PALMITATE HYDROCHLORIDE	0	
	58	ARMODAFINIL	0	
	59	AZITHROMYCIN MONOHYDRATE	0	
	60	SERTRALINE HYDROCHLORIDE	6	
D	61	LANSOPRAZOLE	0	**80**
	62	DIACEREINE	0	
	63	MEMANTINE HYDROCHLORIDE	0	
	64	ESZOPICLONE	0	
	65	TOLTERODINE TARTRATE	0	
	66	DRONEDARONE HYDROCHLORIDE	1.2	
	67	FEXOFENADINE HYDROCHLORIDE	3	
	68	TRAZODONE HYDROCHLORIDE	1.2	
	69	CONIVAPTAN HYDROCHLORIDE	1.2	
	70	MIRABEGRON	0	

	71	EFAVIRENZ	0	
	72	TELMISARTAN	0	
	73	PIOGLITAZONE HYDROCHLORIDE	0	
	74	EMTRICITABINE	0	
	75	MESALAMINE	0	
	76	ZIPRASIDONE HYDROCHLORIDE	0	
	77	BAZEDOXIFENE ACETATE	1.2	
	78	RABEPRAZOLE SODIUM	0	
	79	NABUMETONE	0	
	80	NAFTOPIDIL	0	
	81	TENOFOVIR DISOPROXIL FUMARATE	0	
	82	RITONAVIR	0	
		Total	**15.8**	
E	83	**R & D PILOT PLANT TRIAL RUN PRODUCTS (BULK DRUGS AND INTERMEDIATES)**	37	**100**
F	84	1-PHENYL PIPERAZINE	18	**0**
	85	1-ACETYL-4-(4-HYDROXYPHENYL) PIPERAZINE	0.6	
	86	1-(2,3-DICHLOROPHENYL) PIPERAZINE HCL	2.4	
	87	N-(HYDROXY ETHOXY ETHYL) PIPERAZINE	12	
	88	4,4'-DIFLUOROBENZHYDRYL PIPERAZINE	6	
	89	2-CHLOROETHOXY ACETIC ACID	6	
	90	2-CHLOROETHYL AMINE HCL 70% AQUEOUS SOLUTION	18	

	91	1-METHYLAMINE METHYL NAPHTHALENE HCL	0.6	
	92	ETHYLMETHYL CARBAMOYL CHLORIDE	0.6	
	93	ANTHRACENE-9-CARBOXYLIC ACID	0.3	
	94	1,2,4-TRIAZOLO(4,3-A) PYRIDIN-3-(2H)-ONE	18	
	95	1-[2,5-BIS(2,2,2-TRIFLUOROETHOXY)PHENYL]ETHANONE.	12	
	96	PARA-NITRO-BENZOYL MALONATE.	12	
	97	DIPHENYLIODINIUM CHLORIDE.	1.2	
	98	4-IODO-2, 6-DIMETHYLANILINE	6	
	99	N-(HYDROXY ETHOXY ETHYL) PIPERAZINE.2HCL	6	
	100	BOC-VALINE	18	
	101	T2954	12	
	102	1-(2-PROPHENYL)-2-BENIMIDAZOLEIDINONE	12	
	103	RIFABUTENE	3	
	104	CAMOSTAT MESYLATE	1.2	
	105	MECLOFENAMATE SODIUM	1.2	
	106	LOSARTAN POTASSIUM	24	
	107	VALSARTAN	2.4	

	108	IRBESARTAN	2.4	
	109	RIFAXIMINE	1.2	
	110	SMM	12	
	111	SILODOSIN	1.2	
	112	PANIPENEM	1.2	
	113	FIDALRESTAT	1.2	
	114	CEFOTIAM	1.2	
	115	NIMESULIDE	48	
	116	MONTELUKAST SODIUM	1.2	
	117	FLUCONAZOLE	7	
		TOTAL	270.1	
		TOTAL QUANTITY OF PRODUCTION	**655.4**	**1480**

LIST OF BY-PRODUCTS

SR.NO	NAME OF BY-PRODUCT LIST	EXISTING PRODUCTION (T/A)	TOTAL PROPOSED PRODUCTION (T/A)
1.	SODIUM CHLORIDE	45.6	-
2.	ALUMINIUM CHLORIDE	111	-
3.	POTASSIUM BROMIDE	372	-

4.	AMMONIUM CHLORIDE	30	-
5.	AMMONIUM SULPHATE	40	-
	POTASSIUM CHLORIDE	10.70	-
6.	MANGANESE DIOXIDE	72	1785
7.	PIPERAZINE + WATER	10	1667
8.	POTASSIUM SALTS	-	3575
9.	SODIUM SALTS	-	6918
10.	AMMONIUM SALTS	-	424
11.	DIAMMONIUM TARTARTE	-	800
12.	2,3- DICHLORO 5,6-DI CYANO BENZOQUINOL	-	440
	TOTAL QUANTITY OF BY-PRODUCTS	**691.30**	**15609**

Bagfilter and adequate stack height will be provided to coal fired boiler. Caustic and water scrubber will be provide to process vents. Total fresh water requirement from ground water source after expansion will be 716 m^3/day. Industrial effluent generation will be increased from 205 to 515 m^3/day after expansion. Industrial effluent and sewage will be treated in ETP. Existing ETP will consist of primary & secondary treatment facilities. Treated effluent will be sent to CETP. Reverse osmosis plant followed by MEE and agitated thin film dryer will be provided for recovery of water. Used/spent oil will be sent to authorized recyclers. Process residue, spent carbon and off specification will be sent to common hazardous waste incineration facility. Spent catalyst will be sent to authorized recyclers/reprocessors. ETP sludge, incineration ash, spent ion exchange resin containing toxic metals and ATFD solids are sent to TSDF. Power requirement will be increased from 1800 KVA to 4317 KVA after expansion and sourced from Madhya Gujarat Vij Company Ltd. DG Sets (3 Nos. x 600 KVA) will be installed.

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

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30th May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA/EMP report.
2. Recommendation on project proposal from Gujarat Pollution Control Board to be submitted alongwith the EI report.
3. Executive summary of the project
4. Justification of the project.
5. Promoters and their back ground.
6. Regulatory framework.
7. A map indicating location of the project and distance from severely polluted area.
8. Project location and plant layout.

9. Infrastructure facilities including power sources.
10. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
11. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
12. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the GPCB.
13. 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.
14. 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.
15. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
16. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
17. Details of the total land and break-up of the land use for green belt and other uses.
18. List of products alongwith the production capacities.
19. Detailed list of raw material required and source, mode of storage.
20. Manufacturing process details alongwith the chemical reactions and process flow chart.
21. Action plan for the transportation of raw material and products.
22. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
23. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
24. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, NOx, CO, NH_3 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 proposed for the effective control of gaseous/process emissions within permissible limits.
26. Name of all the solvents to be used in the process and details of solvent recovery system.
27. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
28. Details of water and air pollution and its mitigation plan
29. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
30. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
31. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
32. Permission from CGWA/SGWA for the drawl of 716 m^3/day ground water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
33. Attempt to be made for reduction for usage of water.
34. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.

35. Zero discharge effluent concepts to be adopted.
36. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
37. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
38. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
39. Material Safety Data Sheet for all the Chemicals are being used/will be used.
40. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
41. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
42. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
43. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
47. 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.

44. Details of occupational health surveillance programme.
45. Socio-economic development activities shall be in place.
46. Note on compliance to the recommendations mentioned in the CREP guidelines.
47. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
48. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
49. Total capital cost and recurring cost/annum for environmental pollution control measures.
50. **Corporate Environmental Responsibility**

    (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

    (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
51. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.

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

The following general points shall be noted:

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

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

1.5.14 Zinc Sulphate (1200 MTPA) at Barpeta Industrial Estate, Dag No. 200, Village Sonkuchi, Tehsil Ghilazari, District Barpeta, Assam by M/s Permier Agro Biotech. (TOR)

M/s Premier Agro Biotec have proposed for setting up of Zinc Sulphate (1200 MTPA) manufacturing unit at Barpeta Industrial Estate, Dag No. 200, Village Sonkuchi, Tehsil Ghilazari, District Barpeta, Assam. No forest land is involved. No court case/ litigation is pending against the project. Zinc ash is the main basic raw material. Ducting hood and scrubbing with alkali solution will provided to channelized the sulphuric acid fumes. Water requirement will be 3.0 m^3/day and met from ground water source. Power requirement will be 40 kw and met from state Electricity Board. Low Sulphur diesel will be used in DG Set.

The Committee noted that proposed product will be used as nutrients in the manufacturing of fertilizer, which is used a raw material. Therefore, this project proposal can not be categorized under fertilizer activity and no environmental clearance is required. However other statutory clearances under the Air and Water Acts shall be obtained.

1.5.15 **Agro Chemicals & Intermediates Manufacturing Unit (155 MTPD) at plot No. 5303, GIDC Notification Chemical zone, 4th phase, Vapi, Tehsil Pardi, District Valsad, Gujarat by M/s Cropnosys India Pvt. Ltd. (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 the Pesticides plants are listed at S.N. 5(b) under Category 'A' and appraised at the Central level.

M/s Cropnosys India Pvt. Ltd have proposed for setting up of agro chemicals & Intermediates (155 MTPD) at plot No. 5303, GIDC Notification Chemical zone, 4th phase, Vapi, Tehsil Pardi, District Valsad, Gujarat. Total plot area is 1941 m^2. No forest land is involved. No court case/litigation is pending against the project. Damanganga is flowing at 3.5 Km. Arabian sea is located at 13 Km. Following products will be manufactured:-

S.No.	Product	Capacity (MTPA)
	Agrochemicals-technical	
1	Fluazinam	255 MT
2	Mesotrion	90 MT
3	Flufenacet	140 MT
4	Metamitron	555 MT
5	Chlorpyriphos	900 MT
	Organic Intermediates	
6	Benzotrifluoride	500 MT
7	3-Aminobenzotrifluoride	186 MT
8	2-Amino-5-chlorobenzo-trifluoride	93 MT
9	2-Aminobenzotrifluoride	83 MT
10	4-fluoro-3-phenoxy-benzaldehyde	165 MT

Adequate stack ht will be provided to the boiler (1x3 TPH). Water requirement from GIDC water supply will be 84 m^3/day. Effluent generation will be 52.34 m^3/day. Effluent will be treated in ETP comprising MEE. Organic distillation residue (9.35 MTPM) will be incinerated. Waste oil will be sold to authorized recyclers. Process waste salt & utility will be sent to TSDF. Power requirement will be 500 KVA. CNG and Diesel will be consumed as fuel.

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

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
7. A copy of Gazette Notification issued by the Govt. of Gujarat indicating location of the project in notified GIDC should be included necessarily.
8. Infrastructure facilities including power sources.

9. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw material required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, NOx including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
20. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
21. Name of all the solvents to be used in the process and details of solvent recovery system.
22. Design details of ETP, incinerator, if any along with control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
23. Details of water and air pollution and its mitigation plan
24. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
25. An action plan to control and monitor secondary fugitive emissions from all the sources.
26. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
27. Permission for the drawl of 84 m^3/day water from the concerned agency. Water balance chart including quantity of effluent generated recycled and reused and discharged.
28. Action plan for 'Zero' discharge of effluent should be included.
29. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
30. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.

34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. Risk assessment for storage for chemicals/solvents.
36. Material safety data sheet of chemicals to be submitted.
37. An action plan to develop green belt in 33 % area.
38. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
39. Details of occupational health programme.

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

40. Socio-economic development activities should be in place.
41. Note on compliance to the recommendations mentioned in the CREP guidelines.
42. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
43. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
44. Corporate Environmental Responsibility
    (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
    (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
45. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
46. Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
47. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
48. A tabular chart with index for point wise compliance of above TORs.

The following general points shall be noted:

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

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

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

1.5.16 Specialty Chemicals Manufacturing Unit at Sy. No. 382, Village Neja, Taluka & District Khambhat, Gujarat by M/s Trion Chemicals Pvt. Ltd. (TOR).

The project authorities and their consultant (Ramans Enviro Servicves Pvt. Ltd. "20") gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP. All the Synthetic Organic Chemical Units located outside industrial area/estate are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Trion Chemicals Pvt. Ltd has proposed for setting up of specialty chemicals manufacturing unit at Sy. No. 382,Village Neja, Taluka & District Khambhat, Gujarat. Total plot area is 33200 m^2. Project cost is Rs. 18 Crores. No forest land is involved. No court case litigation is pending against the project. Following products will be manufactured:-

(a) Trichloro Isocyanurate 1000 MTPM

(b) Sodium Dichloro Isocyanurate : 400 MTPM

Bagfilter will be provided to coal fired Thermic fluid heater (125 Kg/hr). Scrubber and bagfilter will be provided to Chlorination vessel, Drying vessel and Granulation vessel. Total water requirement from ground water source will be 300 m^3/day. Wastewater generation will be 295 m^3/day. Process effluent will be evaporated in mechanical vapour compressor. Used oil and discarded containers will be sent to authorized recyclers / re-processor.

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

1. Executive summary of the project
2. Justification of the project.
3. Project location and plant layout.
4. Promoters and their back ground.
5. Regulatory framework
6. A map indicating location of the project and distance from severely polluted area
7. Infrastructure facilities including power sources.

8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Manufacturing process details alongwith the chemical reactions and process flow chart.
16. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
17. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, NOx including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, if any along with control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
26. Permission for the drawl of 300 m^3/day water from the CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.

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

The following general points shall be noted:

i. All documents shall be properly indexed, page numbered.

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

The Committee prescribed the above ToRs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the 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.

1.5.17 **Phenol formaldehyde Resin (87.5 MTPM) and Melamine Formaldehyde Resin (37.5 MTPM) Manufacturing Unit at Sy. No. 86/P, Plot No 1, behind Rajhuvir Ginning , National Highway NO. 8B, Village Hadamtala, Taluka Kotala Sangani, District Rajkot, Gujarat by M/s Kunj Laminates.(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 the Synthetic Organic Chemical Units located outside industrial area/estate are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Kunj Laminates has proposed for setting up of Phenol Formaldehyde Resin (87.5 MTPM) and Melamine Formaldehyde Resin (37.5 MTPM) Manufacturing Unit at Sy. No. 86/P, Plot No 1, behind Rajhuvir Ginning, National Highway NO. 8B, village Hadamtala, Taluka Kotala Sangani, District Rajkot, Gujarat. Total plot area is 3845 m^2. No park/sanctuary/biosphere/Reserve/Monuments /Heritage Site/ Reserve Forest is located within 10Km. Total project cost is Rs 5.0 crores. Recurring cost for EMP is Rs. 10.0 Lakhs.

Bagfilter alongwith stack (40m) will be provided to coal fired boiler. Adequate stack ht will be provided to DG Set (1250 KVA). Fresh water requirement from ground water will be 21.8 m^3/day. Industrial wastewater generation will be 2.2 m^3/day. Used oil will be sent to recyclers/preprocessors. ETP sludge will be sent to TSDF. Coal and HSD will be used as fuel. Power requirement will be met from PGVCL and DG set will be used as standby arrangement. Greenbelt will be developed in 1250 m^2.

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

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework
5. A map indicating location of the project and distance from severely polluted area
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Permission, if any, from the State Forest Department
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, NOx including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
20. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
21. Control methanol emission from drying section.
22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
27. An action plan to control and monitor secondary fugitive emissions from all the sources.
28. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
29. Permission for the drawl of 21.8 m^3/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
30. Action plan for 'Zero' discharge of effluent shall be included.
31. Treatment of phenol in the effluent, if any..
32. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).

33. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
34. Explore the possibility to use fuel other than wood.
35. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
38. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
39. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
40. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
41. An action plan to develop green belt in 33 % area
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
48. Details of occupational health programme.

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

43. Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
45. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
46. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
47. Corporate Environmental Responsibility
    (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
    (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
48. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
49. Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

51. 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.
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. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
viii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

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

1.5.18 **Phenol Formaldehyde Resin (87.5 MTPA) and Melamine Formaldehyde Resin (37.5 MTPM) at Sy. NO. 49/P1, Plot No. 3&4 , National Highway No. 8B, Village Jamnadi, Taluka Gordal, District Rajkot, Gujarat by M/s Mahadev Laminate Pvt. Ltd.. (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 the Synthetic Organic Chemical Units located outside industrial area/estate are listed at S.N. 5(f) under Category ‘A’ and appraised at the Central level.

M/s Mahadev Laminate Pvt. Ltd has proposed for setting up of phenol formaldehyde resin (87.5 MTPA) and melamine fomaldahyde resin (37.5 MTPM) manufacturing unit at Sy. NO. 49/P1, Plot No. 3&4 , National Highway No. 8B, Village Jamnadi, Taluka Gordal, District Rajkot, Gujarat. No national park/sanctuary/Biosphere/Reserve monument/Hetiage site / reserve forest is located with 10 Km. Total plot area is 1410 m^2. Total project cost is Rs. 2.2 Crores. Recurring cost for environment management plant is Rs. 10.00 lac/annum.

Bagfilter alongwith stack (40m) will be provided to coal fired boiler. Water requirement from ground water source will be 21.8 m^3/day. Industrial wastewater generation will be 1.7 m^3/day.
ETP sludge will be sent to TSDF. Used oil will be sent to recyclers/preprocessors.
Coal and HSD will be used as full. Power requirement will be met from PGVCL.

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

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework
5. A map indicating location of the project and distance from severely polluted area
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Permission, if any, from the State Forest Department
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{10}, SO_2, NOx including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
20. Air pollution control measures viz. Multi-cyclone and bag filter etc. Shall be proposed for the effective control of gaseous emissions within permissible limits.
21. Control methanol emission from drying section.
22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
27. An action plan to control and monitor secondary fugitive emissions from all the sources.

28. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
29. Permission for the drawl of 21.8 m^3/day ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
30. Action plan for 'Zero' discharge of effluent shall be included.
31. Treatment of phenol in the effluent, if any.
32. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
33. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
34. Explore the possibility to use fuel other than wood.
35. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
38. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
39. A write up on "Treatment of workers affected by accidental spillage of methanol/ phenol".
40. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
41. An action plan to develop green belt in 33 % area
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
49. Details of occupational health programme.

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

43. Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
45. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
46. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

47. Corporate Environmental Responsibility

(a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

(b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.

48. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
49. Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
51. 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.
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. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.
viii. Certificate of Accreditation issued by the QCI to the environmental consultant shall be included.

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

1.5.19 Multi-feed Distillery Unit (28.5 KLPD Export Quality RS/30 KLPD of TS), Sugar Unit (1,500 TCD), bagasse (4.95 MW) & Captive Power Plant (1.2 MW) at Chak 23F, Kaminpura, Tehsil Sri-Karanpur, District Sriganganagar, Rajasthan by **M/s Rajasthan State Ganganagar Sugar Mills Ltd**. (**TOR to EC**)

The project authorities and their consultant gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 27th Meeting of the Expert Appraisal Committee (Industry) held during 21st – 22nd September, 2011 for preparation of EIA/EMP.

M/s Rajasthan State Ganganagar Sugar Mills Ltd. has proposed for expansion of Multi-feed Distillery Unit (28.5 KLPD Export Quality RS/30 KLPD of TS), Sugar Unit (1,500 TCD), Bagasse (4.95 MW) & Captive Power Plant (1.2 MW) at Chak 23F, Kaminpura, Tehsil Sri-Karanpur, District Sriganganagar, Rajasthan. 23.022 ha. land is available for the proposed factory. Additionl land 14.673 ha. is being procured. Total project cost is Rs. 145.35.00 Crores. Rs. 13.67 Crores and Rs. 1.0845 Crore/annum are earmarked towards capital cost and recurring cost per annum. There is an interlinked project namely 1500 TCD Sugar factory and 5.5 MW Bio-mass based Co-gen Power Plant is submitted to RSPCB. A court case title SB civil writ petition No. 2050/08, 2262/08, 3354/08 is pending against the project in High Court of Jodhpur and related to the acquisition of additional land 14.965 ha and compensation to be paid. Distillery will be operated for 330 days in a year (140 days in season using final molasses & 190 days in off-season using grains as feed stock).No ecological sensitive areas (national park/ wildlife sanctuary/ biosphere reserve etc) and reserved/ protected forest are located within 10 Km.

Grains (13506 MTPA) and Molasses (16800 MT/ season) will be used as raw materials. Out of which molasses (10125 MT/ season) will be sourced from own unit and molasses (6675 MT/season) will be outsourced. The proposed molasses/ grain based distillery will be based on batch fed/continuous fermentation technology. The process include handling/milling, liquefaction and segregation for grain, handling and weighment for molasses, fermentation (common for molasses & grain), distillation (common for molasses & grain) decantation, evaporation and drier section.

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 5 locations during post monsoon season, 2011 and submitted data indicates as PM_{10} (68.2 – 78.2 ug/m^3), $PM_{2.5}$ (34.4 – 40.4 ug/m^3), NO_2 (21.2 – 23.2 ug/m^3) and SO_2 (5.2–5.6 ug/m^3). Boiler capacity will be 10 TPH. Wet scrubber alongwith stack height will be provide to the boiler to control particulate emissions. However, the Committee asked them to go for bagfilter instead of wet scrubber. Total fresh water requirement from canal water will be 750 m^3/day. No ground water shall be used. Effluent generated from the proposed grain based distillery will be decanted and thin slop will be evaporated through multi effect evaporation. Evaporated syrup will be mixed with wet cake and dried in dryer. Concentrated will be used for cattle feed. Water from evaporator will be recycled in process. Molasses effluent will treated by bio-methanation process followed by multi evaporation plant followed by bio-composting. 'Zero' wastewater discharge will be adopted. Effluent (250 m^3/day) will be generated from sugar mill. Committee observed that effluent generation from sugar mill is higher side and sugar effluent shall be restricted within 150 m^3/day. Effluent from sugar mill will be treated in biological process ETP and treated effluent will be used for gardening/ horticulture purpose. Sewage will be treated in septic tank and disposed through soak pit. DWGS/DDGS will be sold as cattle feed.

Bio-compost will be sold to farmera as plant nutrients. DDGS will be used as cattle feed. Boiler ash will be used for brick manufacturing. ETP sludge will be used as manure.

Green belt will be developed in 7.6 ha out of 37.695 ha. Total power requirement will be 2100 KW in season and 700 KW in off season. Bagasse (550 TPD)/agriculture waste/rice/mustard husk (425 TPD) will be used as fuel. Biogas (12500 m^3/day) will be used as fuel. DG set (1x500 KVA + 1 x 100 KVA) will be installed for emergency back up.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Rajasthan State Pollution Control Board on 27th April, 2012. The issues raised included land acquisition, parking facilties, employment, compost,

odour problems etc and have satisfactorily been responded by the project proponent and incorporated in the final EIA/EMP report.

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

i. Bagfilter alongwith stack of adequate height should be provided to bagasse/coal/biogas fired boilers to control particulate emissions within 50 mg/Nm^3. At no time, the emission levels should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.

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

iii. In plant, control measures for checking fugitive emissions from all the vulnerable sources should be provided. Fugitive emissions should be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi-cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system should be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored and records should be maintained. The emissions should conform to the limits imposed by RSPCB.

iv. The gaseous emissions from DG set should be dispersed through adequate stack height as per CPCB guidelines. Acoustic enclosure should be provided to the DG sets to mitigate the noise pollution.

v. Total fresh water requirement from canal water for distillery and sugar alongwith cogeneration should not exceed 300 m^3/day and 390 m^3/day respectively. Prior permission for the drawl of 690 m^3/day water should be obtained from the concerned authority.

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

vii. The spent wash from molasses based distillery should be treated in bio-methanation followed by evaporation and bio-composting with press mud to achieve 'Zero' discharge. Multi-effect evaporator should be installed. No effluent should be discharged outside the premises and 'Zero' discharge should be maintained. Spent wash from grain based distillery should be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. DWGS should be dried to form DDGS. Spent wash should be stored in impervious pucca lagoons with proper lining with HDPE and should be kept in proper condition to prevent ground water pollution. The storage of spent wash should not exceed 5 days capacity.

viii. Adequate numbers of ground water quality monitoring stations should be set up by providing piezometers around the project area. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to RSPCB and this Ministry.

ix. Fire fighting system should be as per the OISD-117 norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting should be made to control fire from the alcohol storage tank.

x. Risk Assessment should be carried to assess the fire and explosion risk due to storage of alcohol and report submitted to the Ministry and its Regional Office at Bhopal within six months.

xi. Green belt should be developed in 7.6 ha out of 37.695 ha. to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO.

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

xiii. All the commitments made during the Public Hearing / Public Consultation meeting held on 27th April, 2012 should be satisfactorily implemented and adequate budget provision should be made accordingly.

xiv. Explore the possibility to use solar energy in the proposed plant.

The meeting ended with a vote of thanks to the Chair. It was decided that the 2nd REAC (Industry) meeting will be held on 29th – 31st October, 2012.

LIST OF PARTICIPANTS IN 1st REAC (INDUSTRY) MEETING (24th -25th September, 2012)

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

24th September, 2012		
S. N.	**List of Project Proponents**	**Attendance**
1.	**M/s Laila Sugars (P) Ltd.**	P
2.	**M/s Rashi Strips Pvt. Ltd.**	P
3.	**M/s Unique Enterprises**	P
4.	**M/s Refulgent Alloys N Steel Limited**	P
5.	**M/s Lokmangal Sugar Ethanol & Co-Generation Industries Ltd.**	P
6.	**M/s Sanvira Industries Limited**	P
7.	**M/s Integrated Pesticides Pvt. Ltd.**	P
8.	**M/s Mangalore Chemicals and Fertilizers Ltd.**	P
9.	**M/s Piccadilly Sugar & Allied Industry Ltd.**	P
10.	**M/s Kala Amb Distillery and Breweries Pvt Ltd.**	P
11.	**M/s India Pesticides Limited.**	P
12.	M/s **Maa Laboratories Pvt. Ltd**.	P
13.	**M/s Trimax Bio Sciences Pvt. Ltd.**	P
14.	**M/s Vaidhatru Pharma (Pvt.) Ltd.**	P
15.	**M/s Vijaya Sai Laboratories Pvt. Ltd.**	P
16.	**M/s DCW Ltd.**	P
17.	**M/s Kemrock Industries & Exports Ltd**.	P
18.	**M/s Asian Paints Limited**	P
19.	**M/s Indian Oil Corporation Ltd.**	P
20.	**M/s Polygel Industries Pvt. Ltd.**	P
21.	**M/s Relixier Pharmaceuticals Pvt. Ltd.**	P

23.	**M/s Paushak Ltd.**	
24.	**M/s Chennai Petroleum Corporation Limited.**	p
25.	**M/s The Fertilizers and Chemicals Travancore Limited (FACTS)**	p
26.	**M/s Solitaire Drugs & Pharma Pvt. Ltd.**	p
27.	**M/S Shreyans Industries Ltd**	p
28.	**M/s Aditya Birla Nuvo Limited**	p
29.	**M/s Jupiter Ispat Private Limited**	p
30.	**M/s Kanishk Steel Industries Ltd.**	p
31.	**M/s Bhilai Jaypee Cement Limited.**	p
32.	**M/s Shyam Steel Industries Limited**	p
33.	**M/s Godrej Industries Ltd.**	p
	25th September, 2012	
34.	**M/s Yogleela Cropscience Pvt. Ltd.**	p
35.	**M/s K.P.R. Chemical Limited**	p
36.	**M/s S.M. Chemicals**	p
37.	**M/s Majalagaon Sahakari Sakhar Karkhana Ltd.**	A
38.	**M/s Raichem Medicare (P) Ltd.**	p
39.	**M/s Gujarat Polysol Chemicals Pvt. Ltd.**	p
40.	**M/s Coromandel Sugars Ltd.**	p
41.	**M/s Goel Agrigreen Fields Pvt. Ltd.**	p
42.	**M/s Selan Exploration Technology Limited**	p
43.	**M/s Lavis Signature Panel Pvt. Ltd**	p
44.	**M/s Satyam Chemical Industries.**	p

43	**M/s Hindustan Petroleum Corporation Ltd.**	p
44	**M/s Lupin Limited.**	p
45	**M/s Permier Agro Biotech**	A
46	**M/s Cropnosys India Pvt. Ltd.**	p
47	**M/s Trion Chemicals Pvt. Ltd.**	p
48	**M/s Kunj Laminates**	p
49	**M/s Mahadev Laminate Pvt. Ltd.**	p
50	**M/s Rajasthan State Ganganagar Sugar Mills Ltd**.	P

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