

MINUTES FOR 34th RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY-2) HELD DURING 17-19th FEBRUARY, 2015

VENUE: Conference Hall (Bhramputra), First Floor, Vayu Wing, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhawan Aliganj, Jorbagh Road, New Delhi -110003.

Time : Meeting held at 10: 00 AM

34.1 Opening Remarks of the Chairman

Time : 10: 00 - 10: 30 AM

34.2 Confirmation of the Minutes of the 32nd Reconstituted Expert Appraisal Committee (Industry-2) held during 20th -21st January, 2015.

17th February, 2015 (Day 1)

34.3 Environmental Clearance

34.3.1 Expansion of Bulk Drug Manufacturing Unit at Village Keshwana Rajpoot, Tehsil Kotputli, District Jaipur, Rajasthan by M/s Otsuka Chemicals (India) Pvt. Ltd. – reg. EC

The project proponent and their consultant (M/s Asian Consulting Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3rd Meeting of the Expert Appraisal Committee (Industry) held during 3rd-5th December, 2012 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, project site is located within 10 Km of interstate boundary and treated as category 'A' project due to applicability of general condition and appraised at Central level. The Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006

M/s Otsuka Chemicals (India) Pvt. Ltd. has proposed for Expansion of Bulk Drug Manufacturing Unit at Village Keshwana Rajpoot, Tehsil Kotputli, District Jaipur, Rajasthan. Existing plot area is 88000 m² and proposed expansion will be carried out in the existing premises. It is reported that there are no eco-sensitive areas or forest or wildlife sanctuaries within the 10 Km distance. Cost of project is Rs. 100 Cr. (25Cr. For GCLE + 75Cr. For lohexol). Expansion will be done in following two phases.

Item	Detail	
	Existing	Proposed
Production Capacity	GCLE - 200 MTPA Cefditoren – 30 MTPA	<i>Phase 1 (by the year 2017):</i> GCLE - from 200 to 450 MTPA; Production increase from existing 200 MT 450 MTPA through (R&D based) yield improvement, reducing losses etc. <i>Phase 2 (by the year 2019):</i> GCLE – from 350 to 700 MTPA; Production increased from 450 MTPA to MTPA through installation of new equipment like reactors, centrifuges, distillation system and also reducing batch time cycle etc. lohexol - 250 MTPA

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during February, 2013-April, 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (31.7 µg/m³ to 67.9 µg/m³), PM_{2.5} (15.9 µg/m³ to 40.3 µg/m³), SO₂ (7.7 µg/m³ to 14.9µg/m³) and NO_x (20.8 µg/m³ to 30.5 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.35 µg/m³, 0.18 µg/m³ and 1.96 µg/m³ with respect to SPM, SO₂ and NO_x. The resultant concentrations are within the NAAQS.

Cyclone and bagfilter have been provided with coal/petcoke fired boiler. Same facilities will be utilized during expansion. Scrubber will be provided to control process emissions viz. HCl. Water requirement from ground water source will be increased from 280 m³/day to 450 m³/day after expansion. Application for ground water drawl has been submitted. However, approval is yet to be received. Industrial effluent generation will be increased from 66 m³/day to 128 m³/day after expansion. Effluent will be treated in the ETP. Effluent is segregated into high TDS and low TDS effluent streams. High TDS effluent stream will be evaporated. Low TDS effluent will be treated in the ETP and treated effluent has been reused for horticulture purpose. No effluent will be discharged outside the plant premises. Onsite incinerator is designed for destruction of ETP sludge, MEE residue and spent solvent. Chemical sludge and Incinerator ash waste treatment will be sent to TSDF, Udaipur. Used oil/ spent oil will be sent to the Authorized recycler/re-processors. Additional DG set (1500 KVA x 1 no) will be installed.

After deliberation, the Committee sought following additional information :

- (i) Water consumption figure found to be higher. Therefore, detailed plan for reduction of water consumption supported by revised water balance chart to be submitted.
- (ii) Quantitative balance of wastewater and hazardous waste to be provided.
- (iii) TDS, Nitrate and fluoride values are in higher side, Give reasons.
- (iv) Existing Greenbelt with photographs and proposed layout plan to be submitted.
- (v) Health and safety status of the existing plant.
- (vi) VOC and other process emission to be monitored.
- (vii) Come alongwith process person before EAC meeting.

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

34.3.2 Expansion of Bulk Drug from 10.5 TPA to 20.1 TPA at Plot No. A1/7 & A1/8, Phase-1, G.I.D.C. Estate, Vapi - 396 195, Dist: Valsad, Gujarat by M/s. Avik Pharmaceuticals Ltd. - Regarding Environment Clearance.

The project proponent and their consultant (M/s Precitech Laboratories Pvt. Ltd..) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3rd Meeting of the Expert Appraisal Committee (Industry) held during 3rd-5th December, 2012 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified Industrial area/Estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within

interstate boundary, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

The Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006

Ms. Avik Pharmaceuticals Ltd. has proposed for expansion of Bulk Drug Unit from 10.5 TPA to 20.1 TPA at Plot No. A1/7 & A1/8, Phase 1, GIDC Estate, Vapi, District Valsad, Gujarat. Total plot area is 3392 m² out of which a total of 560 m² is allotted for green belt. No additional land will be required for proposed expansion. The total cost of proposed project will be 1.91 Crores out of which Rs.43.00 Lakhs allocated for EHS as capital cost. A budgetary provision of Rs. 10.68 Lakhs per annum will be made for EHS expenses as recurring cost per annum. River Damanganga is flowing at a distance of 1.22 Km. Following products will be manufactured:

Sr. No.	Name of products, and intermediate products	Existing (TPA)	Total Quantity after Proposed Expansion (TPA)
Existing Products			
1	Ethisterone	10.5	20.1
2	Clobetasol 17 Propionate		
3	Betamethasone Dipropionate		
4	Betamethasone 17 Valerate		
5	Beclomethasone Dipropionate		
6	Betamethasone Sodium Phosphate		
7	Mometasone Furoate		
8	Prednisolone Sodium Phosphate		
9	Prednisolone Acetate		
10	Triamcinolone Acetonide		
11	Triamcinolone		
12	Methyl Prednisolone		
13	Methyl Prednisolone Acetate		
14	Methyl Prednisolone Hemisuccinate		
15	Methyl Prednisolone Sodium Succinate		
16	Clobetasone Butyrate		
17	Halobetasol Propionate		
18	Budesonide		
19	Flumethasone		
Proposed Products			
20	Vitamin D3 derivatives (Calcitriol/Calcipotriol/ α – Calcidol)	00	
21	Fluticasone Propionate		
22	Deflazacort		
23	Triamcinolone Hexaacetonide		
Total		10.5	20.1
Note: Methyl Prednisolone Sodium Succinate is manufactured through job work.			

The company shall manufacture any one of the above mentioned product at a time or in combination of various products but the quantity shall not increase beyond 50 kgs/day.

Ambient air quality monitoring has been carried out at 6 locations for February, 2013 and the data submitted indicated: PM₁₀(52 to 92 $\mu\text{g}/\text{m}^3$), SO₂ (16 to 29 $\mu\text{g}/\text{m}^3$) and NO_x (18 to 28 $\mu\text{g}/\text{m}^3$). AAQ study for point source emissions indicates that the maximum incremental GLCs would be 3.13 $\mu\text{g}/\text{m}^3$, 5.68 $\mu\text{g}/\text{m}^3$ and 0.82 $\mu\text{g}/\text{m}^3$ with respect to PM₁₀, SO₂ and NO_x

respectively. Scrubber will be provided for control of process emissions viz. HCl. Stack of adequate height will be provided to oil and gas fired boiler. Water requirement from GIDC Water Supply will be increased from 27.5 m³/day to 29.4 m³/day after expansion. Total industrial effluent generation quantity of 18.5 KLD will remain same after proposed expansion. Effluent will be segregated into High TDS/COD and Low TDS/COD effluent streams. High COD effluent stream will be sent to common MEE facility for final disposal. Low TDS/COD effluent stream will be treated in ETP and treated effluent will be sent to CETP inlet through GIDC underground drainage. ETP sludge to be disposed of at Common Landfill site of M/s. Vapi Waste & Effluent Management Co. Ltd, for final disposal. Spent solvents to be sold to the Consented/ Authorized distillation units, Spent Carbon to be sent to Common Incineration facility, Used oil to be sold to registered recycler, Discarded containers to be sold to authorized scrap dealer. Off-specification Product to be reprocessed or sent to Common incineration facility.

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

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

- i) Adequate stack height shall be provided to oil and gas fired boiler.
- ii) The levels of PM₁₀, SO₂, NO_x, CO, HCl and VOC shall be monitored in ambient air.
- iii) Scrubber should be provided to process vents to control HCl. The scrubbing media should be sent to effluent treatment plant (ETP) for treatment. Efficiency of scrubber should be monitored regularly and maintained properly. At no time, the emission levels should go beyond the prescribed standards.
- 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) Prior permission for total fresh water requirement from GIDC water supply should be obtained. The water consumption should not exceed 29.4 m³/day.
- vi) Total industrial effluent generation shall not exceed 18.5 m³/day. . Effluent will be segregated into High TDS/COD and Low TDS/COD effluent streams. High COD effluent stream will be sent to common MEE facility for final disposal. Low TDS/COD effluent stream will be treated in ETP and treated effluent will be sent to CETP inlet through GIDC underground drainage. No process effluent shall be discharged in and around the project site. Suitable treatment to be given for ammonical nitrogen in the effluent.
- vii) Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed. Efforts shall be also made to explore the possibility of recycling/reuse of the treated effluent.
- viii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal

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

- ix) Green belt should be developed in 560 m² out of total plant area.
- x) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

34.3.3 Expansion of Bulk Drug Unit (from 150 MTPM to 170 MTPM) at Plot ;No.6129/11/A, Phase-IV, GIDC Estate, Vapi, district Valsad, Gujarat by M/s Gemasko Pharmachem Industries – reg. EC.

The project proponent and their consultant (M/s Unistar Environment and Research Labs Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 35th Meeting of the Expert Appraisal Committee (Industry) held during 11th–12th May, 2012 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I). The Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006

M/s Gemasko Pharmachem Industries has proposed for expansion of Bulk Drug Unit (from 150 MTPM to 170 MTPM) at Plot no.6129/11/A, Phase-IV, GIDC Estate, Vapi, District Valsad, Gujarat. Total plot area is 998 m². Area earmarked for greenbelt is 86.38 m². Project cost for expansion is Rs. 2.0 Crores out of which Rs. 25 lakhs is earmarked for pollution control measures. Daman river Damanganga is flowing at a distance of 3 km in South-West Direction. It is reported that no ecological sensitive area is located within 10 m distance. Following products will be manufactured:

S.N.	Product	Consent available for production	EC Required for Additional Production of MT/Month	Total Production MT/Month
01	Distillation of various Industrial Solvents	75	0.0	75.0
02	Specialty dilatants	75	0.0	75.0
03	Amlodipine Besylate	0.0	2.0 <u>Either individual OR total</u>	2.0
04	Tramadol HCl	0.0		
05	Ramiprill	0.0		
06	Artemether	0.0		
07	Arteether	0.0		
08	Olanzapine	0.0		
09	Metformine HCl	0.0	18.0	18.0
	Total	150	20.0	170.0

Ambient air quality monitoring has been carried out at 7 locations for October, 2012-January, 2013 and the data submitted indicated: PM₁₀(22 to 84 µg/m³), PM_{2.5} (11 to 42µg/m³), SO₂ (9 to 28 µg/m³) and NO_x (9 to 25 µg/m³). AAQ study for point source emissions indicates that the maximum incremental GLCs would be 0.1 µg/m³ with respect to

PM₁₀. Stack of adequate height will be provided to gas fired thermic fluid heater and boiler. Water scrubber will be provided to control process emissions viz. NH₃. Water requirement from GIDC water supply will be increased from 10 m³/day to 19 m³/day after expansion. Industrial effluent generation will be increased from 1.0 m³/day to 5.5 m³/day after expansion and treated in the ETP. Treated effluent will be sent to CETP. ETP sludge will be sent to TSDF. Ammonia will be sold to actual user. Distillation residue and process residue will be sent to common incineration.

After deliberation, the Committee sought following additional information :

- (i) VOC data should be monitored for one month and submitted.

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

34.3.4 Expansion for manufacturing of Resins and Paints (Integrated Paint Complex) at Plot No.153/B & 154/3, GIDC Notified area, Vapi, District Valsad, Gujarat by M/s Anchor Enterprises Private Limited – reg. EC

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

34.3.5 Expansion of Bulk Drug Intermediates Manufacturing Unit at Village Belad, Taluka Malkapur, District Buldhana, Maharashtra by M/s Chaitanya Biologicals Pvt. Ltd – reg. EC

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

M/s Chaitanya Biologicals Pvt. Ltd. has proposed for expansion of Bulk Drug Intermediates Manufacturing Unit at Village Belad, Taluka Malkapur, District Buldhana, Maharashtra. Total plant area is 3.5 acres of which area earmarked for greenbelt is 1.2 acre. Total cost of expansion is Rs. 4.7 Crore. It is reported that no national park /wildlife sanctuary is located within 10km from the project site. Following products will be manufactured:

S.N.	Existing Product	Capacity
1	Ferrous Glycine Sulphate	60 TPM or 2.5 TPD Maximum Production of one or more products as per market order
2	Ferrous Amminoate	
3	Ferrous BisGlycinate	
4	Peptone's/Tryptone	
5	Iron (III) Hydroxide Poymaltose Complex	
6	Iron (III) Hydroxide Poysucrose Complex	
7	Iron (III) Hydroxide Polysacchride Complex	
8	Glucosamine Hydrochloride	

9	Glucosamine Sodium Sulphate
10.	Glucosamine Potassium Sulphate
11	Methyl Sulphonyl Methane
12	Alovera
13	Chitosan
14	Malt Extract
List of Proposed Products	
15	Iron Protein Succinylate
16	Ferric Pyrophosphate
17	Ferrous Ascrobate
18	Calcium Fumarate
19	Calcium aspartate
20	Calcium Pidolate
21	Ferric Gluconate
22	Iron Caseinate
23	Sodium Ferric EDTA
24	Casein Purrified
25	Casein Protein Hydrolysates
26	Casamino Acid
27	Yeast Extract Bacteriological Grade

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during January, 2014-March, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (21.1 µg/m³ to 62.5 µg/m³), PM_{2.5} (10.4 µg/m³ to 29.3 µg/m³), SO₂ (7.8 µg/m³ to 18.2µg/m³) and NO_x (12.1 µg/m³ to 18.5 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.47 µg/m³, 4.02 µg/m³ and 5.9 µg/m³ with respect to SPM, SO₂ and NO_x. The resultant concentrations are within the NAAQS. Scrubber alongwith stack of adequate height will be provided to oil fired boiler and hot air generator. Total water requirement will be increased from 58 m³/day to 98 m³/day after expansion. Out of which fresh water requirement from ground water source will be 68 m³/day and remaining water requirement will be met from recycled water. Total effluent generation is 37.2 m³/day and treated in ETP. No effluent will be discharged outside the plant premises. The Committee suggested them to install RO for further treatment of effluent. Rejects of RO shall be evaporated in MEE. ETP sludge and MEE salt will be sent to CHWTSDF and process residue will be sent to CHWTSDF/ sale to authorized re-processors.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 30th August, 2013 under the chairmanship of Addl. District Collector. The issues were raised regarding effluent treatment, status of ETP, benefits, hazardous waste etc. The Committee discussed the issues and found satisfactory.

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

- i) As proposed, scrubber shall be provided to the oil fired boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/GPCB guidelines.
- ii) The levels of PM₁₀, SO₂, NO_x, CO and VOC shall be monitored in ambient air.

- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits imposed by SPCB.
- iv) Total fresh water requirement from ground water source shall not exceed 68 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- v) As proposed, industrial effluent generation shall not exceed 37.2 m³/day. Effluent shall be treated in ETP followed by RO. RO rejects shall be concentrated in the MEE. MEE condensate shall be recycled for cooling tower make up. Water quality of treated effluent shall be monitored regularly.
- vi) No effluent shall be discharged outside the plant premises.
- vii) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- viii) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- ix) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, MEE salt and process inorganic should be disposed off to the TSDF.
- x) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from 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.
- 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) Green belt should be developed at least in 1.2 acre 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.
- xiii) All the issues raised during the public hearing/consultation meeting held on 30th August, 2013 should be satisfactorily implemented.
- xiv) At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the

Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

34.3.6 Development of North Karanpura CBM-2001/1 of Bokaro in Jharkhand by M/s ONGC Ltd. –reg. EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 24th meeting held during 29th - 30th September, 2014 and the Committee deferred the proposal for want of following addl. information:

- i) Reanalyzing the ambient air quality and water quality of surface & sub-surface data by conducting one month monitoring.

PP vide letter dated 17th January 2015 has submitted the above addl. information. After detailed deliberations, the Committee found EIA/EMP report and additional information satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. Compensation for the land acquisition to the land ousters, if any, and also for standing crop shall be paid as per the National Resettlement and Rehabilitation Policy (NRRP) 2007 or State Government norms. It may be ensured that compensation provided shall not be less than the norms of the NRRP, 2007.
- ii. The surface facilities shall be installed as per the applicable codes and standards, international practices and applicable local regulations.
- iii. Ambient air quality shall be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards (NAAQES) issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CH₄, VOCs, HC, Non-methane HC etc. Efforts shall be made to improve the ambient air quality of the area.
- iv. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The company shall take necessary measures to prevent fire hazards and soil remediation as needed. At the place of ground flaring, the flare pit shall be lined with refractory bricks and efficient burning system. In case of overhead flare stacks, the stack height shall be provided as per the regulatory requirements and emissions from stacks shall meet the MOEF/CPCB guidelines.
- v. The company shall make the arrangement for control of noise from the drilling activity and DG/GG sets by providing necessary mitigation measures such as proper acoustic enclosures to DG/GG sets and meet the norms notified by the MoEF. Height of all the stacks/vents shall be as per the CPCB guidelines.

- vi. The company shall 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.
- vii. Total fresh water requirement shall not exceed (25m³/day) for each well during drilling phase and prior permission shall be obtained from the Competent Authority and a copy submitted to the Ministry's Regional Office at Bhubaneswar.
- viii. During well drilling, wastewater shall be segregated into waste drilling fluid and drill cuttings. Drill cutting shall be stored onsite impervious HDPE lined pit for solar evaporation and drying. Effluent shall be properly treated and treated effluent shall conform to CPCB standards. The produced water shall be stored onsite HDPE lined pit for solar evaporation and reuse in drilling of new wells and fire hydrant system. Domestic effluent shall be disposed off through septic tank followed by soak pit.
- ix. Ground water quality monitoring shall be done to assess if produced water storage or disposal has any effect.
- x. Drilling wastewater including drill cuttings, wash water shall be collected in disposal pit lined with HDPE lining, evaporated or treated and shall comply with the notified standards for on-shore disposal on land. Proper toxicological analysis shall be done to ensure there is no hazardous material. Copy of toxicological analysis shall be submitted to Ministry's Regional Office at Bhubaneswar.
- xi. Only water based drilling mud shall be used. The drilling mud shall be recycled. Hazardous waste shall be disposed of as per Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers/re-processors.
- xii. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
- xiii. To prevent underground coal fire, preventive measures shall be taken for ingress of ambient air during withdrawal inside the coal seams by adopting technologies including vacuum suction. Gas detectors for the detection of CH₄ and H₂S shall be provided.
- xiv. The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas/oil shall be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141. Pipeline wall thickness and minimum depth of burial at river crossing and casings at rails, major road crossings should be in conformity with ANSI/ASME requirements.
- xv. The company shall develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.

- xvi. Adequate well protection system shall be provided like Blow Out Preventer (BOP) or diverter systems as required based on the geological formation of the blocks.
- xvii. The top soil removed shall be stacked separately for reuse during restoration process.
- xviii. Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan shall be strictly followed.
- xix. Project proponent shall comply with the environment protection measures and safeguards recommended in the EIA/EMP/risk analysis report/disaster management plan.
- xx. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xxi. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xxii. All the commitments made to the public during the Public Hearing / Public Consultation meetings held on 25.02.2014 for Chatra District and on 26.02.2014 for Hazaribagh District shall be satisfactorily implemented.
- xxiii. At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.

34.3.7 Resin Manufacturing Unit at Sy.No. 1133, near TarapurKheda Road, Talukamata District Kheda, Gujarat by M/s Perfect Ply Industries Pvt. Ltd – reg EC

The project proponent and their consultant (M/s T R Associates, Stay order no. C/SCA/1782/2013 dated 9/12/2013) 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 15th Meeting of the Expert Appraisal Committee (Industry) held during 29th to 30th January, 2014 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic chemicals and chemical Intermediates) located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Perfect Ply Industries Pvt. Ltd has proposed for setting up of Resin Manufacturing Unit., located at Sy.No. 1133, near TarapurKheda Road, Talukamata District Kheda, Gujarat. Total plot area is 22392 m² of which greenbelt will be developed in 7380 m².

It is reported that Pariyej Lake (Bird Sanctuary) is located at a distance of 1.5 Km. Cost of project is Rs. 1.00 Crore. Following products will be manufactured:

S.N	Products	Production Capacity (MTPM)
1	P F Resin	800
2	M F Resin	300
3	UF Resin	300
4	Electrical Insulation Board and HP Decorative Laminated Sheet	3,00,000 Nos./month

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 9 locations during February, 2014-April, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (58.8 µg/m³ to 79.1 µg/m³), PM_{2.5} (29.5 µg/m³ to 43.8 µg/m³), SO_x (10.2 µg/m³ to 15.5µg/m³) and NO_x (15.3 µg/m³ to 22.5 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 30.6 µg/m³, 1.155 µg/m³ and 4.5 µg/m³ with respect to SPM, SO₂ and NO_x. The resultant concentrations are within the NAAQS except PM₁₀. Bagfilter will be provided to coal fired boiler & Thermic fluid heater to control particulate emissions. DG set (250 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Total water requirement is 43.2 m³/day, of which fresh water requirement from ground water source will be 12.64 m³/day. Remaining water requirement will be met from treated effluent and condensate. Industrial effluent generation will be 13.68 m³/day. Industrial effluent will be treated in ETP with photo fenton oxidation process method followed by evaporator. Condensate from evaporator will be recycled/reused in process. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers. Fly ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 12th November, 2014. The issues were raised regarding precaution to be taken for health of workers etc. 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 recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) Clearance from National Board for Wildlife for Pariyej Lake (Bird Sanctuary) shall be obtained.
- ii) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- iii) Bag filter along with stack of adequate height should be installed to coal fired boiler & Thermic fluid heater to control particulate emissions.
- iv) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.

- v) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- vi) Total fresh water requirement from ground water source should not exceed 53.0 m³/day and prior permission should be obtained from the CGWA/SGWA.
- vii) Industrial effluent will be treated in ETP based on photo fenton process followed by evaporation to achieve zero discharge. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- 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 over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- x) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xi) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 12th November, 2014 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xii) At least 2.5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

34.3.8 Agro/Chemical Intermediate Manufacturing Unit at Plot no. Z/34, Dahej, SEZ, Taluka Vagra, District Bharuch, Gujarat by M/s Meghmani Unichem Ltd. – reg EC

The project proponent and their consultant (Anand Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of Reference (TORs) awarded during the 10th Meeting of the Expert Appraisal Committee (Industry) held during 29th to 31st July, 2013 for preparation of EIA-EMP report. All units producing technical grade pesticides are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s MeghmaniUnichem LLP have proposed for setting up of Agro/chemical Intermediate Manufacturing Unit at Plot No. Z/34, Dahej SEZ Area, TalukaVagra, District Bharuch, Gujarat. Total plot area is 53,830 m². Area earmarked for greenbelt is 17765 m². Cost of project is Rs.100 Crore. It is reported that no wildlife sanctuary and reserve forest is located within 10 km distance. Following Products will be Manufactured:

Plant	S.N.	Name of Product	Quantity (MTPM)
A	1	3,4 OR 2,3 OR 2,4 OR 2,5 OR 2,6 (Dichloro Nitro Benzene)	800
	2	2,4,5 OR 2,3,6 (Trichloro Nitro Benzene)	
	3	Ortho OR Meta OR Para (Chloro Aniline)	1200
	4	2,3 OR 2,5 OR 3,4 OR 2,4 OR 2,6 (Dichloro Aniline)	
	5	2,4,5 - Trichloro Aniline	
	6	Ortho OR Para Anisidine	
	7	2 - Methyl Cyclohexyl Acetate	
	8	2 - Tertiary Butyl Cyclohexyl Acetate	
	9	4 - Tertiary Butyl Cyclohexyl Acetate	
	10	4 - Chloro 2-hydroxy Aniline	
	11	p-Hydroxyaniline	
B	12	Paracetamol	1200
C	13	Pigment Red-122	40
	14	Pigment Violet-19	
	15	Pigment Violet-23	50
	16	Dispersion Blue	50

Plant	S.N.	Name of By-Product	Quantity (MTPM)
A	1	Spent Sulphuric Acid	648.5
B	2	Dil. Acetic Acid	1677.71
C	3	Dil. Acetic Acid	50
	4	Dil. Phosphoric Acid	1027
	5	Dil. CS Solution	142.5
	6	Dil. Nitric Acid	87.5
	7	Resist Salt Solution	760

Ambient air quality monitoring has been carried out at 6 locations during November, 2013-January, 2014 and the data submitted indicated: PM₁₀(56 to 89 µg/m³), SO₂ (8.0 to 32 µg/m³) and NO_x (12.1 to 36 µg/m³). AAQ study for point source emissions indicates that the maximum incremental GLCs would be 1.86 µg/m³, 4.41 µg/m³ and 2.42 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. Bagfilter followed by dust collector will be provided to coal/lignite fired boiler. Stack of adequate height will be provided to gas fired boiler. Scrubber will be provided to control VOCs from solvent recovery system. Water requirement from GIDC water supply will be 1410 m³/day. Effluent generation will be 976 m³/day and treated in ETP. Sludge generation due to treatment of wastewater in ETP will be disposed to TSDF site. Process waste (Tar) will be sent to Common Hazardous Waste Incineration Facility (CHWIF). Gypsum (Residue from dispersion blue) will be sold to cement industry. Spent carbon will be sent to TSDF site. Spent sulphuric acid, Dil. Acetic acid, Dil. Phosphoric acid, Dil. Caustic Soda Solution, Dil. Nitric Acid Solution, Resist Salt Solution will be recycle/sold to authorised end users. Used oil will be sold to authorized dealers/recyclers. Discarded containers /bags and liners will be sold to authorized dealers/recyclers. PP submitted the copy of EC letter no. 21-1084/2007-IA.III dated 17th March, 2010 for development of Dahej SEZ at Village Dahej. Budget allocated for CSR activity is Rs. 2, 00, 00,000/- in the area of Educational Activities or Medical & Health Activities, Environmental –

Sustainable Livelihood Activities, Workshop, Vocational Training & Employment Generation Activities, Village level monitoring/ Administration/Funding support activities.

After deliberation, the Committee sought following additional information:

- i) To conduct one month monitoring of ambient air quality w.r.t. VOC, CO, PM2.5, HC (Methane and non-methane).
- ii) Submission of wastewater treatment scheme.
- iii) Submission of copy of MoU with SSP unit for spent sulphuric acid.

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

2nd Session: Time: 2.00 PM

Reconsideration for Environmental Clearance

34.3.9 Expansion of Bulk Drugs Unit at Sy.No.270, 271, 275 & 276, Village Nawabpet, Mandal Shivampet, District Medak in Andhra Pradesh by M/s Fleming Laboratories Limited – Reg. EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 36th meeting held during 11th - 12th June, 2012 and the Committee deferred the proposal for want of following additional information:

- ii) Type of fuel to be used in the boiler. Pollution control device to be provided to boiler. Disposal of fly ash if any.
- iii) Soil analysis report to be furnished.
- iv) Ground water quality data to be furnished.
- v) Adequate effluent treatment scheme based on segregation of high COD, high TDS and low TDS effluent streams for zero discharge.
- vi) Detailed compliance report of environmental clearance for the existing unit.

PP vide letter dated 8th January, 2013 has submitted the above mentioned addl. Information. PP has also submitted the copy of court case filed by the SPCB against the Unit as supporting document for credible action taken.

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

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

- ii) The levels of PM10, SO₂, NO_x, VOC, CO and HCl shall be monitored in ambient air.
- iii) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. 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 shall not exceed 55 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- vi) Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD should be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream should be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.
- vii) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- viii) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt should be disposed off to the TSDF. The ash from boiler should be sold to brick manufacturers/cement industry.
- ix) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from 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) 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 over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xiii) At least 5.0 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.

34.3.10 Molasses based Distillery (30 KLPD) at Village Havargaon, Tehsil Kallam, District Osmanabad, Maharashtra by M/s Shambhu Mahadeo Sugar & Allied Industries Limited – Reg. EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 32nd meeting held during 16th – 17th February, 2012 and recommended the proposal for environmental clearance. While processing the proposal, it was observed that public hearing was conducted by the Official below the rank of Additional District Magistrate. Now, Maharashtra Pollution Control Board has conducted fresh public hearing at the level of Additional District Magister on 20.05.2014. The issues were raised regarding village development activities, tree plantation, pollution etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report. Now PP has requested the change in spent wash treatment process from incineration to bio-composting. But the Committee noted that EIA-EMP report was prepared for treatment through MEE and incineration process to maintain zero liquid discharge, which is more effective than Bio-composting process. Therefore, the committee recommended the same treatment process as agreed earlier to be followed.

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

- i. No grain based distillery should be installed without prior permission from the Ministry.
- ii. As proposed, multi-cyclone followed by bag filter alongwith stack of adequate height should be provided to bagasse fired boiler to control particulate emissions within 50 mg/Nm³. At no time, the emission levels should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.
- iii. 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.

- iv. 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 MPCB.
- v. 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.
- vi. Total fresh water requirement from River Manjara for distillery should not exceed 10 KL/KL of the alcohol production (i.e. 300 m³/day). Prior permission for the drawl of 300 m³/day should be obtained from the concerned Authority.
- vii. Spent wash shall be treated in bio-methanation followed by concentration in MEE. Concentrate from MEE will be mixed with bagasse and dried to burn in a furnace to achieve zero discharge. Spent lees and Utilities wastewater should be treated in ETP and water quality of treated effluent should meet the norms prescribed by CPCB/MPCB and treated effluent should be recycled/reused within the factory premises.
- viii. No effluent from distillery should be discharged outside the premises and Zero discharge concept should be adopted.
- ix. Process effluent/any wastewater should not be allowed to mix with storm water. Storm water drain should be passed through guard pond.
- x. 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 30 days capacity.
- xi. Molasses should be transferred through closed tankers and no spillage should be done while transporting.
- xii. Adequate numbers of ground water quality monitoring stations should be set up by providing piezometers around the project area. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to MPCB and this Ministry.
- xiii. 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.
- xiv. As proposed, ash shall be sent to brick manufacturers. No biocomposting shall be done with spent wash.
- xv. Fire fighting system should be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting should be made to control fire from the alcohol storage tank.

- xvi. 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.
- xvii. Green belt should be in 33 % area to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO.
- xviii. 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.
- xix. 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.
- xx. All the commitments made during the Public Hearing/Public Consultation meeting held on 12th July, 2010 should be satisfactorily implemented and adequate budget provision should be made accordingly.
- xxi. At least 2.5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

34.3.11 Single Super Phosphate (Powder & Granular 1500 MTPD), N₂SiF₆ 130 MTPD), NPK Fertilizer (Powder & Granular 500 MTPD), LABASA (500 MTPD), Benzene Sulphonyl Chloride 20 MTPD), Sulphone 1,26 MTPD) at Sy.No.525, 532, 554-556, 560, 56/1. Village Dudhwada, Tehsil Padra, District Vadodara, Gujarat by M/s Bodal Agrotech Ltd –Reg. EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 21st meeting held during 30th July, 2014 –1st August, 2014 and the Committee deferred the proposal for want of following addl. information:

- i) Revised ESR plan.
- ii) HC + CO data to be re-analysed and re-submitted

PP vide e-mail dated 22nd December, 2014 has submitted the above mentioned addl. Information.

After detailed deliberations, the Committee recommended the project for EC and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) As proposed, Silicon Fluoride gases shall be passed through three stage–wet scrubbers before discharging into atmosphere through adequate stack height to control fluorine content within 15 mg/m³. After three stages, if fluorine content in

emission is not meeting the prescribed norms then efficiency of scrubber shall be improved by adding additional stage of scrubber. Scrubbing shall have interlocking system with main plant.

- ii) As proposed, Cyclone followed by bag filter shall be provided to SSP plant and grinding section for controlling fugitive emissions.
- iii) The gaseous emissions (SO₂, NO_x, CO and Fluoride) and particulate matter from process stacks shall conform to the norms prescribed by the CPCB/ State Pollution Control Board (RSPCB) 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 unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored and efficiency of air pollution control device shall be checked regularly. The stack monitoring report shall be submitted to the Ministry's Regional Office at Bhopal, CPCB and GPCB.
- iv) Fluoride monitoring through continuous fluoride analyzer shall be carried out in ambient air as well as stack.
- v) Total fresh water requirement from ground water source shall not exceed 1051 m³/day and prior permission shall be obtained from CGWA/SGWB and a copy submitted to the Ministry's Regional Office at Bhopal.
- vi) 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.
- vii) Industrial effluent shall be treated and recycled/reused in the process. As proposed sewage shall be treated in STP based on MBBR followed by ultrafiltration.
- viii) No effluent shall be discharged outside the premises and 'Zero' discharge shall be ensured.
- ix) Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent and report submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB.
- x) All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008.
- xi) As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xii) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

- xiii) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 22nd February, 2012 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xiv) At least 5 % of the total cost of the project shall be earmarked towards the Enterprises Social Commitment and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

34.4 Terms of Reference (TOR)

34.4.1 Chemical Fertilizer unit for manufacturing of Single super phosphate (SSP) and Granular single super phosphate (GSSP) at plot no. 897/129/2, Village Doriya, Tehsil Nimbahera, Rajasthan by M/s Annapoorna Chemical Fertilizer and Pesticide Ltd. reg TOR.

The Committee noted that the proposal for manufacturing SSP is covered under B-category and to be appraised at State Level. Therefore, the Committee recommended to transfer the proposal to the State SEAC/SEIAA, Rajasthan after its constitution in the state.

34.4.2 Expansion of bulk drug manufacturing unit at Sy. No: 10 and its Parts. Village Gaddapotharam, MendalJinnaram, District Medak, Telangana by M/s. Eytan Labs Limited. File No. -reg TOR.

The project authorities and their Consultant (M/s Rightsource Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All 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 by Expert Appraisal Committee (I).

M/s. Eytan Labs Limited has proposed for expansion of bulk drug manufacturing unit at Sy. No: 10 and its Parts. Village Gaddapotharam, MendalJinnaram, District Medak, Telangana. Plot area is 32368 m². Out of which area earmarked for greenbelt is 10682 m². Waterbodies namely DanaraCheruvu – 5.4 Km SW, BamanaCheruvu – 7.5 Km W, BoppanaCheruvu – 6.3 Km W, AmmaCheruvu – 8.6 Km W, PeddaCheruvu – 8.4 Km WNW, AkkammaCheruvu – 5.6 Km NW, PrishabCheruvu – 3.8 Km NW, AmbCheruvu – 9.2 Km S are located within 10 km distance. Reserve forests namely Dundigal R.F – 0.5 Kms SE, Pochampally R.F – 8.0 Kms E, Gaudavalli R.F – 8.5 Kms E, Suraram R.F – 5.0 Kms SE, Borampet R.F – 5.04 Kms SE, KistaiPalli R.F – 0.8 Kms WSW, Kazipalli R.F – 1.8 Kms SW, Wailal R.F – 1.84 Kms WNW, Jinnawaram R.F – 6.46 Kms NW, Palam R.F – 7.4 Km NW are located within 10 km distance. Following are the details of existing and proposed products:

Existing products & Capacities

S. No	Products	Capacity (Kg/day)
Group-A		
1	Lamivudine pharma	166.67
2	3-Amino benzoic acid ethyl	16.67
3	Methyl-1-(phenylethyl) imidazole-5-carboxylate (Intermediate for Metomidate)	15.00
4	(s)-5-chloro- α -(cyclopropylethynyl)-2-Amino- α -(Trifluoromethyl) benzene methanol (Efavirenz intermediate)	116.67
	Max. production capacity for Group-A	315.0
Group-B		
1	Zidovudine pharma	166.67
2	3-Amino benzoic acid ethyl ester methane sulfonate (Tricaine intermediate)	16.67
3	Methyl -1-(phenylethyl imidazole-5-carboxylate (Intermediate for Metomidate)	15.00
4	(s)-5-Chloro- α -(cyclopropylethynyl)-2- Amino- α -(Trifluoromethyl)benzene methanol(Efavirenz Intermediate)	116.67
	Max. production capacity for Group-B	315.0
Group-c		
1	Efavirenz pharma	166.67
2	3-Amino benzoic acid ethyl ester methane sulfonate (Tricaine intermediate)	16.67
3	4-[1-Hydroxy-4[4-Hydroxy Diphenyl methyl)-1-Piperidinyl] Butyl- α , α -Dimethylbenzene acetic acid methyl ester (Intermediate for fexofendadine)	
4	(2S, 3S, 5S)-5-amino-2-N,n-dibenzylamino-3-hydroxy-1,6-diphenyl hexane (Ritavir Intermediate)	116.67
	Max. production capacity for Group-C	315.0

Any one group of products will be manufactured at any time

Table: List of Proposed products & Capacities

S. No	Product Name	CAS NO.	Therapeutic Category	Quantity Kg/Month	Quantity Kg/Day
1	Ciprofloxacin Hydrochloride	93107-08-5	Anti-infective.	10000.00	333.33
2	Ciprofloxacin Lactate	97867-33-9	Antibacterial	5000.00	166.67
3	Efavirenz	154598-52-4	Antiretroviral.	30000.00	1000.00
4	Emtricitabine	143491-57-0	Anti-Infective Agent	10000.00	333.33
5	Febantel	58306-30-2	Ophthalmic Product	5000.00	166.67
6	Nadolol	42200-33-9	Cardiovascular Agent	5000.00	166.67
7	Lamivudine	134678-17-4	Anti- Hepatitis Agents.	15045.00	501.50
8	Levetiracetam	102767-28-2	Anticonvulsant.	10000.00	333.33
9	Zidovudine	30516-87-1	Antiretroviral Agent	15000.00	500.00
	Total			105045.00	3501.50

Scrubber will be provided to control process emissions viz. ammonia and sulphur dioxide. Additional coal fired boiler (3 TPH + 5 TPH) will be installed. Addl. DG set (1000 KVA) will be installed. Total water requirement will be increased from 39.6 m³/day

to 325 m³/day after expansion. Effluent generation will be increased from 39.61 m³/day to 110 m³/day after expansion. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. Eytan Labs (formerly known as M/s Matrix Laboratories Ltd. Unit (VI) has obtained environmental clearance letter no. J-11011/141/2005- IA II (I) dated 07.07.2005. Eytan labs Limited is having CFO from SPCB vide CFO No. APPCB/RCP/18275/CFO & HWM/HO/2013-3659 dated 20.09.2013.

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

A. Standard TOR:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the SPCB.
6. Copy of NOC/Consent to Establish for the existing unit.
7. Compliance to the conditions stipulated in the NOC granted by the SPCB.
8. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
9. 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.
10. A map indicating location of the project and distance from severely polluted area.
11. Project location and plant layout.
12. Infrastructure facilities including power sources.
13. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
14. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
15. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
16. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
17. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
18. Details of the total land and break-up of the land use for green belt and other uses.
19. List of products alongwith the production capacities.
20. Detailed list of raw material required and source, mode of storage.
21. Manufacturing process details alongwith the chemical reactions and process flow chart.
22. Action plan for the transportation of raw material and products.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.

24. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
25. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, NH₃ including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
26. Details of water and air pollution and its mitigation plan
27. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
28. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
29. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
30. Name of all the solvents to be used in the process and details of solvent recovery system.
31. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
32. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
33. Source and permission from Competent Authority for the drawl of water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
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. Material Safety Data Sheet for all the Chemicals are being used/will be used.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
41. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
43. Details of occupational health programme.
 - a) To which chemicals, workers are exposed directly or indirectly.
 - b) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - c) What measures company have taken to keep these chemicals within PEL/TLV.
 - d) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - e) What are onsite and offsite emergency plan during chemical disaster.

- f) Liver function tests (LFT) during pre-placement and periodical examination.
 - g) Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
 45. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
 46. Note on compliance to the recommendations mentioned in the CREP guidelines.
 47. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
 48. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
 49. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 50. Corporate Environmental Responsibility**
- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non-compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
51. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

B. Additional TOR

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. 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.
3. Recommendation of State Pollution Control Board for proposed expansion.

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

34.4.3 Expansion of Sugar Plant (from 7000 TCD to 12000 TCD), Distillery Plant (100 KLPD),Co-generation Power Plant (3 MW) at Village Pawarwadi, Taluk Majalgaon, District Beed, Maharashtra by M/s NSL SUGARS LIMITED (UNIT-III) (Formerly JAY MAHESH SUGAR INDUSTRIES LIMITED)..-reg 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 report. All molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

MoEF vide letter no. J-11011/1264/2007 IA II (I) dated 30.04 2009 has issued environmental clearance for Expansion of Sugar Plant (from 4500 TCD to 12000 TCD), Distillery Plant (100 KLPD),Co-generation Power Plant (30 MW) at Village Pawarwadi, Taluk Majalgaon, District Beed, Maharashtra. So far unit has installed 7000 TCD (4500 TCD + 2500 TCD) sugar unit and 30 MW Co-generation power plant. 100 KLPD distillery plant is under implementation. 5000 TCD sugar plant is not implanted so far. Total plot area is 100 acres. Validity of EC was expired on 30.04.2014. Now PP has requested to change the name of unit from Jay Mahesh Sugars Ltd. to NSL Sugars Ltd (Unit -III). PP requested for Permission to establish Bio-methanation following bio-composting facility in addition to the already permitted concentration followed by incineration and permission to operate distillery for 330 days. Installation of new 30 TPH boiler and 3 MW power generation instead of 2 x 20 TPH existing old boilers as already permitted in EC. There is no Reserve Forests/ Protected forests/ National Parks/ Wildlife Sanctuaries/Tiger Reserves/elephant Corridors within 10 km distance. Sindaphana River, Godawari River and Magalgaon dam are situated at a distance of 3.1 km and 4.9 km and 8.2 km respectively from the plant. In this proposal, PP has informed that total spent wash generation will be 1000 KLD. Out of which 160 KLD raw spent wash will be treated in bio-methanisation digester and after that the bio-methanated spent wash will be concentrated in MEE @ 25 brix to generate 77 KLPD of concentrated spent wash which will be utilized in bio-composting. The bio-gas generated will be utilized as fuel in the boiler. The balance 840 KLD will be treated in MEEs @ 60 brix to generate 168 KLD of concentrated spent wash which will be incinerated in the incineration boiler. The Committee suggested that 270 days operation with bio-composting is not acceptable due to there is operation and monitoring issues. It is difficult to monitor that industrial activity during monsoon season. The existing boilers are very old i.e. 2 x 20 TPH conventional boiler. Now, the management has decided to replace the oil 2 x 20 TPH boilers with new 1 x 30 TPH incineration boiler alongwith 3 MW power generation. The steam and power generated from this boiler and TG will be used for distillery operation.

After detailed deliberations, the Expert Appraisal Committee prescribed the following Standard and additional TORs for updating existing EIA/EMP report:

A. Standard TOR:

1. Executive summary of the project.
2. Justification of the project
3. Detailed break-up of the land area along with latest photograph of the area.
4. Present land use based on satellite imagery and details of land availability for the project along with supporting document.
5. Details of site and information related to environmental setting within 10 km radius of the project site.
6. A copy of lease deed or allotment letter, if land is already acquired.
7. List of existing distillery units in the study area along with their capacity and sourcing of raw material.

8. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc.
9. Details of proposed products along with manufacturing capacity.
10. Number of working days of the sugar unit, distillery unit and CPP.
11. Details of raw materials, its source with availability of all raw materials including cereal grains requirement in case of grain based distillery. If molasses based distillery, then give source and quantity available for molasses.
12. Manufacturing process details of Sugar , distillery and CPP along with process flow chart.
13. Sources and quantity of fuel (rice husk/bagasse/ coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted.
14. Storage facility for raw materials, prepared alcohol, fuels and fly ash.
15. Action plan for ambient air quality parameters as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
16. One month site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x, CO and HC (methane & non methane) shall be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
17. Mathematical modelling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler's stack.
18. An action plan to control and monitor secondary fugitive emissions from all the sources.
19. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
20. Details of boiler and its capacity. Details of the use of steam from the boiler.
21. Ground water quality around proposed spent wash storage lagoon and the project area.
22. Details of water requirement, water balance chart for existing unit as well as proposed expansion (as applicable). Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
23. Source of water supply and permission of withdrawal of water from Competent Authority.
24. Proposed effluent treatment system for grain/molasses based distillery (spent wash and spent lees) along with utility wastewater including CPP/Co-gen Unit (wherever applicable) as well as domestic sewage and scheme for achieving zero discharge. Details of treatment of effluent generation from sugar unit.
25. Spent wash generation should not exceed 8 KL/KL of alcohol production. Details of the spent wash treatment for molasses based distillery based distillery.
26. Capacity for spent wash holding tank and action plan to control ground water pollution.
27. Layout for storage of bagasse/biomass/coal.
28. Capacity for spent wash holding tank and action plan to control ground water pollution.
29. Dryer shall be installed to dry DWGS.
30. Layout for storage of rice husk/biomass/coal.
31. Details of solid waste management including management of boiler ash.
32. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
33. Alcohol storage and handling area fire fighting facility as per norms. Provision of Foam System for fire fighting to control fire from the alcohol storage tank.

34. Action plan for development of green belt over 33 % of the total project area within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.
35. 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.
36. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
37. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health surveillance programme.
39. Details of socio-economic welfare activities.
40. Transportation of raw materials and finished products for the project (proposed/expansion) in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
41. Action plan for post-project environmental monitoring.
42. Corporate Environmental Responsibility
43. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 (d) Does the company have a system of reporting of non-compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
44. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.

B. Additional TOR

1. Taking in to consideration that more than 50% work has already been completed and public hearing was conducted by the PP while taking the environmental clearance of the same unit in the year November 2008, the committee, therefore, exempted the public hearing as per para 7(ii) of EIA Notification, 2006 for preparation of EIA/EMP Report.
2. One month environmental data to be collected for preparation of EIA-EMP report. .

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

It was recommended that 'TORs' along without Public Hearing prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted.

34.4.4 Manufacturing of Agrochemicals (Capacity 6930 MTPA) at Sy. No. 163, 164 & 165, Udumulapadu Village, Dhone Mandal, Kurnool District, Andhra Pradesh by M/s. Agrisol (India) Pvt. Ltd.-reg TOR

The project authorities and their Consultant (M/s Team Labs and Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All technical grade pesticides and pesticide specific intermediates are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s. Agrisol (India) Pvt. Ltd. has proposed for manufacturing of Agrochemicals (Capacity 6930 MTPA) at Sy. No. 163, 164 & 165, Udumulapadu Village, Dhone Mandal, Kurnool District, Andhra Pradesh. Plot area is 33 acres out of which greenbelt will be developed in 11 acres. Cost of project is Rs. Rs. 30 Crore. It is reported that no national park/wildlife sanctuary is located within 10 km distance. North Dhone RF is located at a distance of 7.6 km. Proposed unit will be implemented in the two phases. Following products will be manufactured:

S.N.	Product Name	CAS No	Capacity (TPA)
1	Acephate	30560-19-1	1320
2	Cartap Hydrochloride	15263-52-2	1320
3	Clodinafop Propargyl	105512-06-9	330
4	Difenoconazole	119446-68-3	330
5	Diafenthiuron	80060-09-9	660
6	Emamectin benzoate	137512-74-4	165
7	Ethephon	16672-87-0	990
8	Ethiprole	181587-01-9	330
9	Fipronil	120068-37-3	330
10	Flonicamid	158062-67-0	330
11	Foramsulfuron	173159-57-4	330

12	Glufosinate	51276-47-2	330
13	Glyphosate	1071-83-6	1320
14	Imidacloprid	138261-41-3	660
15	Imazethapyr	81335-77-5	330
16	Iprobenfos (Kitazin)	26087-47-8	330
17	Mesosulfuron	208465-21-8	330
18	Metribuzin	21087-64-9	330
19	Nitenpyram	150824-47-8	330
20	Penoxsulam	219714-96-2	330
21	Picoxystrobin	117428-22-5	330
22	Pretilachlor	51218-49-6	330
23	Prothioconazole	178928-70-6	330
24	Pyraclostrobin	175013-18-0	330
25	Spirotetramat	203313-25-1	330
26	Sulfosulfuron	141776-32-1	330
27	Thiocyclam	31895-22-4	330
28	Thiamethaxam	153719-23-4	1320
Total Phase I(3 Products on Campaign Basis)			3960
Total Phase II (3 Products on Campaign Basis)			2970
Total after Phase II (6 Products on Campaign Basis)			6930

Bagfilter will be provided to coal fired boiler (8 TPH) to control particulate emissions. Scrubber will be provided to control process emissions viz. HCl, SO₂ and NH₃. Total water requirement will be 427 m³/day. Out of which fresh water requirement from ground water source will be 277.89 m³/day and remaining will be water requirement will be met from recycled. Effluent generation will be 176.3 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. Sewage will be treated in Sewage Treatment Plant. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers.

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

A. Standard TOR

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Plant layout alongwith details of facility.
6. Infrastructure facilities including power sources.
7. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
8. Project site location alongwith photographs and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
9. Present land use based on satellite imagery for the study area of 10 km radius.
10. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
11. Details of the total land and break-up of the land use for green belt and other uses.

12. List of products alongwith the production capacities.
13. Detailed list of raw material required and source, mode of storage and transportation.
14. Manufacturing process details alongwith the chemical reactions and process flow chart.
15. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
16. 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.
17. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x, Cl₂, HCl, SO₂, NH₃ including HC and VOCs should be collected. The monitoring stations should take into account the predominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
18. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
19. Name of all the solvents to be used in the process and details of solvent recovery system.
20. Design details of ETP, incinerator, if any alongwith control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
21. Details of water and air pollution and its mitigation plan
22. An action plan to control and monitor secondary fugitive emissions from all the sources.
23. Action plan for odour assessment and control to be submitted.
24. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
25. Source and quantity of fresh water requirement. Water balance chart including quantity of effluent generated recycled and reused and discharged.
26. Action plan for 'Zero' discharge of effluent should be included.
27. 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).
28. Detailed plan for zero liquid discharge and reduction of water consumption to be prepared .
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 management 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. Risk assessment for storage for chemicals/solvents. Risk assessment for Cyanide.
34. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
35. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to 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.
38. Details of occupational health surveillance programme.
39. Socio-economic development activities shall be in place.
40. Note on compliance to the recommendations mentioned in the CREP guidelines.
41. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided. Toxic substance monitoring plan.
42. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
43. Total capital cost and recurring cost/annum for environmental pollution control measures.

44. Corporate Environmental Responsibility

- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
45. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
46. A tabular chart with index for point wise compliance of above TORs.

B. Additional TOR

1. Action Plan for Chlorine handling system.
2. Public hearing to be conducted by SPCB as proposed project is located in the new industrial area 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.

The following general points shall be noted:

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

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

The Committee prescribed the above ToRs for preparation of EIA/EMP reports. The proponent should prepare EIA/EMP Report based on the above TORs and submit the same to the Gujarat Pollution Control Board for conducting public hearing/consultation. The 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.

34.4.5 Proposed Resin manufacturing (capacity: 2800 MT/month) Located at Survey No. : 565, 394/1 , Village: Nava Sadulka, District: Morbi, Gujarat by M/s. Reolaxe Laminate Pvt Ltd. File No. J-11011/28/2015-IA II (I).-reg TOR

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

34.4.6 Drilling of Development wells (40 nos.) and Exploratory / Appraisal wells (5 Wells) in the Kharsang Oil Field atAt district Chnlang, Arunachal Pradesh by M/s GeoEnpro Petroleum. File No. J-11011/341/2014 IA II (I)-reg TOR

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

M/s GeoEnpro Petroleum has proposed for Drilling of Development wells (40 nos.) and Exploratory / Appraisal wells (5 Wells) in the Kharsang Oil Field atAt district Chnlang, Arunachal Pradesh. Cost of project is Rs. Rs. 720 Crore. Kharsang oil field is situated in the reserve forest area. Total mining lease area is 11 km². Present production rate of oil and gas is around 1500 BOPD and 50,000 m³/day respectively. 94.712ha forest land is involved. Water (50 m³/day) from the nearby river will be drawn during drilling activities. Waste generated from the KOF is mainly in the form of formation water and minor sludge. An effluent treatment plant (ETP) with treating capacity of 200 KLPD is already operational in KOF to achieve permissible norms for disposal as per State Pollution Control Board norms. The oily sludge is collected in a concrete sludge storage facility at Centralized location and is disposal of to an authorized and licensed recycler. Power requirement will be met from the existing power house. KOF is equipped with 3 gas fired Genset (1x 450 KVA and 2x 180 KVA) and one diesel genset (1x 170 KVA) to meet the power requirement. MoEF vide letter no J-11011/389/2006- IA II (I) dated 15.11.2007 for the exploratory drilling.

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

A. Standard TOR:

1. Executive summary of a project
2. Project description, project objectives and project benefits.
3. Site details within 1 km of the each proposed well, any habitation, any other installation/activity, flora and fauna, approachability to site, other activities including agriculture/land, satellite imagery for 10 km area.
4. Details of forest land involved in the proposed project. A copy of forest clearance letter, if applicable.
5. Details of National Park/Wild life Sanctuary/Reserve Forest/Eco sensitive area within 10 km distance.
6. Permission from the State Forest Department regarding the impact of the proposed project on the surrounding National Park/Wild life Sanctuary/Reserve Forest/Eco sensitive area, if any. Approval obtained from the State/Central Government under Forest (Conservation Act, 1980 for the forestland should be submitted.
7. Distance from nearby critically/severely polluted area as per Notification dated 13th January, 2010, if applicable.
8. Does proposal involves rehabilitation and resettlement? If yes, details thereof.
9. Details of project cost.
10. Details of project facilities such as GGS, oil storage, pipeline, ETP, oil collection system etc to be installed.
11. Environmental considerations in the selection of the drilling locations for which environmental clearance is being sought. Present any analysis suggested for minimizing the foot print giving details of drilling and development options considered.
12. Baseline data collection for air, water and soil for one season leaving the monsoon season in an area of 10 km radius with centre of Oil Field as its centre covering the area of all proposed drilling wells.
 - a. Topography of the project site.
 - b. Ambient Air Quality monitoring at 8 locations for PM10, SO2, NOx, VOCs, Methane and non-methane HC (1 month)
 - c. Soil sample analysis (physical and chemical properties) at the areas located at 5 locations.
 - d. Ground and surface water quality in the vicinity of the proposed wells site.
 - e. Climatology and Meteorology including wind speed, wind direction, temperature rainfall relative humidity etc.
 - f. Measurement of Noise levels within 1 km radius of the proposed wells.
 - g. Vegetation and land use; Animal resources
13. Incremental GLC as a result of DG set operation.

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

Safety Programme for all personnel at site. This should also include monitoring programme for the environmental.

38. Total capital and recurring cost for environmental control measures.
39. A copy of Corporate Environment Policy of the company as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26th April, 2011 available on the Ministry's website.
40. Any litigation pending against the project and or any direction/order passed by any court of law against the project. If so details thereof.
41. A tabular chart with index for point-wise compliance of above TORs.

B. Additional TOR

1. Forest clearance to be obtained for 94.712ha forest land.
2. Public hearing is exempted as per para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006 on the ground that as public hearing was conducted on 11.07.2007 for the same block.

The following general points should be noted:

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

The Committee exempted the public hearing as per para 7 (ii) of EIA Notification, 2006 as per para 7(ii) of EIA Notification, 2006 on the ground that as public hearing was conducted on 11.07.2007. 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 the final EIA/EMP report submitted to the Ministry for obtaining environmental clearance.

34.4.7 Bulk Drug Manufacturing Unit at Plot No 34, Gollapuram Industrial Park, Gollapuram (V), Hindupur (M), Anantapuramu (Dt), Andhra Pradesh by M/s Penn Bio Chemicals India Pvt Ltd.–reg. TOR

The project authorities and their Consultant (M/s Rightsource Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All 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, due to applicability of general condition for interstate boundary at 0.5 km (Karnataka and AP), the proposed project is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Penn Bio Chemicals India Pvt Ltd. has proposed for setting up of Bulk Drug Manufacturing Unit at Plot No 34, Gollapuram Industrial Park, Village Gollapuram, Mandal Hindupur, Distirct Anantapuramu, Andhra Pradesh. Total plot area is 38338.58 m² of which are earmarked for greenbelt is 13091 m². Cost of project is Rs. 28.79 Crore. It is reported that no reserve forests/ wildlife sanctuary are located within 10 km distance. Water bodies (i.e. Kumudvati River '8 Km' and Santebidanur lake '4.7 km') are located within 10 km distance. Following products will be manufactured:

Proposed products & Capacities

S. No	Product Name	Therapeutic Category	CAS No's	Quantity Kg/Month	Quantity Kg/Day
1	AbacavirSulphate	Antiretroviral	188062-50-2	2500.00	83.33
2	AliskirenHemifumarate	Antihypertensive agent	173334-58-2	1500.00	50.00
3	Darunavirethanolate	Antiretroviral	635728-49-3	2000.00	66.67
4	Duloxetine Hydrochloride	Antidepressant	136434-34-9	2000.00	66.67
5	Entecavir Monohydrate	Antiviral agent	209216-23-9	3000.00	100.00
6	Febuxostat	Xanthine oxidase inhibitor	144060-53-7	2500.00	83.33
7	Fosamprenavir	Antiretroviral Agent	226700-81-8	1000.00	33.33
8	Montelukast Sodium	Antiasthmatic	151767-02-1	2000.00	66.67
9	Pregabalin	Neuropathic Pain Agent	148553-50-8	10000.00	333.33
10	Sevelamer Hydrochloride	Phosphate binder	152751-57-0	3000.00	100.00
11	Tadalafil	Anti-erectile dysfunction agent	171596-29-5	5000.00	166.67
12	Tizanidine hydrochloride	Skeletal muscle relaxant	64461-82-1	5000.00	166.67
13	Valacyclovir hydrochloride Monohydrate	Antiviral	124832-27-5	1500.00	50.00
	Total			41000.00	1367.00

Bagfilter will be provided to coal fired boiler (2 TPH and 5 TPH) to control particulate emissions. Scrubber will be provided to control particulate emission viz. HCl. DG set (200 KVA + 500 KVA) will be installed for standby arrangement. Total water requirement will be 260 m³/day and met from APIIC water supply. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent carbon and Distillation residue will be sent to cement plant. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. Eytan Labs (formerly known as M/s Matrix Laboratories Ltd. Unit (VI) has obtained environmental clearance letter no. J-11011/141/2005- IA II (I) dated 07.07.2005. Eytan labs Limited is having CFO from SPCB vide CFO No. APPCB/RCP/18275/CFO & HWM/HO/2013-3659 dated 20.09.2013.

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

A. Standard TOR:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Map indicating location of the project and distance from severely polluted area.
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
11. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
12. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products alongwith the production capacities.
15. Detailed list of raw material required and source, mode of storage.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Action plan for the transportation of raw material and products.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
20. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, HCl including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
21. Details of water and air pollution and its mitigation plan
22. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
23. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
24. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
25. Name of all the solvents to be used in the process and details of solvent recovery system.
26. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
27. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.

28. Source and permission from Competent Authority for the drawl of water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
29. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
30. Zero discharge effluent concepts to be adopted.
31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Material Safety Data Sheet for all the Chemicals are being used/will be used.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
36. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
37. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
38. Details of occupational health programme.
 - a) To which chemicals, workers are exposed directly or indirectly.
 - b) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - c) What measures company have taken to keep these chemicals within PEL/TLV.
 - d) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - e) What are onsite and offsite emergency plan during chemical disaster.
 - f) Liver function tests (LFT) during pre-placement and periodical examination.
 - g) Details of occupational health surveillance programme.
39. Socio-economic development activities shall be in place.
40. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
41. Note on compliance to the recommendations mentioned in the CREP guidelines.
42. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
43. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
44. Total capital cost and recurring cost/annum for environmental pollution control measures.

45. Corporate Environmental Responsibility

- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.

- (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- (d) Does the company have a system of reporting of non-compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
46. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

B. Additional TOR

The Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006 as project is located in the notified industrial area.

It was recommended that '**TORs**' **without public hearing** prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006.

34.5 Any Other Items

34.5.1 Underground Coal Gasification (UCG) at Vastan Mine Block, NaniNaroli , Surat in Gujarat by M/s. Gujarat Industries Power Co. Limited - Extension of Validity of Environment Clearance.

MoEF vide letter no. J-11011/815/2007-IA –II dated 26th February, 2010 has issued environmental clearance for the above mentioned project. PP informed that Ministry of coal has decided in principle to allocate Vastan UCG block to GIPCL and execution of project through JV between ONGC and GIPCL. Block allocation is awaited. Execution of UCG pilot project can be initiated after block allocation. Now, PP has requested to extend the validity of EC for another five years term.

After detailed deliberation, the Committee recommended the extension of validity of EC for another five years w.e.f. 26.02.2015.

34.5.2 Proposed Petroleum and Petrochemical Complex in Multi Product Special Economic Zone in District Jamnagar in Gujarat by M/s. Reliance Industries Limited - Extension of Validity of EC.

MoEF vide letter no. J-11011/149/2007-IA –II dated 30th March, 2010 has issued environmental clearance for the above mentioned project. MoEF vide letter no. J-11011/149/2007-IA –II dated 18th October, 2011 has transferred the EC in the name of M/s. Reliance Industries Limited from M/s Reliance Jamnagar Infrastructure Ltd. PP informed that progress of construction of core unit is in advance stage and may take time to complete in next 4-5 years. PP vide letter dated 16.01.2015 has requested to extend the validity of the EC by another five years.

After detailed deliberation, the Committee recommended the extension of validity of EC for another five years w.e.f. 30.03.2015. Detailed time schedule for completion to be submitted for record.

34.5.3 Expansion of P.F. Resin (240 MTM to 750 MTM), M.F. Resin (80 MTM to 250 MTM) & Laminated sheets (2.5 lakh PM) at Survey No.355, Village Dalpur, Tehsil Prantij, District Sabarkantha, Gujarat by M/s Airolam Ltd. – reconsideration of TOR

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 9th meeting held during 10th - 11th June, 2013 and the Committee noted that violation has taken place by the Unit. Now, the State Government has submitted the action taken report indicating that criminal case has been filed against the unit for violation by the Gujarat Pollution control Board.

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

A. Standard TOR:

1. Executive summary of the project
2. Justification of the project.
3. Photographs of proposed plant site.
4. Promoters and their back ground.
5. Regulatory framework.
6. A map indicating location of the project and distance from severely polluted area
7. Project location and plant layout.
8. Infrastructure facilities including power sources.
9. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
10. Project site location along with site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
11. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project along with supporting document.
12. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
13. Details of the total land and break-up of the land use for green belt and other uses.
14. List of products along with the production capacities.
15. Detailed list of raw materials required and source, mode of storage and transportation.
16. Manufacturing process details along with the chemical reactions and process flow chart.
17. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
18. Ambient air quality monitoring at 6 locations within the study area of 5 km. aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
19. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM10, PM2.5, SO₂, NO_x including VOCs shall be collected. The monitoring

stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.

20. Air pollution control measures viz. Multi-cyclone and bag filter etc. shall be proposed for the effective control of gaseous emissions within permissible limits.
21. Control methanol emission from drying section.
22. Details of VOC monitoring system in the working zone environment, if any.
23. Name of all the solvents to be used in the process and details of solvent recovery system.
24. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
25. Details of water and air pollution and its mitigation plan.
26. An action plan to control and monitor secondary fugitive emissions from all the sources.
27. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
28. Permission for the drawl of ground water from CGWA. Water balance chart including quantity of effluent generated recycled and reused and discharged.
29. Action plan for 'Zero' discharge of effluent shall be included.
30. Treatment of phenol in the effluent, if any.
31. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
32. The details of solid and hazardous wastes generation, storage, utilisation and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
33. Precautions to be taken during storage and transportation of hazardous chemicals shall be clearly mentioned and incorporated.
34. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
35. List of hazardous chemicals (as per MSIHC rule) with toxicity levels.
36. A write up on "Safe Practice" followed for methanol handling, storage, transportation and unloading to be submitted.
37. A write up on "Treatment of workers affected by accidental spillage of chemicals".
38. Locating the plant in open area instead of covered to be reviewed in view of safety consideration.
39. An action plan to develop green belt in 33 % area
40. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
41. Details of occupational health programme.
 - i. To which chemicals, workers are exposed directly or indirectly.
 - ii. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii. What measures company has taken to keep these chemicals within PEL/TLV.
 - iv. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v. What are onsite and offsite emergency plan during chemical disaster.
 - vi. Liver function tests (LFT) during pre-placement and periodical examination.
42. Details of occupational health surveillance programme.

43. Socio-economic development activities shall be in place.
44. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and incorporated.
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.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report.
48. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

B. Additional TOR

1. 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.

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 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. 'Certificate of accreditation' issued by QCI to the environmental consultant should be included.

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

34.5.4 Proposed Distillery capacity of 65 KLPD at post Shreepur, Tahsil Malshiras, district Solapur, Maharashtra by M/s BrimaSagar – reg. amendment in TOR.

MoEF vide letter no. J-11011/249/2013-IA –II dated 1st January, 2014 has issued TOR for preparation of EIA-EMP report. Now, PP has requested from the following modification in product as amendments:

S.N.	Description	As per approved TORs dated 31.01.2014	Amendment of TORs (KLPD)
1	Rectified Spirit	65 KLPD	--
2	ENA	65 KLPD	--
3	Malt Spirit	1.5 KLPD	5.0 KLPD
4	Grape Spirit	2.5 KLPD	5.0 KLPD
5	Potable Liquor	36.0	--

After detailed deliberations, the Committee recommended the same earlier TOR for preparation of EIA-EMP report and to conduct public hearing.

34.5.5 Manufacture of Fertilizers (SSP) and Sulphuric Acid Unit of M/s Geminy Acid & Fertilizers (P) Ltd at Village Harijana, The Garhshankar, District Hoshiarpur, Punjab – reconsideration of TOR

The aforesaid proposal was considered in 14.08.2014 and the Committee recommended to submit fresh 1 and pre-feasibility report. Now, PP has submitted the requisite documents.

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

A. Standard TOR:

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 month site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
19. Air pollution control measures.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Details of water and air pollution and its mitigation plan
22. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
23. An action plan to control and monitor secondary fugitive emissions from all the sources.
24. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
25. Source and permission for the drawl of water from the competent authority. Water balance chart including quantity of effluent generated recycled and reused and discharged. Efforts shall be made to reduce ground water drawl.
26. Management plan for solid/hazardous waste generation, storage, utilization and disposal. Ex. Disposal of by products viz., chalk, spent catalyst, hydrofluorosilicic acid and phosphogypsum, sulphur muck, etc.
27. Details of sulphuric acid plant and their technology.
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. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
32. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.

35. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
38. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
39. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
40. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - iii) What measures company have taken to keep these chemicals within PEL/TLV.
 - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - v) What are onsite and offsite emergency plan during chemical disaster.
 - vi) Liver function tests (LFT) during pre-placement and periodical examination.
 - vii) Details of occupational health surveillance programme.
41. Socio-economic development activities should be in place.
42. Note on compliance to the recommendations mentioned in the CREP guidelines.
43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
45. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
46. A tabular chart with index for point wise compliance of above TORs.

B. Additional TOR

1. Details of fluorine recovery system in case of phosphoric acid plants to recover fluorine as hydrofluorosilicic acid (H_2SiF_6) and its uses.
2. Details of process emission control in the sulphuric acid plant
3. Public hearing to be conducted by SPCB 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.

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 with public hearing 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.

18th February, 2015 (Day 2)

34.6 Environmental Clearance

34.6.1 Expansion of Rubber Processing Chemicals at Plot No. A2/2225, 2226, Phase-III, GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat by M/s Shri Hap Chemicals Enterprises Pvt. Ltd.(Unit-II)- reg EC

The project proponent and their consultant (Aqua-Air Environmental Engineers Pvt. Ltd. Stay order no. SCA/4979/2012 dated 24/1/2013) 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 2nd Meeting of the Expert Appraisal Committee (Industry) held during 29th– 31st October, 2012 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

M/s Shri Hap Chemicals Enterprises Pvt. Ltd. (Unit –II) has proposed for expansion of Rubber Processing Chemicals at Plot No. A2/2225, 2226, Phase-III, GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat. Plant is located within the 10 Km of Union territory boundary i.e. Daman. Plot area is 3602.48 m². Of which area earmarked for greenbelt is 720 m². Total project cost is Rs 2.5 crores. Damangang River is flowing at a distance of 5.26 Km. It is reported that no national parks, wildlife sanctuary, biosphere reserve is located within 5 Km distance. Following products will be manufactured.

S.N.	Product	Quantity (MTPM)		
		Existing	Additional proposed	After total proposed expansion
1	Rubber Processing Chemicals such as Accelerators	75	350	425

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during January-March, 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (55.8 µg/m³ to 91.3 µg/m³), PM_{2.5} (33.4 µg/m³ to 57 µg/m³), SO₂ (18.1 µg/m³ to 36.5 µg/m³) and NO_x (13.5 µg/m³ to 24.4 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.11 µg/m³, 0.0047 µg/m³ and 0.0332 µg/m³ with respect to PM, SO₂ and NO_x. The resultant concentrations are within the National Ambient Quality Monitoring Standards (NAAQM). Cyclone Separator followed by Bagfilter will be provided to boiler, Dryer and grinder. Caustic scrubber will be provided to control process emission viz. HCl and Cl₂. Water requirement from GIDC water supply will be increased from 55.5 m³/day to 286 m³/day after expansion. Industrial effluent will be increased from 35 m³/day to 188 m³/day after expansion. Effluent will be treated in ETP. Treated effluent will be sent to CETP for further treatment and discharged to Deep sea through underground pipeline. ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

Public hearing was exempted as per para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006 for preparation of EIA/EMP Report.

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

- i. Multicyclone followed by bagfilter alongwith adequate stack height shall be provided to coal fired boiler and thermic fluid heater to control particulate emissions.
- ii. Caustic scrubber shall be provided to process vent to control Cl₂ and HCl.
- iii. All necessary steps should be taken for monitoring of chlorine and HCl as well as VOCs in the proposed plant.
- iv. Total water requirement from GIDC water supply should not exceed 286 m³/day and prior permission should be obtained from the Competent authority.
- v. As proposed, industrial effluent should be treated in ETP. 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.
- vi. Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed.
- vii. 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 SPCB 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.
- viii. As proposed, greenbelt should be developed at least 720 m² 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.

- ix. All the recommendations made in the risk assessment report should be satisfactorily implemented.
- x. Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.

34.6.2 Expansion of Rubber Processing Chemicals at Plot No. A1/45, 100 shed area, Degam road, GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat by M/s Shri Hap Chemicals Enterprises Pvt. Ltd. (Unit –I)- reg EC

The project proponent and their consultant (Aqua-Air Environmental Engineers Pvt. Ltd. Stay order no. SCA/4979/2012 dated 24/1/2013) 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 2nd Meeting of the Expert Appraisal Committee (Industry) held during 29th– 31st October, 2012 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within interstate boundary, proposal is treated as category 'A' and appraised at Central Level.

M/s Shri Hap Chemicals Enterprises Pvt. Ltd. (Unit –I) has proposed for expansion of Rubber processing Chemicals at Plot No. A1/45, 100 shed area, Degam road, GIDC Vapi, Tehsil Pardi, District Valsad, Gujarat. Plant is located within the 10 Km of Union territory boundary i.e. Daman. Plot area is 3800.92 m². Total project cost is Rs 2.5 crores. Following products will be manufactured.

S.N.	Product	Quantity (MT/Month)		
		Existing	Additional proposed	After total proposed expansion
1	Rubber Processing Chemicals such as Accelerators	40	275	315

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during January-March, 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (55.8 µg/m³ to 91.3 µg/m³), PM_{2.5} (33.4 µg/m³ to 57 µg/m³), SO₂ (18.1 µg/m³ to 36.5 µg/m³) and NOx (13.5 µg/m³ to 24.4 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.11 µg/m³, 0.0047 µg/m³ and 0.0332 µg/m³ with respect to PM, SO₂ and NOx. Stack of adequate height will be provided to gas fired boiler. Cyclone Separator followed by Bagfilter will be provided to Dryer and grinder. Caustic scrubber will be provided to control process emission viz. Cl₂. Water requirement from GIDC water supply will be increased from 34 m³/day to 208 m³/day after expansion. Industrial effluent will be 140 m³/day after expansion. Effluent will be treated in ETP. Treated effluent will be sent to CETP for further treatment and discharged to Deep sea through underground pipeline. ETP sludge will be sent to TSDF.

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

- i. Caustic scrubber shall be provided to process vent to control Cl₂ and HCl.

- ii. All necessary steps should be taken for monitoring of chlorine and HCl as well as VOCs in the proposed plant.
- iii. Total water requirement from GIDC water supply should not exceed 208 m³/day and prior permission should be obtained from the Competent authority.
- iv. As proposed, industrial effluent should be treated in ETP. 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 separate STP.
- v. Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed.
- vi. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary movement) Rules, 2008 for management of hazardous wastes and prior permission from SPCB 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.
- vii. As proposed, greenbelt should be developed at least 720 m² 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.
- viii. All the recommendations made in the risk assessment report should be satisfactorily implemented.
- ix. Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- x. All the safety measures shall be taken for CS₂ handling and storage.

34.6.3 Expansion of manufacturing of Synthetic Organic Resin unit at Village Bhimasar, Anjar-Bhimasar Road, Tal. Anjar, Distt. Kutch, Gujarat by M/s Natural Petrochemicals Pvt. Ltd. – reg EC

The project proponent and their consultant (M/s Envisafe Environment 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 5th Meeting of the Expert Appraisal Committee (Industry) held during 31st January, 2013–1st February, 2013 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) of the EIA notification, 2006 under category 'A' and appraised at Central level.

M/s Natural Petrochemicals Pvt.Ltd has proposed to expand the production of unsaturated polyester resin and alkyd resin S. No. 443, Village: Bhimasar, Anjar-Bhimasar Road, Tal. Anjar, Dist. Kutch, Gujarat. Total land requirement is 42,291 m² (10.45 acres). It is reported that no National Park, Wildlife Sanctuary within 10 km radius of the project site. Total cost of the project is Rs.14.89 crores. Rs. 11 lakhs per annum is earmarked towards

recurring cost for environmental management. The existing and the proposed products details are as below:

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

It was noted that no members of EAC (I-2) have received EIA-EMP report for the said project. However, it was advised the PP and the Environmental Consultant to incorporate the following in the EIA-EMP report and submit the same for appraisal:

1. Reexamining /rechecking of all the ambient air quality data as the same was not properly documented.
2. Details of wastewater treatment scheme.
3. Inlet and outlet characteristics of wastewater.
4. Pointwise response to public hearing issues.

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

34.6.4 Resin Manufacturing Unit (1500 TPM) at Survey No.35/1, 35/2 and 36, Village Alwa, Tehsil Hansot, District Bharuch, Gujarat by M/s Krifor Industries Pvt. Ltd-reg EC

The project proponent and their consultant (En-Vision Enviro Engineers Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 10th Meeting of the Expert Appraisal Committee (Industry) held during 29th to 31st July, 2013 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic chemicals and chemical Intermediates) located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Krifor Industries Pvt. Ltd. has proposed for setting up of Resin Manufacturing Unit (1500 TPM) at Survey No.35/1, 35/2 and 36, Village Alwa, Tehsil Hansot, District Bharuch, Gujarat. Proposed unit will be installed in the existing particle board unit. Total plot area of the existing unit is 72400 m². Land required for proposed unit within existing plant will be 1132.2 m². Total project cost is Rs124 Lakh. Rs 7.0 Lakh and 2.0 Lakh are earmarked towards capital cost and recurring cost per annum for implementation of Environment management plan. Kim River is flowing within 10 Km distance. It is reported that no national park and reserve forest is located within 10Km distance. PP submitted the copy of consent to establish dated 10.4.2013 issued by Gujarat Pollution Control Board for laminated particle board. Following products will be manufactured:

S.N.	Product	Capacity (MTPM)
1.	Melamine Urea Formaldehyde Resin	1500

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during October, 2013- November, 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (31 µg/m³ to 62 µg/m³), PM_{2.5} (26 µg/m³ to 47 µg/m³), SO_x (9.9 µg/m³ to 20.6 µg/m³) and NO_x (12.5 µg/m³ to 29.6 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.72 µg/m³, 2.42 µg/m³ and 0.09 µg/m³ with respect to SPM, SO₂ and NO_x. The resultant concentrations are within the NAAQS. Bagfilter will be provided to lignite coal fired Thermic fluid heater to control particulate emissions. DG set (200 KVA) will be installed. Total water requirement from ground water source will be is 38.5 m³/day. Industrial effluent generation will be 3.55 m³/day. Industrial effluent will be treated in ETP. Committee suggested them to install RO and permeate shall be used for cooling tower make up. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers. Fly ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 4th June, 2014. The issues were raised regarding discharge of effluent, storage of bagasse, about company, manufacturing process etc. The Committee noted that there was protest in anticipation of project operation causing pollution. In response PP informed that employment will be provided to 100 local peoples based on their skill and 5 % of project cost will be used for village level development activities. The Committee noted that issues have satisfactorily been responded by the project proponent in term of pollution control measures and incorporated in the final EIA-EMP report.

After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter along with stack of adequate height should be installed to coal fired boiler & Thermic fluid heater to control particulate emissions.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- iv) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- v) Total fresh water requirement from ground water source should not exceed 38.5 m³/day and prior permission should be obtained from the CGWA/SGWA.
- vi) Industrial effluent will be treated in ETP followed by RO to achieve zero discharge. Permeate shall be used for cooling tower make up water. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB. No effluent to be discharge outside the factory premises.

- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- viii) Green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- x) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 4th June, 2014 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xi) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

34.6.5 Setting-up a grass root Rajasthan Refinery cum Petrochemical complex Project (RRP) of 9 MMTPA at Pachpadra Tehsil, District Barmer, Rajasthan by M/s. Hindustan Petroleum Corporation Limited (HPCL)- reg EC.

The project proponent and their consultant (NEERI) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 10th Meeting of the Expert Appraisal Committee (Industry) held during 29th to 31st July, 2013 for preparation of EIA-EMP report. The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. All the Petroleum Refinery Plants are listed at S.N. 4(a) under Category 'A' and appraised at the Central level.

M/s. Hindustan Petroleum Corporation Limited (HPCL) has proposed for setting-up a grass root Rajasthan Refinery cum Petrochemical complex Project (RRP) of 9 MMTPA at Pachpadra Tehsil, District Barmer, Rajasthan. RRP is planned as a Joint Venture between HPCL and Govt. of Rajasthan (GoR). The cost of the project is about Rs. 37230 Crores. The proposed refinery cum petrochemical complex covers an area of 4813 acres which falls under the villages Sajjiyali, RoopjiKanthavad and Sambhara, in Pachpadra Tehsil, District Barmer, Rajasthan. Out of the total area, 413 acres is reserved for township and raw water reservoir. There are no wild life corridors, archaeological monuments, places of tourist

interests and Defence installations within the study area. No Reserved forest, National park, Wildlife Sanctuary and Tiger Reserves etc. exists within 10-km radius study area. Storage Facilities are considered for crude and product storage with crude storage capacity for 15 days of refinery operation, storage for intermediate streams for 7 days operation, finished product tanks having capacity equivalent to 15 days production except LPG. Safety facilities like flare system, fire water system, safe guard system, monitoring system, gas detectors etc. with suitable design capacities will be provided in the refinery and at the associated utilities and offsite facilities.

A crude pipeline of about 70 km length from Mangla Processing Terminal (MPT) and natural gas pipeline of about 60 km will be laid down from Raageshwari Gas Terminal (RGT) to the RRP site. Details of Process units of RRP are as given below:

Process Unit	Unit	Capacity
CDU	MMTPA	9.0
NHT	MMTPA	1.2
DHDT	MMTPA	3.3
RFCC	MMTPA	2 x 2.55
PPU	MMTPA	3 x 0.39
LDPE	MMTPA	2 x 0.38
ARDS	MMTPA	2 X 2.8
Duel Feed Cracker	MMTPA	0.63
Ethylene Recovery Unit	MMTPA	0.136
Benzene Recovery Unit	MMTPA	0.08
Butadiene Extraction Unit	MMTPA	0.198
Py Gas HDT	MMTPA	0.43
BTX	MMTPA	0.43
RFCC Gasoline Depantanizer	MMTPA	1.7
Gasoline HDT	MMTPA	1.2
RFCC C5s Mercox	MMTPA	0.48
Sat. LPG Mercox Unit	KTPA	80
LPG Depropanizer	KTPA	80
FG Treating Unit	TPD	1480
Hydrogen Generation Unit	KTPA	61
PSA	KTPA	28
SWS -I (Hydro Processing)	m ³ /h	100
SWS -II (Non Hydro-processing)	m ³ /h	250
Amine Regeneration Unit	m ³ /h	770
Sulphur Recovery Unit	TPD	2 x 160

Feed and Products of the RRP

Items	Unit	Quantity
Feed		
Rajasthan Crude	MT/Day	13565.0
Arab Heavy	MT/Day	6844.0
Arab Light	MT/Day	6615.0
Natural Gas	MT/Day	578.0
Products		
Polypropylene	MT/Day	3505.0
Butadiene	MT/Day	593.0
LDPE	MT/Day	2225.0
Benzene	MT/Day	235.0
Toluene	MT/Day	310.0

Mix Xylene	MT/Day	117.0
92 RON Gasoline, EURO-IV	KL/Day	6669.4
ULS Diesel , EURO-V	KL/Day	10907.2
Fuel Oil	KL/Day	869.6
Sulphur	MT/Day	321.0
Fuels & Losses	MT/Day	5394.0

Ambient air quality monitoring was carried out at 11 locations during October, 2013 – December, 2013 and submitted data indicates as PM_{2.5} (25– 49 ug/m³), PM₁₀ (59–87 ug/m³), SO₂ (6 – 17 ug/m³) and NO_x (12-24 ug/m³). Predicted value of ground level concentration due to proposed RRP project is SO₂ (39.5 ug/m³) and NO_x (24.1 ug/m³). The resultant concentrations are within the NAAQS. Total sulphur emission will be 15 TPD. Feed desulfurization Unit, Sour Water stripper unit, Sulphur Recovery Unit, online stack analyzers and low NO_x burners will be installed as air pollution control devices. The total water requirements of the plant will be 127 MLD, which shall be met from the Indira Gandhi Nahar Project by laying about 200 km of pipeline. A captive power plant of 210 MW is proposed to meet the power requirement of the complex. Effluent (1595 m³/day) will be treated in the effluent treatment plant. Tarry residues, spent oil and catalyst will be sent to authorized recyclers/re-processors. ETP sludge will be sent to TSDF.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Rajasthan State Pollution Control Board on 30th May, 2014. The issues were raised regarding salt mining, disposal of waste storage, impact of project on salt mining, local employment, zero effluent discharge, compensation for salt mining labourers, etc.

After deliberation, the Committee sought following additional information:

- i) Details of project affected people. Action plan for rehabilitation and the livelihood for the affected people.
- ii) Hydro-Carbon levels to be monitored and checked.
- iii) Action plan to be submitted to achieve Zero effluent discharge. Characteristics of treated effluent including TDS level from RO rejects. Various stream to be defined for its reuse/recycle.
- iv) Action Plan for conservation of fresh water.
- v) Revised sulphur balance chart indicating sulphur in crude, products, emission and recovered sulphur.
- vi) Stack wise fuel to be used.
- vii) Traffic management plan
- viii) Unit wise details to achieve new standards for refinery.
- ix) Details about Species of tree to be planted and their long term survival.
- x) Action plan for Health and safety of the workers.

- xi) Process expert from project should attend the meeting for discussion.
- xii) Pointwise reply /response of PP on the issues raised during public hearing.

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

34.6.6 Propylene Derivatives Petrochemical Project (PDPP) at Village Puthencruz/Thiruvankulam, Tehsil Kunnathanadu, District Ernakulam, Kerala by M/s BPCL-Kochi Refinery- Environmental Clearance reg.

The project proponent and their consultant (Engineers India Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 6th Meeting of the Expert Appraisal Committee (Industry) held during 5th to 7th March, 2013 for preparation of EIA-EMP report. The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP report. All petro-chemical complexes are listed at S.N. 5(c) under category 'A' and appraised at Central level.

M/s BPCL-Kochi Refinery has proposed for setting up of Propylene Derivatives Petrochemical Project (PDPP) at Village Puthencruz/Thiruvankulam, Tehsil Kunnathanadu, District Ernakulam, Kerala. Total cost of the project is Rs. 4588 Crore. Plant area is 132.4 Acres. Polymer grade propylene (273 TMT) will be supplied by the BPCL-Kochi Refinery after implementation of the integrated refinery expansion project (IREP) at Kochi, Kerala. Chitrapuza River (1.0 Km), Panar (1.6 Km) and KaitapuzhaKoyal (5.7 Km) are located within 10 Km distance. It is reported that no national park/wildlife sanctuary/reserve/protected forests are located within 10 km distance. Following products will be manufactured:

Products:	
Ester Grade Acrylic Acid	: 47,000 Metric Tonnes per Annum
Butyl Acrylate	: 180,000 Metric Tonnes per Annum
2 Ethyl Hexyl Acrylate	: 10,000 Metric Tonnes per Annum
Normal Butanol	: 38,000 Metric Tonnes per Annum
2 Ethyl Hexanol	: 47,000 Metric Tonnes per Annum
Iso Butanol	: 7,000 Metric Tonnes per Annum
Plant Capacities:	
Acrylic Acid Unit	: 160,000 Metric Tonnes per Annum
Acrylate Unit	: 190,000 Metric Tonnes per Annum
Oxo Alcohols Unit	: 212,000 Metric Tonnes per Annum

Ambient air quality monitoring was carried out at 8 locations during March, 2013 – May, 2013 and submitted data indicates as PM_{2.5} (17.1– 46.8 ug/m³), PM₁₀ (30.0– 78 ug/m³), SO₂ (4.2 – 12.1 ug/m³) and NO_x (9.3-25.2 ug/m³). Predicted value of ground level concentration due to proposed project is SO₂ (36.75 ug/m³) and NO_x (39.13 ug/m³). The resultant concentrations are within the NAAQS. Total water requirement from refinery will be 240 m³/day. Incinerators for safe disposal of organic compounds generated in the process with adequate stack height will be provided. Low NO_x burners will be considered at the

design stage. Online analyzers / Gas monitors will be provided to monitor emissions / leaks. Smokeless flare of adequate height will be provided for safe disposal of gases during emergencies. Waste Water quantity generated in the process is 35 m³/hr, which will be routed to the Refinery effluent treatment facility for final treatment and disposal/recycle. Zero liquid effluent discharge from the PDPP complex is envisaged other than storm water outlet. Oxidation catalyst will be sent to the Authorized recycler/re-processors. Feed purification absorbent will be sent to the Authorized recycler. Polymer residue will be sent to the Authorized recycler.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Kerala State Pollution Control Board on 23rd December, 2014 under the chairmanship of Additional District Magistrate. The issues were raised regarding other nearby industrial units, pollution in Chitrapuzha River, safety measures, traffic congestion, petro coke storage etc. 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 satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i. M/s BPCL shall comply with new standards/norms for Oil Refinery Industry and petrochemical industry notified under the Environment (Protection) Rules, 1986.
- ii. Continuous on-line stack monitoring for SO₂, NO_x and CO of all the stacks shall be carried out. Low NO_x burners shall be installed.
- iii. The emission standards prescribed by the MoEF under Environment (Protection) Act for petrochemical industry shall be strictly followed. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored regularly.
- iv. Leak Detection and Repair programme shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent 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. 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.
- v. Continuous monitoring system for VOCs at all important places/areas shall be ensured. When monitoring results indicate above the permissible limits, effective measures shall be taken immediately.
- vi. Total SO₂ emissions after implementation of PDPP including IREP shall not exceed 1561.4 Kg/hr.

- vii. Ambient air quality monitoring stations, [PM₁₀, PM_{2.5}, SO₂, NO_x, H₂S, mercaptan, non-methane-HC and Benzene] shall be set up in the complex in consultation with Kerala State Pollution Control Board, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs.
- viii. Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry on 16th November, 2009 and trend analysis w.r.t past monitoring results shall also be carried out. Adequate measures based on the trend analysis shall be taken to improve the ambient air quality in the project area.
- ix. Total fresh water requirement from Kochi Refinery for PDPP shall not exceed 493 m³/hr and prior permission shall be obtained from the concerned agency. No ground water shall be used.
- x. Industrial effluent shall be treated in the effluent treatment plant. Treated effluent shall be recycled/reused in the existing cooling tower. As proposed, high COD effluent shall be incinerated. Water quality of treated effluent shall be monitored regularly.
- xi. Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.
- xii. The Company should strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Hazardous waste should be disposed of as per Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and amended time to time.
- xiii. Incinerator designed shall be as per CPCB guidelines.
- xiv. Proper oil spillage prevention management plan shall be prepared to avoid spillage/leakage of oil/petroleum products and ensure regular monitoring.
- xv. The company shall strictly follow all the recommendation mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).
- xvi. To prevent fire and explosion at oil and gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable materials shall be in place.
- xvii. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.
- xviii. All the issues raised and commitment made during the public hearing/consultation meeting held on 23rd December, 2014 shall be satisfactorily implemented. Accordingly, provision of budget to be kept.

- xix. At least 2 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.

Reconsideration for Environmental Clearance

34.6.7 Bulk Drug Manufacturing Unit at Survey No.344, Village & Mandal ThakaKondapally, District Mahabubnagar, Andhra Preadesh by M/s Sai Shakthi Pharma Pvt. Ltd – Reconsideration of EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 28th meeting held during 1st –2nd December, 2014 and the Committee deferred the proposal for want of following addl. information:

- (i) Authenticated English translated copy of the representations received in support and against the proposal during public hearing to be submitted.
- (ii) Original Certification /NOC bearing from the GhramPanchyat bearing date to be provided.

PP vide letter dated 5th January, 2015 has submitted the above mentioned information. NOC dated 28.08.2014 from Office of the Gram Panchayath, Talakondapally has been submitted.

After detailed deliberations, the Committee, on the basis of the additional information provided and presentation made recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- ii. Scrubber shall be provided 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 shall go beyond the prescribed standards.
- 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 SPCB. Odour management plan shall be implemented.
- iv. Total fresh water requirement from ground water source shall not exceed 98 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- v. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water will be

recycled/reused within factory premises. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.

- vi. All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- vii. As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- viii. 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 SPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.
- ix. Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- x. Solvent management shall be as follows :
 - Reactor shall be connected to chilled brine condenser system
 - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents shall be stored in a separate space specified with all safety measures.
 - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xii. All the issues raised during the Public Hearing/consultation meeting held on 26th August, 2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiv. As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

34.6.8 Manufacturing of Organic/Inorganic & Specialty Chemicals at Jhagadia, GIDC, District Bharuch, Gujarat by M/s Panoli Intermediates (India) Pvt. Ltd (Unit-VI) – reconsideration of EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 4th meeting held during 8th–9th January, 2013 and the Committee deferred the proposal for want of following addl. information:

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

GPCB vide letter no GPCB/BRCH-CCA-267(3)/ID-15461/221832 dated 12.08.2014 has submitted the satisfactory compliance report of M/s Panoli Intermediates at Plot No. 756/11 A& B, Jhagadia, District Bharuch.

After detailed deliberations, the Committee, on the basis of the additional information provided and presentation made recommended the project for environmental clearance and stipulated following specific conditions along with 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/SPCB guidelines.
- ii) The levels of PM₁₀, PM_{2.5}, SO₂, NO_x, VOC, CO and HCl should be monitored in ambient air.
- iii) Scrubbers shall be provided 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 SPCB.
- v) Total fresh water requirement from ground water source should not exceed 362 m³/day.
- vi) As proposed, industrial effluent should be treated in ETP. Treated effluent from ETP should be discharged into GIDC conveyance system after conforming to the

standards prescribed for the effluent discharge and obtaining permission from the GPCB. Domestic sewage should be treated in STP.

- 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) Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system. Benzene shall be monitored at the site.
- x) Process organic residue and spent carbon should be sent to cement industries. ETP sludge and process inorganic should be disposed off to the TSDF. The ash from boiler should be sent to brick manufacturers.
- 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 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.
- xii) Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust should be avoided.
- xiii) Solvent management should be as follows :
 - Reactor should be connected to chilled brine condenser system
 - Reactor and solvent handling pump should have mechanical seals to prevent leakages.
 - The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents should be stored in a separate space specified with all safety measures.
 - Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
 - Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.
- xiv) Green belt over 5,700 m² out of 20,772 m² land should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xv) At least 5% of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

34.7 Terms of Reference

34.7.1 Proposed Project Addition of Manufacturing of Aroma Chemicals at plot no L-35, Additional MIDC Mahad, Dist.: Riagad, State-Maharashtra by M/s. Raigad Petroleum Ltd. - reg TOR

PP informed that proposal was submitted in the Ministry due to its location within 5 Km of the proposed eco-sensitive area i.e. Western Ghat. However, the Committee noted that Western Ghat as Eco-Sensitive Area is yet to be notified. Therefore, the Committee recommended that project at this stage may be considered as 'B' category and transfer the matter to the State Authority for consideration of the project.

34.7.2 Proposed Bulk Drugs & Drugs Intermediates manufacturing project at Gut No. 204, Nashik Mumbai highway, A/p – Vadivarhe, Tahsil Igatpuri, District Nashik, Maharashtra by M/s. Vadivarhe Specialty Chemicals Ltd.- reg TOR

The PP did not attend the meeting. The committee recommended to consider the project as and when applied on line by the PP.

34.7.3 Proposed manufacturing of Agro chemicals at Plot No. 42/5-B, GIDC Estate, Tehsil Dahej, Dist.: Bharuch, Gujarat by M/s. Unison Industries Ltd. (Unit-II) - reg TOR.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All technical grade pesticides and pesticide specific intermediates are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s. Unison Industries Ltd. (Unit-II) has proposed for manufacturing of Agro chemicals at Plot No. 42/5-B, GIDC Estate, Tehsil Dahej, Dist.: Bharuch, Gujarat. Total plot area is 40000.0 m². Cost of project is Rs. 80.0 Crore of which Rs.12.0 crore will be used for environmental pollution control measures. No critically pollution area and wildlife sanctuary/reserve forest fall within 10 km. radius. Following products will be manufactured:

Sl. No.	Name of Products	Quantity (MT/ Month)
A	Agro Chemicals	
1	Ametryne	20
2	Atrazine	50
3	Azoxystrobin	05
4	Benalaxyl	20
5	Bis Pyribac sodium	20
6	Clodinafop	05
7	Dicamba	05

8	Diclofob p methyl	05
9	Difenconazole	20
10	Diurom	40
11	Fenaxoprop	05
12	Glyphosate	100
13	Hexaconazole	15
14	Imezathapyr	10
15	Kerosoxim methyl	05
16	Metalaxyl	10
17	Metribuzine	30
18	Miclobutanil	10
19	Oxyfluorfen	05
20	Pendimethalin	100
21	Pretiachlor	20
22	Promethryn	20
23	Propiconazole	40
24	Prothioconazole	05
25	Quizalofop ethyl	05
26	Simetryne	05
27	Tebuconazole	10
28	Terbutylazine	50
29	Terbutryn	05
30	Thiophnate Methyle	30
31	Trazinone	30
32	Triclocarb	20
33	Tricyclazole	20
Total		740

PP informed that Coal fired boiler (6 T per hour) will be connected to cyclone and bag filter and one thermic fluid heater will also be connected cyclone and bag filter through stack of adequate height. D.G. set (2x500 KVA) using diesel will be installed. Incinerator (500 kl/hr) will be provided. The main source of emission will be flue gas emission from stack attached to boiler & thermic fluid heater & process gas emission from stack attached to incinerator, other six stacks attached to process reactors & stack attached to solvent recovery system.

For process gas stacks i.e. Alkali scrubber for stack attached to incinerator, water scrubber followed by alkali scrubber for stacks attached to process reactors and two state brine condensers followed by carbon tower for stack attached to solvent recovery system will be provided.

Fresh water requirement will be 428 m³/day from GIDC water supply. The source of wastewater generation will be from process, utilities, washing & water treatment. Process w/w shall be evaporated after pre treatment in MEE and partial condensate reuse in plant & equipment washing and balance quantity sent to ETP for further treatment. All the effluents along with domestic w/w are treated in primary and secondary treatment plant to achieve GPCB norms. Treated water conforming to the standards prescribed by GPCB will be drained to GIDC drainage which ultimately disposed into deep sea.

There will be mainly nine sources of hazardous water generation. ETP sludge, MEE salt & incineration Ash will be disposed off to approve TSDF site. Waste carbon, process residue

will be disposed at CHWIF. Spent oil will be sold to recycler and Drums & liners will be sold to registered recyclers.

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

A. Standard TOR

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the SPCB.
6. Copy of NOC/Consent to Establish for the existing unit.
7. Compliance to the conditions stipulated in the NOC granted by the SPCB.
8. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
9. 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.
10. Plant layout alongwith details of facility.
11. Infrastructure facilities including power sources.
12. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
13. Project site location alongwith photographs and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
14. Present land use based on satellite imagery for the study area of 10 km radius.
15. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities.
18. Detailed list of raw material required and source, mode of storage and transportation.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
22. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x, Cl₂, HCl, SO₂, including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.
25. Design details of ETP, incinerator, if any alongwith control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan

27. An action plan to control and monitor secondary fugitive emissions from all the sources.
28. Action plan for odour assessment and control to be submitted.
29. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
30. Source and quantity of fresh water requirement. Water balance chart including quantity of effluent generated recycled and reused and discharged.
31. Action plan for 'Zero' discharge of effluent should be included.
32. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
33. Detailed plan for zero liquid discharge and reduction of water consumption to be prepared .
34. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the management of fly ash generated from boiler should be included.
35. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
36. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
37. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
38. Risk assessment for storage for chemicals/solvents. Risk assessment for Cyanide.
39. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
40. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
41. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health programme.
 - 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. Note on compliance to the recommendations mentioned in the CREP guidelines.
46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided. Toxic substance monitoring plan.
47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.

49. Corporate Environmental Responsibility

- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
51. A tabular chart with index for point wise compliance of above TORs.

B. Additional TOR

1. 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.
2. Detailed Toxic/hazardous waste management plan to be provided.

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 recommended that **'TORs' along with Public Hearing** prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report.

37.7.4 Proposed enhancement of existing molasses based distillery unit from 30 KLPD to 60 KLPD at Najik Babhulgaon, Post: Rakshi, Tal.: Shevgaon, Dist.: Ahmednagar, Maharashtra by M/s. Gangamai Industries and Constructions Ltd. (GIACL) – reg. TOR.

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

M/s. Gangamai Industries and Constructions Ltd. has proposed enhancement of existing molasses based distillery unit from 30 KLPD to 60 KLPD at Najik Babhulgaon, Post: Rakshi, Tal.: Shevgaon, Dist.: Ahmednagar, Maharashtra. During presentation it is noted that almost 30% work has been completed for the existing unit. The Committee noted that complete EIA/EMP report to be prepared for such expansion. No eco-sensitive zone, wildlife sanctuary/reserve forest fall within 10 km. Radius from the project site. Godavari River is flowing about 12 kms from project site.

PP informed that the proposed enhancement is in the Integrated Project Complex of 5500 TCD Sugar Factory, 32 MW co-generation Plant and 30 KLPD Molasses Distillery. Sugar Factory & Co-generation from October to March (180 days) and Distillery from September to May (270 days). Cost of the proposed project is Rs.55.93 crores. Total plot area is 2,70,661 sq.m (27.06 ha.) of which after enhancement 43% will be under Green Belt. Products after enhancement are Ethanol (16200 KL/Annum) Rectified Spirit (16200 KL/Annum) and Extra Neutral Alcohol (11,100 KL/Annum).

It is reported that source of fresh water (652 m³/day) will be from Jayakwadi dam on Godavari River. Spent wash will be treated through bio-methanation process. Treated spent wash will be evaporated in MEE. Concentrate will be mixed with bagasse to incinerate in the incineration boiler. Spent wash storage tanks of 30 days and 5 days capacity will be leak proof and seepage proof by laying HDPE layer and RCC lining provided under existing unit. Compost Yard area with HDPE layering & PCC lining provided. Spent lees, condensate and other streams-blow down/floor washing will be treated in ETP. No effluent will be allowed to discharge outside the premises. Domestic sewage will be treated in STP. Hazardous waste shall be sent to the Authorised reprocessor. Solid waste to be mixed with compost. Noise pollution will be controlled through isolation, separation and insulation techniques. Earmuffs, ear plugs provided to workers. Odour controlled on close fermentation and molasses handling. No new boiler shall be installed in expansion unit. Regarding air pollution, steam to be taken from existing distillery as well as co-gen boiler (140 TPH and 30 TPH). The unit would develop an Environmental Management Cell comprising of 10 persons who will be qualified and experienced in the field.

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

A. Standard TOR

1. Executive summary of the project.
2. Detailed breakup of the land area along with latest photograph of the area.
3. Present land use based on satellite imagery.

4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. Information regarding eco-sensitive area such as national park / wildlife sanctuary / biosphere reserves within 10 km radius of project area.
6. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
7. List of existing distillery units in the study area alongwith their capacity.
8. Number of working days of the distillery unit.
9. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
10. Manufacturing process details of distillery plant alongwith process flow chart.
11. Details of raw materials and source of raw material molasses, bagasse etc.
12. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
13. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
14. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
15. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
16. An action plan to control and monitor secondary fugitive emissions from all the sources.
17. Details of boiler and its capacity. Details of the use of steam from the boiler.
18. Ground water quality around existing /proposed spent wash storage lagoon and the project area.
19. Details of water requirement, water balance chart for Molasses based Distillery. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
20. Water requirement should not exceed 10 KI/KI of alcohol for distillery and prior 'permission' for the drawl of total fresh water. Details of source of water supply.
21. Hydro-geological study of the area for availability of ground water.
22. Spentwash generation from molasses based should not exceed 8KI/KI of alcohol production.
23. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) and scheme for achieving 'zero' discharge.
24. Lagoon capacity for sugar unit and spent wash as well measures to be taken to control ground water contamination.
25. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
26. Land available for bio-composting. Details of lining to be provided in the compost yard.
27. Green belt development as per the CPCB guidelines.
28. List of flora and fauna in the study area.
29. Noise levels monitoring at five locations within the study area.
30. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.

31. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
32. Details of bagasse storage. Details of press mud requirement.
33. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.
34. Alcohol storage and handling area and its fire fighting facility as per norms.
35. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
36. Details of occupational health programme.
 - i) To which chemicals, workers are exposed directly or indirectly.
 - ii) Whether these chemicals are within 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.
37. Details of socio-economic welfare activities to be provided.
38. 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.
39. Action plan for post-project environmental monitoring.

40. Corporate Environmental Responsibility

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

B. Additional TOR

1. 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.

2. A separate chapter on status of compliance of Environmental Conditions granted by 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.
3. One month actual emission data of the existing Unit.

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

34.7.5 Proposed modernization of BS-IV Project: MS Quality Up-gradation & HSD Quality Up-gradation by M/s. IOCL Barauni Refinery -reg TOR

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

M/s. IOCL Barauni Refinery has proposed for modernization of BS-IV Project: MS Quality Up-gradation & HSD Quality Up-gradation. Cost of project is Rs. 1327 crore. PP informed that there is no additional increment in Refining Capacity of 6.0 MMTPA, however capacity of following units are proposed to undergo revamp/addition of small units to meet BS-IV standard for petrol and diesel.

- a) Naphtha Hydro Treating Unit (NHTU) revamp from 0.3 MMTPA to 0.47 MMTPA.
- b) Catalytic Reforming Unit (CRU) revamp from 0.3 MMTPA to 0.47 MMTPA.
- c) Diesel Hydro Treating Unit (DHDT) revamp from 2.2 MMTPA to 3.3 MMTPA.
- e) Additional new Naphtha Splitter Unit (NSU) to enhance present capacity of 0.464 MMTPA to 0.76 MMTPA.
- f) Additional new Cracked Gasoline De-sulphurisation Unit to enhance present capacity of 0.4 MMTPA to 0.76 MMTPA

It was noted that no additional land requirement (Project will be implemented within existing Refinery Boundary Limit). RO plant is coming up in ETP and likely to be commissioned in FY 2015-16, post commissioning of RO plant & BS:IV project the overall water consumption will come down from present 690 m³/hr to 651 m³/hr . Additional requirement of power is 8.5 MWH (Will be fulfilled from existing Power Plant Capacity of 90 MWH, which is presently running at a load of 42.25 MWH). 1.25 MT/hr of Hydrogen Gas will be fulfilled from existing Hydrogen generating units (HGU, CRU & DOG PSA) of 9.08 MT/hr, which is presently running at load of 6.05 MT/hr. SO₂ emission expected to increase by approx. 200 kg/hr. Total refinery SO₂

emission after project = approx. 900 kg/hr. Limit for Barauni Refinery is 1035 kg/hr. No impact on water, as post project overall water consumption will come down due to commissioning of RO plant in ETP for recycling of treated effluent.

It was noticed that project namely replacement of reactors & allied modernization jobs of Coker A and Installation of Biturox Unit in the existing Barauni Refinery was considered in the 30th EAC meeting held during 22nd – 23rd December, 2014 and the Committee suggested to **modify/update the said EIA-EMP report by taking this proposal into consideration.** After detailed deliberation, the Committee suggested them to club the new proposal with the existing proposal to evaluate the cumulative impact. The existing ToR will remain same. Public hearing is exempted under section 7 (ii) of EIA Notification, 2006 as public hearing was held on 25th September, 2007 and no significant pollution load increase has been envisaged.

34.7.6 Proposed distillery unit of 30 KLD at Village Jalalabad, Dist – Kannauj, Uttar Pradesh by M/s Reekriti Distilleries Private Limited. - reg TOR

The PP did not attend the meeting. The committee recommended to consider the project as and when applied on line by the PP.

34.7.7 Manufacturing of Synthetic Organic Chemicals(773.6 MTPA) at Sy. No. Parts of 46,50,51,52,53,54,55 & 56, Ananthsagar Village, Chegunta Mandal, Medak District, Telanagana by M/s. Astrica Laboratories Private Limited. - reg TOR

The project authorities and their Consultant (M/s Team Labs and Consultant) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s. Astrica Laboratories Private Limited has proposed (773.6 MTPA)for Manufacturing of Synthetic Organic Chemicals at Sy. No. Parts of 46,50,51,52,53,54,55 & 56, Ananthsagar Village, Chegunta Mandal, Medak District, Telanagana. M/s. Astrica Laboratories Private Limited obtained Environmental Clearance from Ministry of Environment and Forests (MoEF) vide letter no. F. No. J-11011/270/2008-IA II (I) dated 17.03.2009. PP informed that The civil works of the plant are in advanced stage and installation of machinery is awaited.

The site is situated at 17059'18" latitude and 78029'32" longitude. The land area of the plant is 6.97 acres. Total 3.56 acres of land of the total land area shall be developed as green belt.

Total cost of project is Rs. 7.8 Crores. Ibrahim RF at a distance of 1.1 Km in east direction, Godugupalli RF at a distance of 7.8 Km in southwest direction, Wadiaram RF at a distance of 8.2 Km in southeast direction and Sivaipalli RF at a distance of 9.7 Km in Northeast direction. The nearest human settlement from the site is Anantasagar located at distance of 1.25 km in South direction. There are no ecologically sensitive areas like national parks, sanctuaries within 10 km radius of the site.

Following products will be manufactured:

S.No	Product name	Capacity	
		TPA	TPM
1	Terbinafine Hydrochloride	60	5
2	Clopidogrel Hydrogen Bisulfate	60	5
3	Moxifloxacin Hydrochloride Monohydrate	60	5
4	Darifenacin	36	3
5	Olmesartan	12	1
6	Montelukast Sodium	12	1
7	Zidovudine	60	5
8	Ramipril	12	1
9	Duloxetine Hydrochloride	24	2
10	Amolodipine Besylate	36	3
11	Ketorolac Tromethamine	12	1
12	Pantaprazole Sodium	60	5
13	Omeprazole	60	5
14	Lansoprazole	48	4
15	Rabeprazole Sodium	36	3
	Total	240.0	20.0

Note: The above products will be manufactured on campaign basis only. Only four products will be in production at any given time.

List of By-Products

S.No	Product name	Capacity	
		TPA	TPM
1	Alphapinene	11.04	0.92
2	Tritanol	105.9	8.825
3	Spent HCl	36.4	3.03
4	Spent Sulfuric Acid (22.5%)	773.6	64.46

List of Utilities

S.No	Description	Capacity
1	Coal/Agro Waste Fired Boiler	3 TPH
2	Coal/Agro Waste Fired Boiler	2 TPH
3	DG Sets	2x250 KVA

The sources of air pollution from the plant are 3TPH & 2TPH Coal/Agro waste Fired boilers and 2 x 250 KVA DG Sets capacity. The emissions from the boiler are passed through a Multi-Cyclone before letting out through a chimney. The process emissions contain HCl, SO₂ are sent to scrubber. The other gases expected in the process are excess Carbon dioxide and Hydrogen is let out into atmosphere following a standard operating procedure.

Total fresh water requirement will be 120.44 KLD and same will be met by Ground water within plant premises. The source of wastewater from the plant is mainly process, washings, scrubbers, utilities and domestic use. The wastewater from process, washings

and scrubbers, in the order of 39.83 KLD is sent to stripper followed by MEE, and AFTD. The condensate from MEE and AFTD is treated along with utility blow downs of 4 KLD and domestic effluent of 4 KLD will be treated in biological treatment plant followed by RO. The permeate from RO is reused for cooling tower and the reject is sent to MEE.

Solid wastes are generated from process, solvent distillation, stripper, AFTD, ETP (primary & secondary), and DG sets. The stripper distillate, process residue and solvent residue are sent to cement plants for co-incineration. The evaporation salts are sent to TSDF. Filter media like activated carbon and hy-flow are sent to TSDF. Waste oil and used batteries from the DG sets are sent to authorize recyclers. The sludge from effluent treatment plant is sent to TSDF. Ash generated from coal fired boilers sent to brick manufacturers. The other solid wastes expected from the unit are containers, empty drums which are returned to the product seller or sold to authorized buyers after detoxification.

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

A. Standard TOR:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework
5. A map indicating location of the project and distance from severely polluted area
6. Project location and plant layout.
7. Infrastructure facilities including power sources.
8. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
9. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
10. Present land use based on satellite imagery for the study area of 10 km radius.
11. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
12. Details of the total land and break-up of the land use for green belt and other uses.
13. List of products alongwith the production capacities and list of solvents and its recovery plan.
14. Detailed list of raw material required and source, mode of storage and transportation.
15. Details of the existing Sulphonation plant alongwith the environment clearance, consent to establish/operate and point-wise compliance report.
16. Manufacturing process details alongwith the chemical reactions and process flow chart.
17. Action plan for the transportation of raw material and products.
18. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
19. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
20. One month site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, NO_x including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.

21. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
22. Name of all the solvents to be used in the process and details of solvent recovery system.
23. Design details of ETP, incinerator, if any alongwith control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
24. Details of water and air pollution and its mitigation plan
25. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16th September, 2009.
26. An action plan to control and monitor secondary fugitive emissions from all the sources as per the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008.
27. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
28. Permission for the drawl of 158 m³/day water from the Competent Authority. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
29. Action plan for Zero Discharge of effluent as proposed should be included.
30. Ground water monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
31. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler should be included.
32. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
33. A copy of the ?Memorandum of Understanding? signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
34. Details of land fill alongwith design details as per CPCB guidelines. Location of secured land fill/TSDF.
35. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
36. Ground water monitoring around the project site as well as around land fill site
37. Risk assessment for storage for chemicals/solvents and phosgenes. Action plan for handling & safety system, whenever any cyanide is involved in process.
38. An action plan to develop green belt in 33 % area
39. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
40. Occupational health of the workers needs elaboration including evaluation of noise, heat, illumination, dust, any other chemicals, metals being suspected in environment and going into body of workers either through inhalation, ingestion or through skin absorption and steps taken to avoid musculo-skeletal disorders (MSD), backache, pain in minor and major joints, fatigue etc. Occupational hazards specific pre-placement and periodical monitoring should be carried out.
41. Socio-economic development activities should be in place.
42. Note on compliance to the recommendations mentioned in the CREP guidelines.
43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

45. Total capital cost and recurring cost/annum for environmental pollution control measures.
46. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
47. A tabular chart with index for point wise compliance of above TORs.

B. Additional TOR

1. Public hearing is exempted as per to para 7 (ii) of the EIA, Notification, 2006 for preparation of EIA-EMP report as public hearing has already been conducted by the same unit whose validity of EC has been expired.
2. One month data to be collected.
3. Details of Zero discharge scheme.

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 project proponent should submit the final EIA report for consideration of the proposal by the Expert Appraisal Committee (Industry-2). Public hearing is exempted under section 7 (ii) of EIA Notification, 2006 as public hearing was held on 23rd December 2008 for the unit whose EC has expired.

34.7.8 Proposed 30 KLPD capacity of distillery unit in existing Sugar complex at Post - Sadashivnagar, Tahsil Kagal, District Kolhapur, Maharashtra by M/s Sadashivrao Mandlik Kagal Taluka SSK Ltd.- reg TOR

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

M/s Sadashivrao Mandlik Kagal Taluka SSK Ltd. has proposed 30 KLPD capacity of distillery unit in existing Sugar complex at Post - Sadashivnagar, Tahsil Kagal, District Kolhapur, Maharashtra. No eco-sensitive zone, Wildlife sanctuary/reserve forest fall within 10 kn. Radius from the project site. Vedganga River is flowing about 3.5 kms from project site.

PP informed that the proposed distillery is in the Integrated Project Complex of 4000 TCD Sugar Factory and 12 MW co-generation Plant. Number of employee for the unit is 69. Total plot area is 135 acres, of which 33% will be under Green Belt. Cost of proposed unit is 43.15 crore. Products namely Ethanol/ Rectified Spirit/ Extra Neutral Alcohol will be manufactured.

It is reported that about 500 m³/day of water will be extracted from River Vedganga. The Committee noted that water requirement is high for proposed unit and suggested to restrict water 10KL/KL of alcohol produced. Spent wash will be treated through bio-methanation process followed by MEE. Concentrate will be mixed with press mud for bio-composting. Spent lees, condensate and other streams-blow down/floor washing will be treated in ETP. No effluent will be allowed to discharge outside the premises

Power of 14400 KW will be made available from State Electricity Board and boiler of 10TPH using basses as fuel will be installed for MEE. Bagfilter will be provided as Air Pollution Control device. Hazardous waste shall be sent to the Authorized recycler. Solid waste to be mixed with compost. Noise pollution will be controlled through isolation, separation and insulation techniques. Earmuffs, ear plugs provided to workers. Odour controlled on close fermentation and molasses handling.

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

A. Standard TOR

1. Executive summary of the project.
2. Detailed breakup of the land area along with latest photograph of the area.
3. Present land use based on satellite imagery.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. Information regarding eco-sensitive area such as national park / wildlife sanctuary / biosphere reserves within 10 km radius of project area.
6. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
7. List of existing distillery units in the study area alongwith their capacity.
8. Number of working days of the distillery unit.
9. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
10. Manufacturing process details of distillery plant alongwith process flow chart.
11. Details of raw materials and source of raw material molasses, bagasse etc.
12. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
13. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
14. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind

- direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
15. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
 16. An action plan to control and monitor secondary fugitive emissions from all the sources.
 17. Details of boiler and its capacity. Details of the use of steam from the boiler.
 18. Ground water quality around existing /proposed spent wash storage lagoon and the project area.
 19. Details of water requirement, water balance chart for Molasses based Distillery. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
 20. Water requirement should not exceed 10 KI/KI of alcohol for distillery and prior 'permission' for the drawl of total fresh water. Details of source of water supply.
 21. Hydro-geological study of the area for availability of ground water.
 22. Spentwash generation from molasses based should not exceed 8KI/KI of alcohol production.
 23. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) and scheme for achieving 'zero' discharge.
 24. Lagoon capacity for sugar unit and spent wash as well measures to be taken to control ground water contamination.
 25. Adequate lining for bio-composting and molasses storage tank
 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.
 38. To which chemicals, workers are exposed directly or indirectly.
 39. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 40. What measures company have taken to keep these chemicals within PEL/TLV.

41. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
42. What are onsite and offsite emergency plan during chemical disaster.
43. Liver function tests (LFT) during pre-placement and periodical examination.
44. Details of occupational health surveillance programme.
45. Details of socio-economic welfare activities to be provided.
46. 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.
47. Action plan for post-project environmental monitoring.

48. Corporate Environmental Responsibility

(a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

(b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.

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

(d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

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

B. Additional TOR

1. 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.

2. A separate chapter on status of compliance of Environmental Conditions granted, if any to the existing sugar unit by 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.

3 Action Plan for water reduction and permission to be obtained for withdrawal of water.

It was recommended that 'TORs' along with Public Hearing prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of

EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report.

34.7.9 Manufacturing of Technical Grade Pesticides and pesticide specific intermediates (3000MTPA) (excluding formulations) at Kh. No. 60//22/2 , 69//2 , 3,8,9,12 ,village Kalanwali Tehsil Dabwali , District Sirsa, Haryana by M/s Maheshwari Biochemical Pvt. Ltd. - reg TOR

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All technical grade pesticides and pesticide specific intermediates are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s Maheshwari Biochemical Pvt. Ltd. has proposed for Manufacturing of Technical Grade Pesticides and pesticide specific intermediates (excluding formulations) at Kh. No. 60//22/2 , 69//2 , 3,8,9,12 ,village Kalanwali Tehsil Dabwali , District Sirsa, Haryana. Total plot area is 21000 sq feet, of which 6930 Sq. feet (33%) will be developed for Green Belt. Cost of project is Rs. 8.0 Crore. No critically pollution area and Wildlife sanctuary/reserve forest fall within 10 km. radius. Following products will be manufactured:

Sl. No.	Product Name	Capacity Proposed (MT/Annum)
1	Clodinafop	50
2	Hexaconazol	250
3	Atrazine	200
4	Bufrofezine	100
5	Lambda Cyhalothrin	50
6	MPB	650
7	Fipronil	200
8	Glyphosate	200
9	Thiram	100
10	Ziram	100
11	2,4-D Sodium Salt	500
12	2,4-D Amine Salt	500
13	Imidacloprid	50
14	Thiomethoxame	50
	Total	3000MT/Annum

PP informed that power will be supplied by State Electricity Board. Power requirement of 500 KVA will also be met by Gen set.

Fresh water requirement will be 3 m³/day from groundwater. PP informed that the

source of wastewater generation will be from process, utilities, washing will be treated in ETP. All solvent used will be recovered and recycled for product. Energy efficient equipment will be installed at all locations. Wastewater will be recycled and reused. There will be no discharge outside the industry premise and plant will be based on Zero Liquid Discharge concept.

Hazardous waste of about 50 MTPA will be generated and will be sent for final disposal in TSD site as per Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008.

After detailed deliberations, the Committee noted that proposed capacity of the unit does not meet with requirement of plot area. PP needs to resubmit the revised proposal and Form-1 through online indicating layout of all units meeting with proposed capacity.

34.7.10 Proposed expansion of Bulk Drug & Pharmaceutical Intermediate Manufacturing unit (from 200.2 MTPA to 448 MTPA) at Sy.no.223/3,252/1, 265/1, 265/2, 265/3, 265/4, 265/5, 253/1, 253/2, 254/2A, 254/1, 266/1 of Torenavu Village, Nanjangud Taluk, Mysore District, Karnataka by M/s. Sequent Scientific Limited. - reg TOR

The project authorities and their Consultant (M/s ABC Techno Labs) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All 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. Sequent Scientific Limited has proposed for expansion of Bulk Drug & Pharmaceutical Intermediate Manufacturing unit (from 200.2 MTPA to 448 MTPA) at Sy.no.223/3,252/1, 265/1, 265/2, 265/3, 265/4, 265/5, 253/1, 253/2, 254/2A, 254/1, 266/1 of Torenavu Village, Nanjangud Taluk, Mysore District, Karnataka. PP informed that environmental clearance for the existing unit was obtained vide MoEF letter no. J-11011/1157/2009 IA II (I) dated April 29th 2009 in the name of Arvee Chem Pharma Pvt. Ltd. It is reported that there is no Wildlife sanctuary/National Park/Reserved Forests located within 10 km radius of the unit. River Kabini is flowing 1.9 km fin south-east direction. Hadinauru Kere lake is at the distance of 5.5 km.

Total plot area is 59056.22 m2, of which green belt to be developed in 35677.22 m2 area (33%). .Proposed cost of expansion is not indicated by the PP, however cost on environmental pollution control and management system is proposed to be Rs. 4.31 crore and recurring cost is Rs. 30.2 lakh. A total of 90 personnel are employed at the factory for the proposed project an additional of 50 persons will be employed. Following products will be manufactured:

S. No.	Products	Production Capacity (TPA)		
		Existing	Proposed	Total
1	Azacyclonol Base	60	-60	0

2	Di Benzo Suberone	63	-63	0
3	ISO Nipecotic Acid	54.8	-54.8	0
4	ISO Nipecotic Acid Ethyl Ester (INEE)	22.4	-22.4	0
5	Buparavaquone	0	+12	12
6	Praziquantel	0	+300	300
7	S-Methoprene Ammonium Salt	0	+12	12
8	Ractopamine Hydrochloric Acid	0	+24	24
9	Calcium phosphoryl choline chloride	0	+100	100
Total		200.2	448	448

The existing power requirement of 300 KVA is sourced from Chamundeshwari Electricity Supply Corporation Ltd. (CHESCOM). After the expansion the power requirement will be 1000 KVA and will be sourced from CHESCOM. As power back up one DG of 500 KVA is existing and one DG set (500 KVA) is proposed. There is one Agro-boiler of capacity (0.75 T/Hr). Briquettes are used as fuel for the Agro-boiler. All raw materials are sourced indigenously.

The total water consumption (process & domestic) will increase from 20 KLD to 50.1 KLD. Source of water is from (Karnataka Industrial Area Development Board (KIADB). Effluent generated from the process, vessel washing etc. is separated into High Polluting Stream (high TDS/COD)and Low Polluting Stream (low TDS/COD). The High Polluting Stream is treated in Multiple Effective Evaporator. The Low Polluting stream is treated in the Effluent treatment plant of 30 KLD. The treated water is used for green-belt development. Residues and hazardous wastes are disposed to KSPCB approved TSDF. The sewage generated will be treated in septic tank.

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

A. Standard TOR:

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the SPCB.
6. Copy of NOC/Consent to Establish for the existing unit.

7. Compliance to the conditions stipulated in the NOC granted by the SPCB.
8. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
9. 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.
10. A map indicating location of the project and distance from severely polluted area.
11. Project location and plant layout.
12. Infrastructure facilities including power sources.
13. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
14. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
15. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
16. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
17. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
18. Details of the total land and break-up of the land use for green belt and other uses.
19. List of products alongwith the production capacities.
20. Detailed list of raw material required and source, mode of storage.
21. Manufacturing process details alongwith the chemical reactions and process flow chart.
22. Action plan for the transportation of raw material and products.
23. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
24. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
25. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM_{2.5}, PM₁₀, SO₂, NO_x, CO, NH₃ including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
26. Details of water and air pollution and its mitigation plan
27. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
28. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
29. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
30. Name of all the solvents to be used in the process and details of solvent recovery system.
31. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
32. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16th September, 2009.
33. Source and permission from Competent Authority for the drawl of water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
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. Material Safety Data Sheet for all the Chemicals are being used/will be used.
39. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
40. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
41. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
42. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
43. Details of occupational health programme.
 - a) To which chemicals, workers are exposed directly or indirectly.
 - b) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - c) What measures company have taken to keep these chemicals within PEL/TLV.
 - d) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - e) What are onsite and offsite emergency plan during chemical disaster.
 - f) Liver function tests (LFT) during pre-placement and periodical examination.
 - g) Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
45. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
46. Note on compliance to the recommendations mentioned in the CREP guidelines.
47. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
48. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
49. Total capital cost and recurring cost/annum for environmental pollution control measures.

50. Corporate Environmental Responsibility

- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
- (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
- (d) Does the company have a system of reporting of non-compliance / violations of environmental norms to the Board of Directors of the company and / or

shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

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

B. Additional TOR

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. 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.
3. The company needs to change the name from M/s Arvee Syntesis Pvt. Ltd. to M/s Sequent Scientific Ltd. Prior to submission of EIA-EMP report.

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

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

34.7.11 Proposed Installation of Diesel Hydro treatment Unit (DHT) and associated facilities to produce 100% BS-IV HSD (capacity 2.6 MMTPA of DHT) at village

Anik, Mahul, Tehsil Kurla, district Mumbai Maharashtra by M/s BPCL Mumbai Refinery - reg TOR

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

M/s BPCL Mumbai Refinery has proposed for Installation of Diesel Hydro treatment Unit (DHT) and associated facilities to produce 100% BS-IV HSD (capacity 2.6 MMTPA of DHT) at village Anik, Mahul, Tehsil Kurla, district Mumbai Maharashtra. PP informed that Mumbai Refinery has recently commission continuous catalytic Regeneration (CCR) reformer project for maximizing BS IV Motor Spirit for which EC was granted in June 2013. It was also stated that Mumbai Refinery is currently implementing New Crude distillation unit to reduce energy consumption/improve yields/Improve yields/Improve safety on which EC was granted vide letter no. J-11011/140/2012-IA II(I) dated 12th June 2013. Public Hearing/consultation was conducted by the SPCB on 25th September 2012.

Further The Mumbai Refinery is implementing for conversion of existing CRU to Isomerization unit to enable 100% BS IV MS production for EC was granted in August 2014.

Now Refinery has proposed for installation of DHT unit of 2.6 MMTPA (7800 MTP). Other associated facilities include;

- Revamp of existing hydrogen Generation Unit –II
- Revamp of Amine Regeneration Unit (ARU)
- Revamp of existing Sour Water Stripper Unit.
- Revamp of all four sulphur Recovery unit (SRU) trains to meet the additional 85MT/D of sulphur production.
- New Gas Turbine with Heat Recovery Steam Generator (HRSG) for additional power (3405 MW) and steam requirement.

Total project cost is Rs.2368 crore. No additional land is required as the proposed unit will be within the existing campus. Water requirement of proposed unit is 129m³/hr. Effluent generation shall be 35 m³/hr . The existing ETP is designed for 240 m³/hr. Treated Effluent is 100% recycled as make up water to various cooling tower in refinery.

The Committee noted that public hearing has already been conducted in the year 2012. It was recommended for exemption of public. After detailed deliberations, the Committee recommended for spot assessment and site visit may be undertaken by the sub-committee of EAC. The Committee clubbed this visit with the visit to HPCL wherein name of Mr. M.B. Lal, as an expert of Refinery was suggested. TOR shall be finalized after the site visit.

34.7.12 Proposed 80 KLD distilleries at Village Belwara, Tehsil & District Moradabad, Uttar Pradesh by M/s. Rana Sugar Limited. - reg TOR.

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

M/s. Rana Sugar Limited has proposed 80 KLD distilleries at Village Belwara, Tehsil & District Moradabad, Uttar Pradesh. Rectified Spirit/ENA/Anhydrous Alcohol will be manufactured. No eco-sensitive zone, wildlife sanctuary/reserve forest fall within 10 kn. Radius from the project site. No information about water body and river is reported within 10 km radius of project site.

PP informed that the proposed unit will be established adjacent to Moradabad Sugar Mill, which has commenced production from May 2007 with cane crushing capacity of 5000 TCD and 15 MW cogeneration plant. Cost of the proposed project is not indicated by the consultant. Total plot area for proposed unit is 25 acres, of which 33% of green belt will be developed

It is reported that source of fresh water of 840 m³/day will be from groundwater. Spent wash will be treated through bio-methanation process first and evaporated in MEE followed by bio-composting. It is noted that the proposed site is within Ganga Basin, therefore, the committee suggested for incineration in place of bio-composting. Spentlee will be recycled to process as well as to cooling tower as make-up water. Process condensate from evaporation will also be neutralized, treated and recycle to process and to cooling tower as make up water. No effluent will be allowed to discharge outside the premises. Domestic sewage informed to be treated in soak pit which is to be changed to STP.

The source of air pollution from 25TPH biogas/coal fired/rice husk boiler, which will be connected to bagfilter/ESP as a pollution control device. Three nos of DG sets of 500 KVA capacity. Hazardous waste/empty drums shall be sent to the Authorized recyclers. Solid waste to be mixed with compost. Earmuff will be used while running the equipment of the plant.

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

A. Standard TOR

1. Executive summary of the project.
2. Detailed breakup of the land area along with latest photograph of the area.
3. Present land use based on satellite imagery.
4. Details of site and information related to environmental setting within 10 km radius of the project site.
5. Information regarding eco-sensitive area such as national park / wildlife sanctuary / biosphere reserves within 10 km radius of project area.
6. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forest.
7. List of existing distillery units in the study area alongwith their capacity.
8. Number of working days of the distillery unit.
9. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
10. Manufacturing process details of distillery plant alongwith process flow chart.

11. Details of raw materials and source of raw material molasses, bagasse etc.
12. Sources and quantity of fuel (coal etc.) for the boiler. Measures to take care of SO₂ emission. A copy of Memorandum of Understanding (MoU) signed with the coal suppliers should be submitted, in case coal is used.
13. Action plan prepared by the SPCB to control ambient air quality as per NAAQES Standards for PM₁₀, PM_{2.5}, SO₂ and NO_x as per GSR 826(E) dated 16th November, 2009.
14. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x and HC (methane & non methane) should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
15. Mathematical modeling for calculating the dispersion of air pollutants and ground level concentration along with emissions from the boiler.
16. An action plan to control and monitor secondary fugitive emissions from all the sources.
17. Details of boiler and its capacity. Details of the use of steam from the boiler.
18. Ground water quality around existing /proposed spent wash storage lagoon and the project area.
19. Details of water requirement, water balance chart for Molasses based Distillery. Measures for conservation water by recycling and reuse to minimize the fresh water requirement.
20. Water requirement should not exceed 10 KI/KI of alcohol for distillery and prior 'permission' for the drawl of total fresh water. Details of source of water supply.
21. Hydro-geological study of the area for availability of ground water.
22. Spentwash generation from molasses based should not exceed 8KI/KI of alcohol production.
23. Proposed effluent treatment system for molasses based distillery (spent wash and spent lees) and scheme for achieving 'zero' discharge.
24. Lagoon capacity for sugar unit and spent wash as well measures to be taken to control ground water contamination.
25. Details of solid waste management including management of boiler ash. Submit Ash management plan. MoU with cement plant for the use of fly ash.
26. Land available for bio-composting. Details of lining to be provided in the compost yard.
27. Green belt development as per the CPCB guidelines.
28. List of flora and fauna in the study area.
29. Noise levels monitoring at five locations within the study area.
30. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
31. EMP should also include the concept of waste-minimization, recycle/reuse/ recover techniques, Energy conservation, and natural resource conservation.
32. Details of bagasse storage. Details of press mud requirement.
33. Risk assessment for storage and handling of alcohol and mitigation measure due to fire and explosion and handling areas.

34. Alcohol storage and handling area and its fire fighting facility as per norms.
35. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
36. Details of occupational health programme.
37. To which chemicals, workers are exposed directly or indirectly.
38. Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
39. What measures company have taken to keep these chemicals within PEL/TLV.
40. How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
41. What are onsite and offsite emergency plan during chemical disaster.
42. Liver function tests (LFT) during pre-placement and periodical examination.
43. Details of occupational health surveillance programme.
44. Details of socio-economic welfare activities to be provided.
45. Traffic study of the area for the proposed projects in respect of existing traffic, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
46. Action plan for post-project environmental monitoring.

47. Corporate Environmental Responsibility

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

B. Additional TOR

1. 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.
2. Necessary permission for drawl of groundwater to be obtained from the concerned department. Zero liquid discharge to be maintained through MEE and incineration process.
3. A detailed plan for good house keeping practices with trained staff and Personal to be given.
4. Project cost break up of cost on pollution control devices and environmental management system to be adequately worked out.

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

34.7.13 Greenfield Multi-Purpose Plant for Manufacturing of Various Technical Grade Pesticides (12 TPD) at Dahej – II Industrial Estate, Bharuch, Gujarat.by M/s. Hetban Spechem Limited.- reg TOR.

The project authorities gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All technical grade pesticides and pesticide specific intermediates are listed at S.N. 5(b) under category 'A' and appraised at Central level.

M/s. Hetban Spechem Limited has proposed for Greenfield Multi-Purpose Plant for Manufacturing of Various Technical Grade Pesticides (12 TPD) at Dahej – II Industrial Estate, Bharuch, Gujarat. No critically pollution area and wildlife sanctuary/reserve forest fall within 10 km. radius. Bhukhi River is at ~ 10 Km in East direction from the proposed site. Narmada Estuary is at distance of 5 km and Gulf of Khambhat is at 13.5 km. Total plot area is 5000 m². Cost of project is Rs. 31.10 Crore. Following products will be manufactured:

S. No.	Name of Product	Production (MT/annum)	S. No. (Cont d.)	Name of Product	Production (MT/annum)
	Herbicides		25	Buprofezin	500
1	Glyphosate	2,000	26	Bifenthrin	200
2	2,4 Dichlorophenoxy acetic acid	1,000	27	Diafenthiuron	600
3	MCPA	500	28	Deltamethrin	100

4	Atrazine	500	29	Cypermethrin	600
5	Metribuzin	400	30	Permethrin	600
6	Propanil	500	31	Lambda-Cyhalothrin	300
7	Pretilachlor	300		Fungicides	
8	Pendimethalin	600	32	Cymoxanil	300
9	Butachlor	300	33	Cyproconazole	200
10	Clodinafop Propargyl	300	34	Azoxystrobin	500
11	Fenoxaprop-P-Ethyl	200	35	Metalaxyl	500
12	Quizalofop-p-Ethyl	200	36	Trifloxystrobin	450
13	Clodinofof-P-Ethyl	300	37	Carbendazime	800
14	Paraquat dichloride	500	38	Kresoxim-Methyl	200
15	Imazathapyr	300	39	Thiophenat-Methyl	400
16	Oxyfluorfen	100	40	Tricyclazole	1,000
	Insecticides		41	Isoprothiolane	200
17	Thiamethoxam	400	42	Propiconazole	300
18	Profenofos	400	43	Hexaconazole	1,000
19	Acephate	800	44	Tebuconazole	600
20	Chlorpyrifos	350	45	Difenconazole	500
21	Imidacloprid	600	46	Epoxyconazole	200
22	Acetamiprid	500	47	Chlorothalonil	500
23	Fipronil	200		Plant Growth Regulator	
24	Cartap – Hydrochloride	300	48	Chlormequatchloride	2,000

The fresh water of 103 m³/day will be sourced from GIDC reservoir for maintain ZLD.. Effluent & sewage generated will be treated in Effluent Treatment Plant. System is designed to achieve Zero Liquid discharge, however final discharge after treatment of ~ 88 KLD is proposed to GIDC drain / CETP once layout of drain is completed and the permission are taken

The power requirement of 610 kVA will be through Dakshin Gujarat Vij Company Ltd (DGVCL) /Dahej Local Source. Approximately 325 Sm³/Hr Natural Gas will be used in Boilers and Thermic Fluid Heater. Alternate fuel will be LDO (~ 4.5 KLD). Approximately 200 Ltr/Hr HSD will be used for running two DG Sets. Fuel will be sourced from local depot/suppliers.

The principal air pollutants are volatile organic compounds (VOCs) and particulate matter (PM). Likely air pollutants from proposed flue gas stacks will be PM, SO₂ & NO_x, from process vents will be HCl, HBr, H₂S, NH₃, NO_x & HC. APC like scrubbers with adequate stack heights will be provided (upto 35 m). Also, fugitive emissions are envisaged due to the use of solvents. Main odorous compound are CH₃CHO, NH₃ and H₂S. Odor Control Plan shall be made and followed.

The hazardous waste shall include Process waste, Carbon Waste, Hypo Chlorite, HCl, Acetic acid, Spent acid, Spent Catalysts, Used Oil, Discarded Drums and containers and ETP waste. Suitable facility for storage of approximately 92 MT/Month of hazardous waste shall be provided. Handling, transportation and disposal to authorized recyclers/vendors/re-processors of hazardous waste will be done as per HW Rules. Membership from authorized TSDF shall be taken.

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

A. Standard TOR

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. Environment clearance for the existing unit issued by the Ministry (reasons, if not obtained), Consent to Operate and Authorization accorded by the SPCB.
6. Copy of NOC/Consent to Establish for the existing unit.
7. Compliance to the conditions stipulated in the NOC granted by the SPCB.
8. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
9. 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.
10. Plant layout alongwith details of facility.
11. Infrastructure facilities including power sources.
12. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
13. Project site location alongwith photographs and site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
14. Present land use based on satellite imagery for the study area of 10 km radius.
15. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
16. Details of the total land and break-up of the land use for green belt and other uses.
17. List of products alongwith the production capacities.
18. Detailed list of raw material required and source, mode of storage and transportation.
19. Manufacturing process details alongwith the chemical reactions and process flow chart.
20. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
21. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
22. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM₁₀, PM_{2.5}, SO₂, NO_x, Cl₂, HCl, SO₂, including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
24. Name of all the solvents to be used in the process and details of solvent recovery system.
25. Design details of ETP, incinerator, if any alongwith control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
26. Details of water and air pollution and its mitigation plan
27. An action plan to control and monitor secondary fugitive emissions from all the sources.
28. Action plan for odour assessment and control to be submitted.

29. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
30. Source and quantity of fresh water requirement. Water balance chart including quantity of effluent generated recycled and reused and discharged.
31. Action plan for 'Zero' discharge of effluent should be included.
32. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
33. Detailed plan for zero liquid discharge and reduction of water consumption to be prepared .
34. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the management of fly ash generated from boiler should be included.
35. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
36. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilized all the organic solid waste generated.
37. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF.
38. Risk assessment for storage for chemicals/solvents. Risk assessment for Cyanide.
39. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
40. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
41. Action plan for rainwater harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health programme.
 - vii) To which chemicals, workers are exposed directly or indirectly.
 - viii) Whether these chemicals are within Thresh Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
 - ix) What measures company have taken to keep these chemicals within PEL/TLV.
 - x) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
 - xi) What are onsite and offsite emergency plan during chemical disaster.
 - xii) Liver function tests (LFT) during pre-placement and periodical examination.
43. Details of occupational health surveillance programme.
44. Socio-economic development activities shall be in place.
45. Note on compliance to the recommendations mentioned in the CREP guidelines.
46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided. Toxic substance monitoring plan.
47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.

49. Corporate Environmental Responsibility

- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

- (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
 - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
 - (d) Does the company have a system of reporting of non compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.
51. A tabular chart with index for point wise compliance of above TORs.

B. Additional TOR

- 1. 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.
- 2. Detailed Toxic/hazardous waste management plan to be provided.

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 recommended that '**TORs' along with Public Hearing** prescribed by the Reconstituted Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report shall be submitted to the State Pollution Control Board for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report.

34.8 Any Other

34.8.1 Expansion of Rayon Tyre Cord, Dipped Fabric, Carbon Disulphide and Captive Power Plant (from 7.2 MW to 11.2 MW) at Khasra No.248, 342, 245, 246, 247 at Village and TalukaLadpura, District Kota, Rajasthan by M/s ShriramRayons (a unit of DCM Shriram Industries Ltd.) – Clarification regarding public hearing

MoEF&CC vide letter no J-11011/220/2014 IA II (I) dated 3.12.2014 has issued TOR for preparation EIA-EMP report. PP has submitted a copy of letter dated 13.2.2015 issued by the District Industries Centre, Kota and they confirmed that industrial area Kota was notified vide letter no. F12 (6) Rev. 8/9366-74 dated 6.12. 1961. The said unit is located in the notified industrial area.

After detailed deliberation, the committee exempted the public hearing under para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006. Final EIA –EMP report incorporating all suggested TORs shall be submitted in the Ministry for consideration of environmental clearance in addition to following.

1. A detailed plan for water reduction alongwith recycle and reuse of wastewater to be incorporated with proposed treatment scheme.
2. Weekly (4 times) in a month monitoring to be done u/s and downstream of water intake point and discharge point in river/ canal.

34.8.2 Greenfield Fertilizer Plant for production of 2200 MTPD Ammonia and 3850 MTPD of Urea along with CPP (33 MW) at Panagarh, Burdwan District, West Bengal by M/s Matix Fertilizers and Chemicals – Amendment in EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 28th meeting held during 1st –2nd December, 2014 and the Committee The Committee suggested to modify/update the said EIA-EMP report by taking this fuel change into consideration. The Committee also recommended following additional information:

- i) Layout map indicating all changes.
- ii) Full Quantitative Risk Assessment & Disaster Management Plan should include:
 - a. Identification of hazards
 - b. Consequence Analysis
 - c. Determination of Individual Risk and Societal Risk
 - d. List of last Major Refinery Incidents Globally in last 10 years
 - e. Proposed measures for risk reduction.

PP vide letter dated 7th January, 2015 has submitted the above mentioned information. PP informed that CBM and Naptha will be as fuel. Low NOx burner will be used. Tank volume of Naptha will be 6000 m3. After detailed deliberation, the Committeerecommended the proposal for amendment in the EC for usage of CBM and Naptha both fuel. All the safety precaution mentioned in the risk assessment shall be implemented.

Day 3 (19th February 2015)

34.9 Environmental Clearance

34.9.1 Proposed Molasses based distillery (30 KLPD) at Village Bamani (Pare), Taluka Khanapur, District Sangli, Maharashtra by M/s Udagiri Sugar and Power Ltd.- EC reg.

The project proponent and their consultant (Vasantdada Sugar Institute) 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 23rd-24th June, 2014 for preparation of EIA-EMP report. All molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Udagiri Sugar and Power Ltd. has proposed for setting up of molasses based Distillery 30 KLPD at Village Bamani, Taluka Khanapur, District Sangli, Maharashtra. Plot area is 10.7 acres of which greenbelt will be developed in 2.6 acres. Land required for the proposed distillery unit is available within the existing sugar unit. Cost of project is Rs. 38.42 Crore of which Rs. 11.67 Crore has been earmarked towards capital cost for environment management. It is reported that no wildlife sanctuary, reserve forest is located within 10 Km distance. Distillery will be operated for 270 days per annum. Molasses will be sourced from sugar factory and remaining from nearby mills.

Ambient air quality monitoring was carried out at 10 locations during March, 2014 – May, 2013 and submitted data indicates as PM_{2.5} (19.17– 30.30 ug/m³), PM₁₀ (39.76–86 ug/m³), SO₂ (7.48 – 10 ug/m³) and NO_x (8.36-12 ug/m³). Predicted value of ground level concentration due to proposed project is PM₁₀ (0.04 ug/m³) and SO₂ (0.5 ug/m³). The resultant concentrations are within the NAAQS. The steam requirement of the proposed distillery will be fulfilled from sugar mill boiler. ESP alongwith stack of adequate height has been provided to bagasse fired boiler. Water requirement from Pare minor Reservoir will be 345 m³/day. Spent wash will be treated in bio-methanation plant followed by MEE and bio-composting to achieve zero effluent discharge. Condensate will be treated in the polishing pond. Boiler ash from baggase will be used as manure. Fermented sludge will be used as bio-composting.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 2nd December, 2014. The issues raised were regarding water pollution, preparation of compost, transportation of spent wash, local employment etc. 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 recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) ESP alongwith stack of adequate height shall be provided to biomass fired boiler to control particulate emission within 50mg/Nm³.
- ii) Total fresh water requirement from Pare minor Reservoir for distillery shall not exceed 345 m³/day and prior permission shall be obtained from the Competent Authority.

- iii) Spent wash generation from molasses based distillery shall not exceed 8 KI/KI of alcohol. The spent wash from molasses based distillery shall be treated in bio-methanation reactor. Treated spent wash will be evaporated in MEE and concentrated spent wash will be bio-composted by mixing with press mud generated from sugar unit to achieve 'Zero' discharge. Evaporator Condensate shall be treated in polishing pond and recycled/reused in process. No effluent shall be discharged outside the premises and 'Zero' discharge shall be maintained.
- iv) Spent wash shall be stored in impervious RCC lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 5 days capacity.
- v) As proposed, no effluent from distillery shall be discharged outside the plant premises and Zero discharge shall be adopted. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- vi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- vii) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area and compost yard shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Lucknow and UPPCB.
- viii) Bagasse/biomass storage shall be done in such a way that it does not get air borne or fly around due to wind.
- ix) Boiler ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided. Bagasse ash and coal ash shall be stored separately.
- x) Fire fighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting shall be made to control fire from the alcohol storage tank. DMP shall be implemented.
- xi) Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.
- xii) Dedicated parking facility for loading and unloading of materials shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xiii) As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc.

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

- xiv) All the commitments made during the Public Hearing/Public Consultation meeting held on 2nd December, 2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xv) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

34.9.2 Grain based Distillery (120 KLPD) alongwith Cogeneration Power Plant (3.5 MW) of M/s Globus Spirit Ltd' at Panagarh Industrial Park, Panagarh District, Burdwan, West Bengal. – EC regarding

The project proponent and their consultant (J M Environet Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of Reference (TORs) awarded during the 20th Meeting of the Expert Appraisal Committee (Industry) held during 23rd to 24th June 2014 for preparation of EIA-EMP report. All grain based distilleries are listed at S.N. 5(g) (ii) under category 'A' and appraised at Central level.

M/s Globus Spirit Ltd. has proposed for setting up of Grain based Distillery (120 KLPD) along with Cogeneration Power Plant (3.3 MW) at Panagarh Industrial Park, Panagarh, District Burdwan, West Bengal. Total plot area is 18.81 acres of which greenbelt will be developed in 6.2 acres. Cost of project is Rs. 110 Crore of which Rs. 15 Crore and 1.5 crore are earmarked towards capital cost and recurring cost per annum for environmental management. Total no. of working days are 330 days per annum. It is reported that no national park/wildlife sanctuary/bio-sphere reserves lies within 10 km distance. Panagarh branch canal (0.7 km), left bank canal (5.5 Km) and Damodar River (6.5 Km) are located within 10 Km distance. Protected forests (i.e. Khandori PF, Baradoba PF, Premganj PF, Radhaballabpur PR, Kuldiha PF, Amarargarh PF, Pratappur PF, Ramharipur PF and Dombandhi PF) are located within 10 Km distance.

Ambient air quality monitoring was carried out at 8 locations during April–June, 2014 and submitted data indicates as PM_{2.5} (25.6– 43.1 ug/m³), PM₁₀ (56.5–89.4 ug/m³), SO₂ (5.7 – 11.8 ug/m³) and NO_x (14.6-23.9 ug/m³). Predicted value of ground level concentration due to proposed project is PM₁₀ (0.87 ug/m³), SO₂ (4.69 ug/m³) and NO₂ (1.41 ug/m³). The resultant concentrations are within the NAAQS. ESP will be provided to coal/rice husk fired boiler to control particulate matter. Total fresh water requirement from ground water source will be 1205 m³/day. Spent wash will be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. DWGS will be sent to dryer to form DDGS. No effluent will be discharged outside the plant premises and zero effluent discharge concepts will be followed. Process condensate will be treated and recycled into process. DDGS will be used as cattle feed. Fly ash will be used for brick manufacturing.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the West Bengal State Pollution Control Board on 28th November, 2014 under the chairmanship of Addl. District Magistrate. The issues were raised regarding local employment, ground water drawl, CSR, compliance of

environmental norms etc. In response, PP informed that job priority will be given to the locals based on their skill and ability. Regarding ground water usage, PP informed that rain water harvesting will be practiced to recharge ground water and Rs. 2 Crore has been earmarked for installation of rain water harvesting. As regards to CSR, PP informed that educational activities, health camps, water supply to villagers will be undertaken and Rs. 5.5 Crore has been earmarked for aforesaid propose. The Committee was satisfied with the response of the PP.

After detailed deliberations, the Committee, on the basis of the EIA-EMP report and presentation made recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Distillery unit shall be based on Grain based only and no Molasses based distillery unit shall be operated. The unit will use bagasse if available.
- ii. ESP alongwith stack of adequate height shall be provided to husk/coal fired boiler to control particulate emission within 50mg/Nm³.
- iii. Pucca approach road to project site shall 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/ surface water supply shall not exceed 1205 m³/day for distillery and cogeneration unit and prior permission shall be obtained from the CGWA/SGWA. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- v. Spent wash generation shall not exceed 6 Kl/Kl of alcohol. Spent wash shall be treated through decanter and concentrated in multi-effect evaporator (MEE) to form DWGS. DWGS will be sent to dryer to form DDGS. The spentlees and condensate will be treated in UASBR followed by aerobic treatment and sand filtration /charcoal filtration. Treated effluent will be used for make up water of cooling towers and water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB and recycle/reuse.
- vi. No effluent from distillery and co-generation power plant shall be discharged outside the premises and Zero discharge shall be adopted.
- vii. Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored.
- viii. No storage of wet cake shall be done at site. An additional dryer shall be installed so that at any time wet cake is not sold then wet cake shall be converted into dry cake by operating additional dryer.
- ix. Coal storage shall be done in such a way that it does not get air borne or fly around due to wind.

- x. Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- xi. Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.
- xii. Dedicated parking facility for loading and unloading of material shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xiii. As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xiv. All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 28th November, 2014 shall be satisfactorily implemented.
- xv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhuvneswar. Implementation of such program shall be ensured accordingly in a time bound manner.

34.9.3 Expansion of Synthetic Organic Chemical Manufacturing Unit at Plot No. 59,61,62,63, 66A and 67, Sipcot Industrial Area, Phase II,VillageMornapalli, Tehsil Hosur, District Krishnagiri, Tamil Nadu by M/s V. B. Medicare Pvt. Ltd.- Regarding EC.

The project proponent and their consultant (Chola MS Risk Service) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 7th Meeting of the Expert Appraisal Committee (Industry) held during 4th– 5th April, 2013 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, project site is located within 10 Km of interstate boundary and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s V. B. Medicare Pvt. Ltd. has proposed forexpansion of Synthetic Organic Chemical Manufacturing Unit at Plot No. 59,61,62,63, 66A and 67, Sipcot Industrial Area, Phase II,Village Mornapalli, Tehsil Hosur, District Krishnagiri, Tamil Nadu. Total plot area is 6 ha. Out of which, greenbelt will be developed in 3.1 ha. Environmental clearance for the existing unit was accorded by the MoEF vide letter no J-11011/583/2007 IA II (I) dated 13th February, 2008. Total cost of the project is Rs. 1537.5 Lakhs. It is reported that no national parks or wildlife sanctuaries are located within 10 km distance. Ponnaiyar River is flowing at

a distance of 1.5 km. Reserve forests viz Sanamavu RF, Ramasandiram RF and Ungatti are located within 10 km distance. Following products will be manufactured :

Product name	Existing/Proposed	Existing Capacity - MTPA	Proposed Capacity - MTPA	Total Capacity - MTPA
Trichloro Galacto Pyranosyl Fructo Furanoside (TGPF)	Consented product to be continued after process modification	72	-	72
Glucosamine Hydrochloride (GHC)	Consented product to be continued	240	-	240
Docosahexaenoic acid (DHA)	Proposed product	-	180	180
Tocopheryl polyethylene glycol Succinate (TPGS)	Proposed product	-	72	72

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during November, 2013-January, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (32.42 µg/m³ to 108.57 µg/m³), PM_{2.5} (18.26 µg/m³ to 65.28 µg/m³), SO₂ (4.93 µg/m³ to 15.17 µg/m³) and NOx (9.64 µg/m³ to 29.64 µg/m³) respectively. The resultant concentrations are within the National Ambient Quality Monitoring Standards (NAAQM) except PM₁₀. PP informed that high PM₁₀ level was observed at the location of bus stand and highway near shanti nagar. Cyclone and bagfilter have been provided to the existing coal fired boiler to control particulate matter. Online VOC sensor are placed at the solvent area. Alkali scrubber is attached to GHC process emission to control emission of HCl fumes. Tail gas condensers have been installed to control VOC emissions from vents. Fresh water requirement from SIPCOT water supply will be increased from 124 m³/day to 219 m³/day after expansion. Industrial effluent generation after expansion will be 91.2 m³/day after expansion. Effluent will be segregated into High TDS and Hfh COD effluent streams. High COD effluent stream will be treated in anaerobic reactor followed by two stage extended aeration process, Ultra filtration and Reverse Osmosis plants. RO rejects and High TDS effluent stream will be treated in neutralization and evaporated in MEE. Sewage will be treated in the Sewage Treatment Plant. No effluent will be discharged outside the plant premises and zero effluent discharge concept will be followed. ETP sludge, spent silica, MEE salts and spent fuller's earth will be sent to TSDF site. Spent HCl will be sold to the actual recyclers. By-product recovery DHA will sold as animal feed.

The Committee also discussed the compliance status report on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Southern regional office, Bangalore. It is reported that the said unit is manufacturing only the Glucosamine Hydrochloride with maximum throughput of about 58.8 T/year and Sucralose manufacture was stopped due to poor commercial viability in the year 2010. Indonesian coal with less than 0.3 % sulphur content has been used in their boilers. Cyclone bag filter has been installed in the coal fired boiler to control particulate emissions. Acid and alkali wet scrubber is in operation for treating vent gases from digestion reaction. Acid and alkali wet scrubber is in operation in Chlorination reactor. Online monitoring system from boiler stack has been installed. Necessary membership in the Tamil Nadu Waste Management Limited has been obtained to dispose the hazardous waste generated. The Committee was satisfied with compliance report.

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

- i. Multicyclone followed by bagfilter alongwith adequate stack height shall be provided to imported coal fired boiler to control particulate emissions.
- ii. Two stage water scrubber followed by alkali scrubber shall be provided to process vent to control SO₂, HCl and HBr emissions. 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.
- iii. 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%.
- 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 stipulated by GPCB.
- v. All necessary steps should be taken for monitoring of Chlorine and HCl as well as VOCs in the proposed plant.
- vi. Total water requirement from SIPCOT water supply should not exceed 219 m³/day and prior permission should be obtained from the Competent authority.
- vii. As proposed, effluent will be segregated into High TDS and Hfh COD effluent streams. High COD effluent stream will be treated in anaerobic reactor followed by two stage extended aeration process, Ultra filtration and Reverse Osmosis plants. RO rejects and High TDS effluent stream will be treated in neutralization and evaporated in MEE. Sewage will be treated in the Sewage Treatment Plant. Domestic sewage should be treated in STP.
- viii. 'Zero' effluent discharge shall be followed and no effluent shall be discharged outside the plant premises.
- 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 for management of hazardous wastes and prior permission from SPCB 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.
- x. As proposed, greenbelt should be developed at least 3.1 ha 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.
- 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.

34.9.4 Expansion of Viscose Filament Yarn at Veraval, District Gir Somnath, Gujarat by M/s Indian Rayon –Environmental Clearance Reg.

The project proponent and their consultant (JM EnviroNet Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 16th Meeting of the Expert Appraisal Committee (Industry) held during 20th–21st February, 2014 for preparation of EIA-EMP report. All manmade fibres manufacturing including rayon are listed at S.No. 5(d) under category 'A' of Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) in the Ministry.

M/s Indian Rayon has proposed for expansion of viscose filament yarn at Town Veraval, District Girsomnath, Gujarat. It was informed that a new dist.- Gir-Somnath has been created out of Junagadh. Total plant area is 176 acres of which greenbelt will be developed in 59 acres. Proposed expansion will be done within the existing plant premises; thus, no additional land is required. It is reported that no national parks/wildlife sanctuaries /biosphere reserve & reserved /protected forest lies within 10 km radius project site. Arabian sea is at 700 m from the plant site. Triveni sangam of the rivers namely Hiran, Kapila, Saraswati is located at 6.5 km from the plant site. The Seasonal River Devka is passing just near the plant site. Cost of the proposed expansion is Rs. 850 crores. Rs. 40 Crore and Rs. 2.0 Crore are earmarked towards capital cost and recurring cost per annum for implementation of EMP. The following products will be manufactured:

S.N.	Products	Existing Quantity (MTPM)	Proposed additional (MTPM)	Total Quantity after expansion (MTPM)
1	Viscose Filament Yarn	1650	750	2400
2	Captive Power Plant	34.5 MW	20 MW	54.5 MW
3	Sodium Sulphate	2050	300	2350
4	Sodium Sulphite	Nil	3000	3000
5	Liquid SO ₂	Nil	1500	1500
6	Sulphuric Acid	3600	No change	3600
7	Carbon Disulphide	1000	No change	1000
8	Caustic soda Lye (100 %)	12000	No change	12000
9	Chlorine (100 %)	10560	No change	10560
10	Compressed Hydrogen	650000 Nm ³	No change	650000 Nm ³
11	Sodium Sulphide, (Na ₂ S ¹)	100	No Change	100
12	HCl	1800	No change	1800
13	Sodium Hypochlorite (100%)	3750	No Change	3750

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2014- May, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (58.9 µg/m³ to 82.4 µg/m³), PM_{2.5} (27 µg/m³ to 38.3 µg/m³), SO₂ (6.5 µg/m³ to 18.1 µg/m³), NO₂ (15.3 µg/m³ to 25.6 µg/m³), H₂S (18.9 µg/m³ to 24.4 µg/m³) and CS₂ (12.4 µg/m³ to 17.5 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.14 µg/m³, 3.65 µg/m³, 2.07 µg/m³, 3.65 µg/m³ and 23.87 µg/m³ with

respect to PM, SO₂, NO₂, H₂S and CS₂. The resultant concentrations are within the NAAQS. ESP has been provided to the existing coal fired boiler to control particulate emissions. Fluidized bed combustion boiler & lime dosing system will be provided to control SO₂ emissions. Bagfilter & cyclone separator will be installed in boiler house to control particulate emissions. Bagfilter will be provided in coal crusher plant. Four stage scrubbing system with chilled caustic has been provided in Sodium Hypochlorite plant. Bubble cap tray followed by packed bed scrubber has been provided to hydrochloric acid plant. Alkali scrubber has been provided in sulphuric acid plant. Alkali scrubbers has been installed in Rayon Plant to control hydrogen sulphide emissions. Water scrubber will be provided in Sodium sulphate plant. Wet scrubber in sodium sulphate plant has been provided to control sodium sulphate aerosols emitting. Sodium Sulphite Recovery Unit – existing. CS₂ is recovered by cooling with the help of series of condensers and H₂S is scrubbed by caustic soda with the help of two stage absorption system in series to produce Sodium sulphide.

Fresh water requirement from the Umrethi Dam will be increased from 12938 m³/day to 15938 m³/day after expansion. Effluent generation after expansion will be 10540 m³/day and treated in the ETP to meet stipulated standards before discharge from factory outlet through marine pipeline with diffuser system with more than 77 time dilution into deep sea for design discharge of 15000 m³/day. Effluent recycling RO plant will be installed to produce 2000 m³/day recycle water. Sewage will be treated in STP. Fly ash will be sent to group cement plant, brick plant & rest of the quantity will be given to the GPCB approved vendors. Process sludge is being stored in identified area and briquettes are formed by use of process sludge, cellulose waste, coal ash, charcoal churry and used in boiler & co-incineration in the Group plant Ultra Tech Rajula. Sulphur sludge will be sent to TSDF site. Waste catalyst will be sent to authorized recycler/re-processors.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 4th October, 2014. The issues were raised regarding scarcity of drinking water, treated effluent and its disposal in sea, fisheries, coal dust, CSR, local development, public health, flood, pollution from industry, etc. regarding lift of water from Umerthi River, PP informed that the Company is lifting water from Dam as per allocated quantity and the quantity required for proposed expansion will also be met accordingly. Rs. 8 Crore has been earmarked for installation of effluent recycling system alongwith RO. Regarding health programme, PP informed that Company has also proposed to spend around Rs. 20 Crore on health and family welfare under ESC for the proposed expansion. Also provision for hospital has been included in the CSR plan. Company has also proposed to spend around Rs. 2.65 Crore on education & literacy under ESC for the proposed expansion. Regarding fish production, PP informed that as per Fish landing data of Junagadh and Veraval from Department of Fisheries, Govt. of Gujarat, fish production has been increased. Regarding dust emission, PP informed that adequate pollution control equipment will be installed to keep the emissions within limit and Rs. 25 Crore has been earmarked towards air pollution control system. Regarding contribution towards socio-economic development, PP informed that Rs. 43 Crore has been earmarked towards CSR/ESC. Regarding CRZ, PP informed that plant location is outside the CRZ area. CRZ permission has already been obtained for marine pipeline outside the plant premises. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

The Committee also discussed the compliance status report dated 30.12.2014 on the conditions stipulated in the existing environmental clearance, which were monitored by the Ministry's Southern regional office, Bhopal. It is reported that the analytical reports as submitted show parameters like CS₂ & H₂S of stack attached to old and new Rayon plants and HCl mist, Cl₂ at process stack of HCl synthesis plant and hypochlorite plant respectively at caustic soda plant were found within the prescribed limits. 26 online chlorine monitors have been installed which were attached to DCS within caustic plant. Process interlocks have been provided for tripping of the plant during any deviation. Effluent generated from caustic soda plant has been treated at common ETP within the premises before discharging into sea through pipeline. Authorization under hazardous waste rule has been obtained from GPCB. Out of 176 acres of total land, about 56 acres have been brought under plantation. The Committee was satisfied with the compliance report.

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

- i. ESP and adequate stack height shall be provided to coal fired boiler to control the air emissions within the limit stipulated by CPCB and MPCB. Low NO_x burner shall be provided in Captive Co-generation Power Plant to reduce the NO_x emissions.
- ii. The gaseous emissions (SO₂, NO_x, CS₂, H₂S, CO, HC) and particulate matter from process and CPP units shall conform to the norms prescribed by the CPCB/MPCB 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 unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Continuous emission monitoring system (CEMS) should be installed to measure SO₂, NO_x and Particulate from the CPP stack and SO₂, CS₂ and H₂S from process plant stacks.
- iii. Exhaust containing CS₂ and H₂S gas from rayon plant shall be passed through scrubber.
- iv. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB guidelines. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- v. The levels of PM₁₀, PM_{2.5}, SO₂, NO_x, CO, CS₂, H₂S, HCl and VOCs in ambient air should be monitored and displayed at a convenient location near the main gate of the company and at important public places. Continuous ambient air quality monitoring station should be set up at important locations.
- vi. Total fresh water requirement from Umrethi Dam supply should not exceed 15938 m³/day and prior permission shall be obtained from the concerned Authority. No ground water should be used. Efforts should be made to reduce the fresh water requirement by adopting 3 R's (Reduce, Reuse and Recycle) concept.
- vii. Total industrial wastewater generation shall not exceed 10540 m³/day. As proposed, effluent should be treated in the effluent treatment plant. Treated effluent shall be discharged into conveyance system for marine disposal after conforming to the standards prescribed for marine discharge norms and obtaining permission from the GPCB. Treated effluent should be passed through guard pond. Online pH meter, TOC analyzer and flowmeter should be installed. No process effluent shall be

discharged in and around the project site. Sewage should be treated in STP. The water quality monitoring report for treated effluent should be submitted to the CPCB and Ministry's regional Office at Bhopal.

- viii. As proposed, effluent recycling RO plant shall be installed to produce 2000 m³/day recycle water.
- 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 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. The Company should strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All Transportation of Hazardous Chemicals shall be as *per* the Motor Vehicle Act (MVA), 1989.
- xi. Boiler ash should be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- xii. All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.
- 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 over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xvi. All the commitment made regarding issues raised during the public hearing/consultation meeting held on 4thOctober, 2014shall be satisfactorily implemented.
- xvii. Efforts should be made for recovery of sodium thiosulphate.
- xviii. Sulphide contents in the effluent should also be monitored

- xix. At least 5 % of the total cost of the project (i.e. Rs 43 Crore) should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

34.9.5 Expansion of Resin Manufacturing Unit at Block No.153, Kadi Road, Village Dhanot, Taluka Kalol, District Gandhinagar, Gujarat by M/s Salasar Laminates Ltd – reg.EC

The project proponent and their consultant (M/s Anand Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 10th Meeting of the Expert Appraisal Committee (Industry) held during 29th to 31st July, 2013 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (basic organic, chemicals, other, synthetic organic chemicals and chemical Intermediates) located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Salasar Laminates Ltd. has proposed for expansion of Resin Manufacturing Unit at Block No. 153, Koli Road, Village Dhanot, Taluka Kalol, District Gandhinagar, Gujarat. Total plot area is 20,943 m² of which greenbelt will be developed in 7995 m². Cost of project is Rs. 884 Lakhs. It is reported that there is no national park/wildlife sanctuary/reserve forest within 10 km distance. Following products will be manufacturing:

S.N.	Product (s)	Production Capacity (MTPM)		
		Existing	Proposed	Total
1.	Melamine Formaldehyde Resin	15	1185	1200
2.	Phenol Formaldehyde Resin	32	1568	1600
3.	Urea Formaldehyde Resin	--	1000	1000

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during November, 2013-December, 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (47 µg/m³ to 72 µg/m³), PM_{2.5} (13 µg/m³ to 25 µg/m³), SO_x (10 µg/m³ to 26 µg/m³) and NO_x (11 µg/m³ to 31 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.53 µg/m³, 2.68 µg/m³ and 0.64 µg/m³ with respect to PM₁₀, SO₂ and NO_x. The resultant concentrations are within the NAAQS.

Bagfilter followed by water scrubber will be provided to coal/lignite/wood fired boiler & Thermic fluid heater to control particulate emissions. Bagfilter will be provided to sanding machines. Methanol recovery system will be installed to kraft dryer and design dryer. DG set (415 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Total water requirement from ground water source will be increased from 17.71 m³/day to 23.73 m³/day after expansion. Industrial effluent generation will be increased from 6.86 m³/day to 14.32 m³/day after expansion. Industrial effluent will be treated in ETP with oxidation process method followed by evaporator. Condensate from evaporator will be recycled/reused in process. No effluent will be discharged outside the plant premises. ETP sludge will be sent to TSDF. Resin waste will be sent to common incineration facility. Used oil/spent oil will be sent to registered recyclers. Fly ash will be sent to brick manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 24th June, 2014. The issues were raised regarding ground water quality, waste generation, employment etc. 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 recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i) Regular monitoring of Volatile Organic Compounds (VOCs) should be carried out.
- ii) Bag filter along with stack of adequate height should be installed to coal/lignite/wood fired boiler & Thermic fluid heater to control particulate emissions.
- iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored.
- iv) Wet scrubber should be provided to control process emissions. Methanol should be recovered from the process area.
- v) Total fresh water requirement from ground water source should not exceed 24 m³/day and prior permission should be obtained from the CGWA/SGWA.
- vi) Industrial effluent will be treated in ETP based on oxidation process followed by evaporation to achieve zero discharge. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.
- viii) Green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix) Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- x) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 24th June, 2014 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.

- xi) At least 2.5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

34.9.6 Expansion of Bulk Drug Unit (from 0.442 MTPM to 22.175 MTPM) at Plot No.104, Village Dumral, Tehsil Nadiad, District Kheda, Gujarat by M/s Envee Drugs Pvt. Ltd. – reg. EC

The project proponent and their consultant (M/s San Envirotech Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 36th Meeting of the Expert Appraisal Committee (Industry) held during 11th to 12th June, 2012 for preparation of EIA-EMP report. All the synthetic organic chemicals industry (bulk drugs) located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Envee Drugs Pvt. Ltd. has proposed for expansion of Bulk Drug Unit (from 0.442 MTPM to 22.175 MTPM) at Plot No.104, Village Dumral, Tehsil Nadiad, District Kheda, Gujarat. The total area of the premises is 8303 sqm and the proposed expansion will be in the same premises. There will not be any additional land requirement for the proposed expansion. The cost of the proposed expansion project will be 1.35 crore. Out of which, Rs. 0.22 crore will be utilized for the Environment protection measures as capital investment and around 0.03 crore as recurring cost per annum. It is reported that no national park/wildlife sanctuary/reserve forest is located within 10 km distance. Details of existing and proposed products are as given below:

S. N.	Name of Product	Existing Quantity in MT/month	Total Proposed Quantity in MT/Month
1.	Erythromycin stearate	0.192	8.0
2.	Roxithromycin	0.100	0.8
3.	Erythromycin Estolate	0.150	3.0
4.	Erythromycin	--	0.5
5.	Erythromycin Ethyl Succinate	--	3.0
6.	Azithromycin	--	6.0
7.	Clarithromycin	--	0.6
8.	Betamethasone Valerate	--	0.025
9.	Betamethasone Di Propionate	--	0.050
10.	Clobetasole Propionate	--	0.050
11.	Beclomethasone Di Propionate	--	0.025
12.	Betamethasone Sodium Phosphate	--	0.025
13.	Dexamethasone Sodium Phosphate	--	0.050
14.	Mometasole	--	0.025
15.	Prednisolone Sodium Phosphate	--	0.025
Total		0.442	22.175

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during January, 2013-March, 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (43.1 µg/m³ to 82.6 µg/m³), SO₂ (9.9 µg/m³ to 21.9 µg/m³) and NO_x (11.2 µg/m³ to 23.9 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.897 µg/m³, 0.193 µg/m³ and 0.129 µg/m³ with respect to SPM, SO₂ and NO_x. The resultant concentrations are within the NAAQS. Stack of adequate height will be

provided to LDO/HSD fired boiler/thermic fluid heater. Water requirement from ground water source will be increased from 1.775 m³/day to 19.5 m³/day after expansion. Effluent generation will be increased from 0.175 m³/day to 5.65 m³/day after expansion and treated in ETP followed by evaporator. Condensate from evaporator will be recycled/reused for cooling tower make up.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 5th April, 2014. The issues raised were regarding air pollution, safety, wastewater management, local employment, greenbelt etc. 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 EIA/EMP report satisfactory and suggested to stipulate following specific conditions alongwith other environmental conditions while considering for accord of environmental clearance:

- i) The levels of PM₁₀, SO₂, NO_x and VOC should be monitored in ambient air.
- ii) 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.
- iii) Total fresh water requirement from ground water source should not exceed 19.5 m³/day and prior permission should be obtained from the CGWA/SGWA.
- iv) Effluent shall be treated in the ETP followed by evaporator. Condensate shall be recycled/reused for cooling tower make up. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.
- v) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- vi) 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.
- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire-fighting facilities in case of emergency.
- viii) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- ix) At least 2.5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner

34.9.7 Product Mix Change at existing Epichlorhydrin Plant, Manali, Chennai, Tamil Nadu by M/s Tamil Nadu Petroproducts Ltd. – reg. EC

The project proponent and their consultant (En-Vision Enviro Engineers Pvt. Ltd. and Hubert Enviro Care System) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 14th Meeting of the Expert Appraisal Committee (Industry) held during 19th to 20th December, 2013 for preparation of EIA-EMP report. All the petrochemical based processing units located inside the notified industrial area/estate are listed at S.N. 5(e) under category 'B'. However, applicability of general condition due to project location within 10 km distance from CPA, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Tamil Nadu Petroproducts Ltd. has proposed for product mix change by adding propylene oxide in place of epichlorohydrin at existing Plant, Manali, Chennai, Tamil Nadu. TPL has established facilities to make Epichlorohydrin (ECH) in the year 1995. Which is used as a key material in the manufacture of epoxy resins, pesticides and pharmaceutical formulations. Total plot area is 38.72 acre. Cost of project is Rs. 12.96 Crore. It is reported that no wildlife sanctuary is located within 10 km distance. Project is located at 3.5 km away from sea. Water bodies such as Buckingham canal (0.5 Km), Surplus canal (0.02 Km), Saththankadu Lake (2.17 Km), Madhavaram Lake (3.35 Km), Kadapakkam Pan. Following products will be manufactured:

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

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during March- May, 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (51 µg/m³ to 60 µg/m³), PM_{2.5} (21 µg/m³ to 32 µg/m³), SO₂ (11.2 µg/m³ to 14.3 µg/m³) and NOx (14 µg/m³ to 25 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.414 µg/m³, 22.3 µg/m³ and 4.14 µg/m³ with respect to SPM, SO₂ and NOx. The resultant concentrations are within the NAAQS. Existing greenbelt area is 16187.43 m² and additional area earmarked for greenbelt is 32374.85 m². Caustic scrubber will be provided to control chlorine emissions. Online chlorine monitoring system in the existing scrubber stack is available. Dust scrubber will be installed in the lime plant. LDAR program will be implemented. Total water requirement will be 2150 m³/day of which fresh water requirement from CMWSSB will be 1650 m³/day and remaining water requirement (500 m³/day) will be met from treated effluent. Effluent generation will be 1805 m³/day and treated in the ETP comprising primary and secondary facilities. Treated effluent is disposed to sea. Sewage is treated in the STP. Treated effluent will be used for horticulture purpose. ETP sludge will be sent to TSDF. Used oil will be sent to authorized recycler/re-processors. The Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006 as project is located in the notified industrial area.

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

- i. Caustic scrubber shall be provided to control Cl₂emissions. 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.
- ii. 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 TNPCB.
- iii. All necessary steps should be taken for monitoring of chlorine as well as VOCs in the proposed plant.
- iv. A proper Leak Detection and Repair (LDAR) Program shall be prepared and implemented as per the CPCB guidelines.
- v. Alarm for chlorine leakage if any in the liquid chlorine storage area is provided alongwith automatic start of the scrubbing system.
- vi. Total water requirement from CMWSSB water supply should not exceed 1650 m³/day and prior permission should be obtained from the Competent authority.
- vii. As proposed, industrial effluent should be treated in ETP. Treated effluent from ETP should be discharged to sea after conforming to the standards prescribed for the effluent discharge and obtaining permission from the GPCB. Domestic sewage should be treated in STP.
- viii. Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed.
- 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 for management of hazardous wastes and prior permission from SPCB 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.
- x. As proposed, greenbelt should be developed at least 48561 m²areain 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.
- 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.

34.9.8 Synthetic Organic Chemical Manufacturing Unit at Sy. No. 297 (part), village Jagdevpur, Mandal Jagdevpur, district Medak, Andhra Pradesh by M/s Elite Pharmaceutical Pvt. Ltd. - reg. EC

The project authorities and their consultant (Team Labs and Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 11th Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 26th–27th August, 2013 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised at Central.

M/s Elite Pharmaceutical Pvt. Ltd. have proposed for setting up of Synthetic Organic Chemical Manufacturing Unit at Sy. No. 297 (Part), Village Jagdevpur, Mandal Jagdevpur, District Medak, Andhra Pradesh. Total plot area is 6.5 acres of which greenbelt will be developed in 2.15 acres of land. Cost of project is Rs. 7.0 Crore. No forest land is involved. Daulapuram RF (1.2 Km), Kondapuram RF (4.5 Km), Singaram RF (5.7 Km) are located within 10 Km distance. No national park/sanctuary is located within 10 Km distance. Following products will be manufactured:

S.N.	Product	Capacity (kg/day)
1	Balaglitazone	50
2	Duloxetine	15
3	Eprosartana Mesylate	250
4	Lansoprazole	30
5	Olanzapine	100
6	Ritanovir	100
7	Simvastatin	100
8	Terbinafine HCl	400
9	Valgancyclovir	100
10	Sertraline Hydrochloride	200
11	Pragabalin	400
12	Voriconazole	100
13	Sumatriptan	50
	Total (Only 4 products will be in production at any given time)	1250

List of By Products

S.N.	By Product	Capacity (kg/day)
1	30% Potassium Chloride Solution	758

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during March-June, 2013 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (28 µg/m³ to 48 µg/m³), PM_{2.5} (10 µg/m³ to 19 µg/m³), SO₂ (5 µg/m³ to 11 µg/m³) and NO_x (6 µg/m³ to 13 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.28 µg/m³, 1.21 µg/m³ and 2.02 µg/m³ with respect to SPM, SO₂ and NO_x. The resultant concentrations are within the National Ambient Quality

Monitoring Standards (NAAQM). Multicyclone separator alongwith bag filter with a stack height of 30m will be installed for controlling the Particulate emissions from the proposed Coal fired boiler (1x 2TPH &3TPH). Scrubber will be provided to control process emissions viz. HCl, NH₃ and SO₂. DG set (1x500 KVA) will be installed. Total water requirement will be 102 m³/day of which fresh water requirement will be 55 m³/day and remaining from recycled water. Industrial effluent generation will be 47 m³/day. Effluent will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) followed by RO. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Inorganic & evaporation salt and ETP sludge will be sent to Treatment Storage Disposal Facility (TSDF) for hazardous waste. Fly ash will be sold to brick manufacturers. Waste oil and used batteries will be sold to authorized recyclers/re-processors.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the AP Pollution Control Board on 31st January, 2014 under the Chairmanship of Additional District Magistrate. The issues raised during Public Hearing were regarding Zero effluent discharge, greenbelt, CSR, local employment, wastewater treatment etc. The committee was satisfied with the response of PP.

After detailed deliberations, the Committee, on the basis of the EIA-EMP provided and presentation made recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/APPCB guidelines.
- ii. Scrubber shall be provided 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 shall go beyond the prescribed standards.
- 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 APPCB. Odour management plan shall be implemented.
- iv. Total fresh water requirement from ground water source shall not exceed 55 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- v. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.
- vi. All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

- vii. As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- viii. 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 APPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.
- ix. Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- x. Solvent management shall be as follows :
 - Reactor shall be connected to chilled brine condenser system
 - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents shall be stored in a separate space specified with all safety measures.
 - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
- xi. Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xiii. All the issues raised during the Public Hearing/consultation meeting held on 31st January, 2014 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiv. Company needs to bear operation & maintenance cost of the RO to be provided for drinking water for villages.
- xv. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xvi. As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

Reconsideration of EC

34.9.9 Bulk drug manufacturing unit at Plot Nos.130 & 131, Raichur Growth Centre Industrial Area, Chiksugur Village, Raichur District, Karnataka by M/s Shruti Drugs Pvt .Ltd – reconsideration of EC

The project proponent and their consultant (Rightsource Industrial Solutions Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 7th Meeting of the Expert Appraisal Committee (Industry) held during 4th to 5th April, 2013 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, project site is located within 10 Km of interstate boundary (Andhra Pradesh & Karnataka) and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s Shruti Drugs Private Limited have proposed to set up a bulk drug manufacturing unit at Plot Nos.130 & 131, Raichur Growth Centre Industrial Area, Chiksugur Village, Raichur District, Karnataka. Total plot area is 8086 m². Cost of project is Rs. 10 Crores. It is reported that no National Park, Wildlife Sanctuary is exists within 10 km radius of the project site.

S.No	Name of the product	Application	Production/ Month in KG.
1.	Pregabalin	Neuropathic Pain Agent	2000.00
2.	Rosuvastatin Calcium	Anti lipemic	2000.00
3.	Bipiridine Hydrochloride	Anti Parkinson	1000.00
4.	Donepezil Hydrochloride	Anti-Alzheimer's agent	2000.00
5.	Domperidone	Anti emetic	1000.00
6.	Carisoprodole	Skeletal Muscle Relaxant	3000.00
7.	Topiramate	Anti convulsant	2000.00
8.	Valsartan	Anti convulsant	2000.00
9.	Moxifloxacin HCl	Anti-infective	1000.00
10.	Levitiracetam	Anti convulsant	2000.00
11.	Metformin Hydrochloride	Anti diabetic	15000.00
TOTAL			33000.00

Ambient air quality monitoring has been carried out at 8 locations during November, 2013- January, 2014 and the data submitted indicated: PM₁₀(40.10 to 59.4 µg/m³), PM_{2.5} (8.2 to 20.4 µg/m³), SO₂ (8.1 to 12.4 µg/m³) and NO_x (12.10 to 16.50 µg/m³). AAQ study for point source emissions indicates that the maximum incremental GLCs would be 0.97 µg/m³, 2.8µg/m³and 3.5 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The resultant concentrations are within the National Ambient Quality Monitoring Standards (NAAQM).

Bagfilter will be provided to coal fired boiler (3.0 TPH) to control particulate emissions. Scrubber will be provided to control process emissions viz. HCl, SO₂ and Ammonia. Total water requirement will be 97 m³/day. Out of which fresh water requirement from KIADB water supply will be 58 m³/day and remaining quantity will be met from treated effluent. Total effluent generation will be 39.17 m³/day. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporator (MEE) and agitated thin film drier (ATFD). Low TDS effluent stream will be treated in ETP followed by RO. No effluent will be discharged outside the plant premises. Process organic residue, solvent residue and spent carbon will be sent to TSDF/cement industries. Process

Inorganic residue, evaporation salts and ETP sludge will be sent to TSDF. Fly ash will be sent to brick manufacturers.

The Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006 as project is located in the notified industrial area.

After detailed deliberations, the Committee, on the basis of the additional information provided and presentation made recommended the project for environmental clearance and stipulated following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- ii. Scrubber shall be provided 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 shall go beyond the prescribed standards.
- 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 SPCB. Odour management plan shall be implemented.
- iv. Total fresh water requirement from KIADB water supply shall not exceed 58 m³/day and prior permission shall be obtained from the Competent Authority.
- v. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.
- vi. All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- vii. As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- viii. 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 SPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.
- ix. Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- x. Solvent management shall be 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 where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
 - xii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
 - xiii. As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

34.9.10 Expansion of Synthetic Organic Chemical manufacturing unit at Plot Nos.C-1-B/2805 & 2806, GIDC, Sarigam, District Valsad, Gujarat by M/s OM Titanates – reconsideration of EC

Proposal was considered in the 19th meeting held during 28th-30th May, 2014. But could not be appraised due to the Ministry's OM No. J-11013/36/2014-IA-I dated 16th May, 2014, requirement of public hearing. Further, MoEF&CC vide OM No. J-11011/36/2014-IA II (I) dated 10th December, 2014 has clarified that the exemption from public consultation, as provided under para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006 is applicable to the projects or activities or units located within the industrial Estates or parks, which were notified prior to 14.09.2006, i.e. the EIA Notification, 2006 coming into force

The project proponent and their consultant (M/s Precitech Laboratories Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 3rd Meeting of the Expert Appraisal Committee (Industry) held during 3rd– 5th December, 2012 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State level. However, applicability of general condition due to project location within Critically Polluted Area, proposal is treated as category 'A' and appraised at Central Level.

M/s OM Titanates has proposed for expansion of Titanates & Di-Isopropyl Ethyl Amine (DIPEA) Manufacturing Unit at Plot Nos. C-1-B/2805 & 2806, GIDC, Sarigam, District Valsad, Gujarat. Total plot area is 1406 m². Total cost of project is Rs. 81.85 Lakhs. Damanganga canal, river Darotha and River Damanganga is flowing at a distance of 10 km. Following products will be manufactured:-

S.N.	Name of Product	Quantity (TPM)		
		Existing Scenario	Proposed Scenario	
Main Products				
1	Tetra Butyl Titanate	Blending	50	100
2	Tetra Iso Propyl Titanate			
3	TPT-20 B			
4	Tetra2-Ethyl Hexyl Titanate			
5	Titanium Acetyl Acetonate			
6	Ethyl Titanate			
7	Di-isopropyl ethyl amine	Nil	15	
8	Ammonium Chloride	47	94	
9	Sodium/potassium Ethyl Sulphate	Nil	22	
	Total	50	231	

Ambient air quality monitoring has been carried out at 6 locations during January, 2013 and the data submitted indicated: PM₁₀(54 to 92 µg/m³), SO₂ (17 to 30 µg/m³) and NO_x (20 to 31 µg/m³). AAQ study for point source emissions indicates that the maximum incremental GLCs would be 0.00036 µg/m³, 0.00001µg/m³and 0.0045µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The resultant concentrations are within the National Ambient Quality Monitoring Standards (NAAQM). Traces of Ammonia & HCl generated from the manufacturing of TBT, TIPT & ET are scrubbed in scrubber. Total fresh water requirement from GIDC water supply will be increased from 4 m³/day to 13.5 m³/day after expansion. Cooling tower blow down will be generated as industrial effluent. The domestic waste water generated will be disposed through Soak pit / Septic tank. The committee suggested to treated domestic effluent in the STP and treated sewage should be reused/recycled for horticulture purpose. Used oil will be sold to registered recycler. Ammonium chloride is currently sent to other Industries through manifest system. After proposed expansion project, Ammonium chloride will be added as product in product list & will be sold as product.

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

- i. National Emission Standards for Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3rd February, 2006 and amended time to time shall be followed by the unit.
- ii. Scrubber shall be provided to control process emission viz. Ammonia & HCl. 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.

- iii. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored. The emissions should conform to the limits stipulated by GPCB.
- iv. Fresh water requirement from GIDC water supply should not exceed 13.5 m³/day.
- v. Trade effluent should be treated in ETP. Sewage shall be treated in the STP. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.
- vi. The Company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary movement) Rules, 2008 for management of hazardous wastes and prior permission from SPCB 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.
- vii. Green belt should be developed at least in 160 m² 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.
- viii. All the recommendations made in the risk assessment report should be satisfactorily implemented.
- ix. Detailed plan for Occupational health and surveillance of the workers should be exercised on a regular basis and records maintained as per the Factories Act.

34.9.11 Active Pharmaceutical Ingredients & Intermediate Manufacturing Unit at Plot No.211 & 213, GIDC, Sarigam, Tehsil Umargam, District Valsad, Gujarat by M/s Aarti Drugs Ltd – reconsideration of EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 30th meeting held during 22nd – 23rd December, 2014 and the Committee deferred the proposal for want of following addl. information:

- (i) Conduct ambient air quality monitoring w.r.t. Methane and Non Methane Hydrocarbon, CO, VOC for one month period.
- (ii) Repeat water quality monitoring for surface water.
- (iii) Layout map of proposed greenbelt in the plan covering 33% of the project area.

PP vide letter dated 03.02.2015 has submitted the addl. information. PP has submitted CO and HC data below Detectable Limit, which was not satisfactory. Therefore, the Committee recommended to conduct Hydrocarbon and CO data once again. The proposal is deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website. The matter will be discussed internally after receipt of monitoring data.

34.9.12 Distillery Plant capacity enhancement from 60 KLPD to 75 KLPD at Village Avapadu, Mandal Nallajerla, District West Godavari, Andhra Pradesh by M/s Aroma Biotech Pvt Ltd. – reg. Amendment in EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 30th meeting held during 22nd – 23rd December, 2014 and the Committee suggested them to submit form 1 along with pre-feasibility report. Environmental clearance was obtained vide MoEF letter no. J-11011/824/2007 IA-II (I) dated 11th July, 2008 for 60 KLPD grain based distillery along with CPP (1.5 MW). Further, amendment in EC was obtained vide MoEF letter no. J-11011/824/2007 IA-II (I) dated 3rd June, 2009.

Now, PP informed that the environmental clearance and its amendment for 60 KLPD plant, steam requirement has been presumed as 28 TPH. But after detailed engineering, actual steam requirement for 60 KLPD has been arrived as 19.6 TPH. This is resulting in significant loss of steam in condensing and thereby a coal loss of 25 TPD. In order to effectively utilize the steam, it has been proposed to enhance the capacity from 60 KLPD to 75 KLPD with 2.25 MW Cogeneration power plant. This capacity enhancement will be achieved without any additional coal, which is environmentally beneficial. PP also informed that :

- i. There is no air emissions & incremental GLCs.
- ii. No additional water requirement and in fact the actual water requirement is reducing from 1540 m³/day to 750 m³/day due to better recycling practices.
- iii. No increase in wastewater.
- iv. No additional storage of ash.
- v. No additional land requirement

The Committee exempted the EIA/EMP report preparation and public hearing under para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006. The Committee recommended the proposal for enhancement from 60 KLPD to 75 KLPD.

34.9.13 Grain and Molasses based Distillery Unit (60 KLPD), Co-generation Power Plant (28 MW), CPP (3 MW) and expansion of Sugar Plant (925 to 4750 TCD) at Khasra No. 1098, 1140, 1217, 1331, 1342, 1141, 1337, 1339, 1340, 72, 184, 1144, 1370, 1220, 1369, 932, 934, 1097, 485, 936, 1137, 133, 1138, Village & Tehsil Ryam, District Darbhanga, Bihar by M/s Tirhut Industries Limited – Environmental Clearance reg.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 2nd meeting held during 29th – 31st October, 2012 and the Committee recommended the proposal for environmental clearance. While processing the file, it was observed that the Sub Divisional Officer, Darbhanga has supervised and presided over the entire public hearing dated 18th May, 2012, who is below the rank of Additional District Magistrate. MoEF vide letter dated 13th March, 2013 has directed State Pollution Control Board to conduct fresh public hearing.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Bihar State Pollution Control on 11th July, 2014 under the chairmanship of Dy. Commissioner. The issues were raised regarding pollution control equipment, local employment, CSR etc. 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. Molasses and cane based distillery unit (60 KLPD) shall be operated for 160 days and grain based distillery (60 KLPD) shall be operated for remaining 150 days per annum.
- ii. As proposed, Electrostatic precipitator (ESP) alongwith stack of adequate height should be provided to boiler (1x135 TPH and 1x25 TPH) to control particulate emissions within 50 mg/Nm³.
- iii. Company shall follow good management practices viz. collection of waste yeast sludge from fermentation section in a closed system and proper disposal, reduced volume of effluent by adopting strategic approaches, closed drains carrying spent wash to the treatment units; minimization of fugitive emissions from anaerobic treatment; proper collection & handling of excess sludge generated from the anaerobic & aerobic treatment units; minimum retention of treated & untreated spent wash in the lagoons; effective composting of the spent wash by controlled effluent spraying through mechanical system to avoid spillages & over application, blending of sludge in correct proportion with press mud; and properly finished compost and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.
- iv. 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 ground water source shall not exceed 600 m³/day for distillery (Molasses/Grain), 550 m³/day for sugar unit and 1400 m³/day for cogeneration unit and prior permission for drawl of water should be obtained from the CGWA/SGWA.
- vi. Spent wash generation from molasses and grain should not exceed 10 KI/KI and 6 KL/KI of alcohol respectively. Spent wash from molasses based distillery should be concentrated in MEE to 60 % solids and sent to an incinerator boiler (25 TPH) for incineration to achieve zero discharge. Spent wash from the grain based distillery should be separated in decanter and then concentrated in MEE to concentrate the solids to 30 % followed by drying in a dryer to achieve zero discharge Spentlees, effluent from utilities and cogeneration unit should be treated in effluent treatment plant (ETP) and water quality of treated effluent should meet the norms prescribed by CPCB/SPCB and recycle/ reuse.
- vii. Spent wash shall 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 30 days.

- viii. Wastewater generation from the sugar unit shall not exceed 100 litres per tonne of cane crushed. Effluent from sugar unit should be treated in the effluent treatment plant.
- ix. As proposed, no effluent from sugar, distillery and co-generation power plant should be discharged outside the premises and Zero discharge shall be achieved.
- x. 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.
- xi. Bagasse/rice husk 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. 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 11th July, 2014 should be satisfactorily implemented.
- xvi.** Green belt should be developed in 33 % of plot area to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO. Thick green belt with suitable plant species should be developed around the proposed distillery to mitigate the odour problem.
- xvii. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Bhubaneshwar. Implementation of such program should be ensured accordingly in a time bound manner.

34.9.14 Agrochemical manufacturing unit (4000MTPA) at plot no. z- 12/1 (SEZ-part-1), survey no. 402/p, 407/p, 486/p, 487/p, 488, 489, 489, 490, 491, 492/p, Dheh SEZ, Bharuch, Gujarat by M/s Indofil Industries Ltd. - reg.EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 32th meeting held during 20th– 21st January, 2015 and the Committee desired that PP may explain status of existing unit along with environmental statements in the next meeting.

After deliberation, the Committee noted that products/process used in the existing plants are different than the proposed one. Issues connected with the proposed plant have already been resolved to satisfaction of the Committee.

After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering accord of environmental clearance:

- i. National Emission Standards for Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3rd February, 2006 and amended time to time shall be followed by the unit.
- ii. Multicyclone separator followed by bagfilter shall be provided to coal fired boiler to control particulate matter.
- iii. Scrubber will be provided to control process emissions viz. HCl, HBr, Cl₂, SO₂ and NH₃. 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.
- iv. 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%.
- v. All necessary steps should be taken for monitoring of VOCs in the plant.
- vi. A proper Leak Detection and Repair (LDAR) Program for pesticide industry shall be prepared and implemented as per the CPCB guidelines.
- vii. Total water requirement from Gujarat Water Infrastructure water supply should not exceed 415 m³/day and prior permission should be obtained from the Competent Authority.
- xv. Industrial effluent generation should not exceed 513 m³/day. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.
- 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 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 fire fighting facilities in case of emergency.

- ix. As proposed, ETP sludge and inorganic waste should be sent to TSDF site. High calorific value waste such as spent organic should be incinerated.
- x. All the commitment made regarding issues raised during the public hearing/ consultation meeting held on 3rd September, 2013 shall be satisfactorily implemented.
- xi. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xii. The company should make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.
- xiii. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiv. As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

34.9.15 Expansion of Refinery from 9MMTPA to 11.25MMTPA of HPCL-Mittal Energy Ltd Village Phulokheri Tehsil, Bhatinda, Punjab by M/s HPCL-MITTAL ENERGY LIMITED - reg EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 32th meeting held during 20th– 21st January, 2015 and the Committee deferred the proposal for want of following addl. information:

- i) Sulphur balance chart to be rechecked.
- ii) Measures to be taken to bring down incremental sulphur dioxide.
- iii) A Note on the public hearing issues and commitment made on the issued to be submitted.
- iv) ESR plan considering 2.5 % of the project cost to be submitted. Next 2 years plan to be prepared how to spend Rs. 20 Crore.

In response PP informed that Presently, SO₂ emission is 9.71 TPD (4.77 TPD from Refinery heaters / process stacks, and 4.94 TPD from CPP), against the Environment Clearance (EC) limit of 24 TPD. Incremental SO₂ emission due to the expansion projects is 11.93 TPD. HEMEL will make all attempts to enhance the sulfur capture efficiency in the proposed CFBC boiler from 91% while adjusting the mole-ratios of lime-stone (dry flue gas desulfurization unit), to achieve at least 93 % sulfur removal. SO₂ emission from the refinery will be 23.64 TPD post expansion. Stack height for one new stack will be 130 meters for the CFBC boilers which will be in addition to the existing stack of CPP. The GLC of SO₂ will be 39 µg/m³ when considering sulphur capture of 93% in the CFBC with stack height of 130m.

Regarding public hearing issues, PP informed that HMEL has allocated around Rs. 70 Crore in the EMP for pollution Control Measures. Regarding odour control, PP has already implemented various odour control measures and Rs. 20 lakhs budget are allocated in the EMP budget. Regarding safety, HMEL has allocated around Rs. 10 Crore in the EMP for further strengthening safety control. Based on the recommendation given by the EAC committee, the capital CSR budget of 2.5% of the total capital cost has been embarked for the local Community development under CSR Budget amounting Rs. 54 Cr. for a period of 10 years in which 20 Cr will be in next two (2) years.

After detailed deliberations, the Committee recommended the project for environmental clearance and stipulated the following specific conditions along with other environmental conditions while considering accord of environmental clearance:

- i. M/s HPCL-MITTAL ENERGY LIMITED 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 SO₂, NO_x and CO of all the stacks shall be carried out. Low NO_x burners shall be installed.
- iii. ESP alongwith stack of adequate height shall be provided to pet coke/coal fired boiler. Limestone will be injected to pet coke/coal fired boiler to control SO₂ emission.
- iv. 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.
- v. SO₂ emissions after expansion from the plant shall not exceed 23.64 TPD 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 H₂S emissions.
- vi. 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.
- vii. Total water requirement from Kotla Canal after expansion shall not exceed 2420 m³/hr and prior permission shall be obtained from the competent authority. Industrial effluent generation will be 720 m³/hr. and treated in the effluent treatment plant. Treated effluent shall be recycled/reused within the factory premises. Domestic sewage shall be treated in sewage treatment plant (STP).
- viii. Acoustic enclosure /silencer should be installed wherever it is possible.

- ix. All the commitment made regarding issues raised during the public hearing/consultation meeting held on 14thOctober, 2014 shall be satisfactorily implemented.
- x. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- xi. The company should make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.
- xii. At least 2.5 % (Rs. 54 Crore) of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiii. As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

LIST OF PARTICIPANTS OF EAC (Industry) IN 34th MEETING OF EAC (INDUSTRY) HELD ON 16-17th February, 2015

S.N.	Name	Designation	Attendance
1	Shri M. Raman	Chairman	A
2	Shri R.K. Garg	Vice-Chairman Acting Chairman	P
3	Prof. R.C. Gupta	Member	A
4	Dr. Prem Shankar Dubey	Member	P
5	Dr. R.M. Mathur	Member	P
6	Dr. S. K. Dave	Member	P
7	Dr. B. Sengupta	Member	P
8	Shri Rajat Roy Choudhary	Member	A
9	Dr. S.D. Attri	Member	P
10.	Dr. Antony Gnanamuthu	Member	P
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjana Raghunath Raje	Member	P
MOEF Representatives			
13.	Shri Lalit Bokolia	Additional Director & MS Industry-(2)	P
14.	Shri A.N.Singh	Joint Director	P