

**MINUTES FOR 30<sup>th</sup> RECONSTITUTED EXPERT APPRAISAL COMMITTEE (INDUSTRY-2) HELD DURING 22<sup>nd</sup> – 23<sup>rd</sup> DECEMBER , 2014**

**VENUE:** Teesta Hall, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhawan Aliganj, Jorbagh Road, New Delhi -110003.

**Time : Meeting to be held on 10: 00 AM**

**30.1** Opening Remarks of the Chairman

**Time : 10: 00 - 10: 30 AM**

**30.2** Confirmation of the Minutes of the 26<sup>th</sup> Reconstituted Expert Appraisal Committee (Industry-2) held during 29<sup>th</sup> – 30<sup>th</sup> October, 2014.

**22<sup>nd</sup> December, 2014**

**1<sup>st</sup> Session: Time: 10.30 AM**

**30.3 Environmental Clearance**

**30.3.1** Expansion of Specialty Chemicals Plant located at Sy. No. 295, Village Lunej, TalukaKhambhat, District Anand, Gujarat by M/s Bromchem Lab. Pvt. Ltd.–reg. Environmental Clearance

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 13<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 18<sup>th</sup>–20<sup>th</sup> November, 2013 for preparation of EIA-EMP report. All the Synthetic Organic Chemicals Manufacturing Unit located outside the notified industrial area are listed at S.N. 5(f) under Category 'A' and appraised at the Central level.

M/s Bromchem Lab. Pvt.Ltd. has proposed for expansion of Specialty Chemicals Plant at Sy. No. 295, Village Lunej, TalukaKhambhat, District Anand, Gujarat. Existing plot area is 6981 m<sup>2</sup> and no additional land is required. Cost of project is Rs. 4.5 Crore. It is reported that no national park/wildlife sanctuary/reserve forest is located within 10 km distance. Water body such as Nareshwar lake ( 4.0 Km south), Sea ( Gulf of Khambhat), Malasoni pond( 4.24 Km), Neja Pond (2.36 Km), Lunej pond (2.66 Km) and canal (1.70 Km) are located within 10 Km distance. Following products will be manufactured:

S. N.	Product	Existing Capacity (MT/Month)	After Proposed Expansion Capacity (MT/Month)
1.	Potassium chloride	400 Max. 1 product	400 Max. 1 product
2.	Calcium chloride		
3.	Barium chloride		
4.	Zinc chloride		

5.	Potassium bromated	100	100
6.	Sodium bromated	Max. 1 product	Max. 1 product
7.	Potassium bromide	70 Max. 1 product	70 Max. 1 product
8.	Sodium bromide		
9.	Calcium bromide		
10.	Ammonium bromide		
11.	Sodium carbonate	100	100
12.	Potassium carbonate	Max. 1 product	Max. 1 product
13.	Sodium phosphate	300 Max. 1 product	300 Max. 1 product
14.	Potassium phosphate		
15.	Dicalcium phosphate		
16.	Tricalcium phosphate		
17.	Sodium sulphate	200 Max. 1 product	200 Max. 1 product
18.	Potassium sulphate		
19.	Copper sulphate		
20.	Zinc sulphate		
21.	Chloroacetyl chloride	--	80
22.	Benzoyl chloride	--	310
23.	Pivaloyl chloride	--	40
24.	Propionyl chloride	--	80
25.	2-chloropropionyl chloride	--	40
26.	Butyryl chloride	--	40
27.	Isobutyryl chloride	--	40
28.	4-Chlorobenzoyl chloride	--	40
29.	2-chlorobenzoyl chloride	--	40
30.	Velaryl chloride	--	40
31.	3-chloropropionyl chloride	--	40
32.	4-chlorobutyryl chloride	--	40
33.	4-methoxybenzoyl chloride	--	25
34.	3-methoxybenzoyl chloride	--	25
35.	3-chlorobenzoyl chloride	--	25
36.	2,3-Dichlorobenzoyl chloride	--	25
37.	2,4-Dichlorobenzoyl chloride	--	25
38.	3,4-Dichlorobenzoyl chloride	--	25
39.	3,5-Dichlorobenzoyl chloride	--	25
40.	4-methylbenzoyl chloride	--	25
41.	2-methylbenzoyl chloride	--	25
42.	Isophthaloyl chloride	--	20
43.	N-butyl chloride	--	20
44.	Isobutyl chloride	--	20
45.	N-Hexyl chloride	--	20
46.	Propiophenone	--	20
47.	3-chloropropiophenone	--	20
48.	Benzophenone	--	20
49.	4-chlorobenzophenone	--	20
50.	2,4-dichloroacetophenone	--	20

51.	Valarophenone	--	20
52.	Trityl chloride	--	50
53.	Acetanilide	--	20
54.	Triethylamine hydrochloride	--	21
55.	2,4,6-Trichloropyrimidine	--	20
<b>Total</b>		<b>1170</b>	<b>2536</b>

#### By-Products

Sr. No.	Product	Existing Capacity (MT/Month)	Proposed Capacity (MT/Month)
1.	HCl (30 % )	--	872
2.	Sodium Bisulfite	--	1772
3.	Aluminium Chloride	--	396

PP informed that the existing unit is for manufacturing of inorganic products. For which consent to establish has been obtained from GPCB vide letter no. GPCB/AND-267/ID-39010/132320 dated 13.12.2012.

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during January-March, 2014 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (58 µg/m<sup>3</sup> to 75 µg/m<sup>3</sup>), PM<sub>2.5</sub> (40 µg/m<sup>3</sup> to 52 µg/m<sup>3</sup>), SO<sub>2</sub> (10 µg/m<sup>3</sup> to 14µg/m<sup>3</sup>) and NOx (8.0 µg/m<sup>3</sup> to 12 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.65 µg/m<sup>3</sup>, 0.85 µg/m<sup>3</sup> and 1.352 µg/m<sup>3</sup> with respect to PM, SO<sub>2</sub> and NOx. The resultant concentrations are within the National Ambient Quality Monitoring Standards (NAAQM). Cyclone separator alongwith dust collector will be provided to agro waste/coal fired furnace/thermopack boiler/ steam boiler to control particulate emissions. The Committee suggested to install bagfilter instead of dust collector for better efficiency. Two stage scrubber will be provided to process vent to control process emissions viz. HCl and SO<sub>2</sub>. Fresh water from ground water source will be increased from 4.0 m<sup>3</sup>/day to 45 m<sup>3</sup>/day after expansion. Effluent generation will be increased from 1.3 m<sup>3</sup>/day to 8.8 m<sup>3</sup>/day after expansion. Effluent will be treated in the effluent treatment plant . PP has suggested two options for disposal of treated effluent i.e. (i) discharged into CETP or (ii) reuse to dilute the HCl, this will be used to produce calcium chloride for own consumption. The Committee suggested them for option II as no CETP is functional at that location so far. No effluent will be discharged outside the plant premises. Greenbelt will be developed in the area of 2303 m<sup>2</sup>. All the solvent storage will be connected to a vent system through chilled water condensers to prevent loss of solvents. ETP sludge will be sent to TSDF facility. Used oil will be sent to the authorized recyclers/re-processors. Distillation residue will be sent to common incineration facility or co-processing in cement industries.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 8<sup>th</sup> October, 2014. The issues were raised regarding CETP/ TSDF, rain water harvesting structure, greenbelt, local employment, measures to control odour 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) Multi-cyclone followed by bag filter should be provided to the agro waste/coal fired furnace/thermopack boiler/ steam 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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO and HCl should be monitored in ambient air.
- iii) Two stage chilled water/caustic scrubber should be provided to process vents to control HCl. Two stage scrubber with caustic lye media solution should be provided to process vents to control SO<sub>2</sub>. 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) Odour management plan shall be implemented.
- vi) Total fresh water requirement from ground water source should not exceed 45 m<sup>3</sup>/day and prior permission should be obtained from the CGWA/SGWA.
- vii) Industrial effluent shall be treated in ETP. Treated effluent shall be recycled/reused within the plant premises. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB. 'Zero' effluent discharge should be adopted and no effluent will be discharged outside the premises.
- viii) All the solvent storage tanks should be connected with vent condensers with chilled brine circulation.
- ix) 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.
- 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) 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.
- xii) Solvent management should be as follows :
  - Reactor should be connected to chilled brine condenser system
  - Reactor and solvent handling pump should have mechanical seals to prevent leakages.

- The condensers should be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
  - Solvents should be stored in a separate space specified with all safety measures.
  - Proper earthing should be provided in all the electrical equipment wherever solvent handling is done.
  - Entire plant where solvents are used should be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.
- xiii) 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.
- xiv) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 8<sup>th</sup> October, 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.
- xv) 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.

**30.3.2** Additional crude oil tanks (8 nos.) at Village Singach & Vadinar, Tehsil Lalpur and Khambhaliya, District Jamnagar, Gujarat by M/s Bharat Oman Refineries Limited-reg. EC.

The proposed project falls under S.N. 6(b) of the schedule i.e. all isolated storage & handling of hazardous chemicals under category 'B'. PP informed that environmental clearance letter no J-11011/32/94-IA II (I) dated 20<sup>th</sup> September, 1995 has been obtained for establishment of SPM and crude oil cross-country pipeline of Bharat Oman Refineries Ltd. considering integrated in nature, current project proposal is treated as category 'A' project. The Committee noted that EIA/EMP report is prepared by Annamalai University, which as per the current record, is not an accredited Consultant for activity 6 (b) or 4 (a) i.e. petroleum refining industry. Therefore, EIA-EMP report should be validated/prepared by the QCI accredited consultant for the respective sector. At this stage the Committee came to know the unit has obtained environmental clearance vide letter dated 20<sup>th</sup> September, 1995 for the existing unit. Therefore, the Committee recommended to submit a certified copy of the report of the status of compliance of the conditions stipulated in the environmental clearance of the project by the respective Regional Office of the MoEF&CC.

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

**30.3.3** Bulk Drug Manufacturing Unit at Sy No. 904, Village Jangampally, Mandal Bhiknour, District Nizamabad, Telangana by M/s. Basis Laboratories – reg. 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 7<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held

during 4<sup>th</sup> to 5<sup>th</sup> April, 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 level.

M/s. Basis Laboratories has proposed for setting up of Bulk Drug Manufacturing Unit at Sy No. 904, Village Jangampally, Mandal Bhiknoor, District Nizamabad, Telangana. Total plot area is 20948 m<sup>2</sup> of which greenbelt will be developed in 6379.6 m<sup>2</sup>. It is reported that no National Park, Wildlife Sanctuary is exists within 10 km radius of the project site. Biknoor Reserve Forest is located at a distance of 2.8 Km. Water bodies i.e. JangampalliCheruvu (1.5 Km) and TalamadlaCheruvu (3.17 Km) are located within 10 Km. The following products would be manufactured:

S.N.	Name of the product	Application	Production (Kg/Month)
1.	Fluconazole	Anti Fungal	2000.00
2.	Lamivudine	Anti- Hepatitis Agent	3000.00
3.	Losartan Potassium	Antihypertensive	2000.00
4.	Metformin Hydrochloride	Anti diabetic	15000.00
5.	PhenylpherineHCl	Anti tussive - Decongestant	1500.00
6.	Rabeprazole Sodium	Proton pump inhibitor	1000.00
7.	Telmisartan	Antihypertensive	2000.00
8.	Tramadol Hydrochloride	Analgesic	2000.00
9.	Zidovudine	Antiretroviral	2000.00
10.	Cetirizine Dihydrochloride	Anti Histaminic	1500.00
11.	Carbidopa	Anti parkinsonian	1000.00
	<b>TOTAL</b>		<b>33000.00</b>

Ambient air quality monitoring has been carried out at 6 locations during October, 2013- January, 2014 and the data submitted indicated: PM<sub>10</sub>(44.6 to 76.3 µg/m<sup>3</sup>), PM<sub>2.5</sub> (15.2 to 23.6 µg/m<sup>3</sup>), SO<sub>2</sub> (8.2 to 13.2 µg/m<sup>3</sup>) and NO<sub>x</sub> (10.6 to 18.10 µg/m<sup>3</sup>). AAQ study for point source emissions indicates that the maximum incremental GLCs would be 1.47 µg/m<sup>3</sup>, 4.16 µg/m<sup>3</sup> and 4.9µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> respectively.

Bagfilter will be provided to coal fired boiler (2.0 & 3.0 TPH) to control particulate emissions. Scrubber will be provided to control process emissions viz. SO<sub>2</sub> and Ammonia. Total water requirement will be 95.77 m<sup>3</sup>/day. Out of which fresh water requirement from ground water source will be 75.14 m<sup>3</sup>/day and remaining quantity 20.63 m<sup>3</sup>/day will be sourced from treated effluent. Total effluent generation will be 47.37 m<sup>3</sup>/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 deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Andhra Pradesh Pollution Control Board on 23<sup>rd</sup> July, 2014. The issues raised were regarding quantity of water consumption, greenbelt, local

employment, pollution from nearby steel unit, CSR etc. In response, PP has proposed roof top water harvesting. The unit will be give maximum employment to the local villagers and assured that they would involve them in socio-economic development of the area. 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, 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 75 m<sup>3</sup>/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 23<sup>rd</sup> July, 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.

**30.3.4** Resin Manufacturing Unit at Sy. No. 119/2, VeravalPadavala Road, Village Veraval, District Rajkot, Gujarat by M/s Neptune Laminates 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 12<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 30<sup>th</sup> September to 1<sup>st</sup> October, 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 Neptune Laminates Pvt. Ltd. have proposed for setting up of Resin Manufacturing Unit at Sy. No. 119/2, Veraval Padavala Road, Village Veraval, District Rajkot, Gujarat. Total plot area is 8397 m<sup>2</sup> of which greenbelt will be developed in 2833 m<sup>2</sup>. It is reported that no national park/ wildlife sanctuary/ reserve forest/ is located within 10 Km distance. River Gomta is flowing at a distance of 9.44 Km. Cost of project is Rs. 1 Crore. Following products will be manufactured:

S.N.	Product	Quantity
1	Phenol Formaldehyde Resin	700 MTPM
2	Melamine Formaldehyde Resin	300 MTPM
3	Urea Formaldehyde Resin	300 MTPM
4	H P Decorative Laminated Sheets	2,50,000 Nos./Month



Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 8 locations during December, 2013-February, 2014 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (62.8 µg/m<sup>3</sup> to 77.5 µg/m<sup>3</sup>), PM<sub>2.5</sub> (30.1 µg/m<sup>3</sup> to 43.8 µg/m<sup>3</sup>), SO<sub>x</sub> (10.1 µg/m<sup>3</sup> to 16.2 µg/m<sup>3</sup>) and NO<sub>x</sub> (16.3 µg/m<sup>3</sup> to 24.3 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 8.1 µg/m<sup>3</sup>, 0.28 µg/m<sup>3</sup> and 1.0 µg/m<sup>3</sup> with respect to SPM, SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS. Bagfilter will be provided to coal/white coal/agro waste fired boiler & Thermic fluid heater to control particulate emissions. DG set (320 KVA) will be installed. Scrubber will be provided to Dryer to control methanol. Total water requirement is 53.2 m<sup>3</sup>/day, of which fresh water requirement from ground water source will be 23.6 m<sup>3</sup>/day. Remaining water requirement will be met from treated effluent and condensate. Industrial effluent generation will be 18 m<sup>3</sup>/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 18<sup>th</sup> October, 2014. The issues were raised regarding employment, disposal of hazardous waste 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 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 23.6 m<sup>3</sup>/day and prior permission should be obtained from the CGWA/SGWA.
- vi) Industrial effluent will be treated in ETP based on photo fenton process followed by evaporation to achieve zero discharge. Water quality of treated effluent shall meet the norms prescribed by CPCB/SPCB.
- vii) The company should obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of

Hazardous wastes and prior permission from GPCB should be obtained for disposal of solid / hazardous waste in the TSDF. Measures should be taken for fire fighting facilities in case of emergency.

- viii) Green belt 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 18<sup>th</sup> October, 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.

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

The project proponent and their consultant (M/s Goldfinch Engineering Systems 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 11<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 26<sup>th</sup> to 27<sup>th</sup> August, 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, 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 noted that location of project is 7.9 Km away from the interstate boundary Maharashtra and Gujarat. However, as per amendment notification dated 25.06.2014, location of project within 5 km of interstate boundary will be treated as category 'A' project. Since project was submitted prior to amendment notification dated 25.06.2014 i.e. in April, 2014 and was further held up for want of public hearing. Therefore, the Committee at the request of PP agreed to appraise the project.

M/s Aarti Drugs Ltd. have proposed for setting up of Active Pharmaceutical Ingredients & Intermediate Manufacturing Unit at Plot No.211 & 213, GIDC, Sarigam, Tehsil Umargam, District Valsad, Gujarat. Damanganga River is flowing at a distance of 7.5 Km.

Total plot area is 8662 m<sup>2</sup> of which greenbelt will be developed in 2657 m<sup>2</sup>. Cost of project is Rs. 56.126 Crore. Following product will be manufactured:

Sl. No.	Product	Quantity (MTPM)
1	Metformin HCl	1200

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 8 locations during 1<sup>st</sup> October, 2013 – 30<sup>th</sup> November, 2013 and submitted baseline data indicate range of concentrations of PM<sub>10</sub> (52 µg/m<sup>3</sup> to 93 µg/m<sup>3</sup>), PM<sub>2.5</sub> (23 µg/m<sup>3</sup> to 49 µg/m<sup>3</sup>), SO<sub>2</sub> (14 µg/m<sup>3</sup> to 33 µg/m<sup>3</sup>) and NO<sub>x</sub> (17 µg/m<sup>3</sup> to 34 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.13 µg/m<sup>3</sup>, 0.11 µg/m<sup>3</sup>, 2.33 µg/m<sup>3</sup> and 2.053 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> respectively. Cyclone separator followed by bagfilter will be provided to coal/briquette fired boiler to control particulate emissions. Water requirement from GIDC Sarigram water supply will be 245 m<sup>3</sup>/day. Effluent generation will be 46 m<sup>3</sup>/day and treated in the ETP. Treated effluent will be evaporated. No effluent will be discharged outside the plant premises and 'Zero' effluent discharge concept will be followed. Fly ash will be sent to the brick manufacturers.

After deliberations, the Committee sought the following additional 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.

The proposal was deferred till the desired information is submitted. Thereafter, the proposal will be considered internally by the Committee. The above information shall be provided with the uploading of minutes on the website.

**30.3.6** Exploratory Drilling (6 Nos.) in the NELP Block CY-OSN-2009/2 in Cauvery Off-shore Sedimentary Basin, Off the Coast of Thoothukudi (Tuticorin), Tamil Nadu by M/s Oil India Ltd – reg. Environmental Clearance.

The project proponent and their consultant (SENES Consultants India Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded during the 12<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 30<sup>th</sup> – 1<sup>st</sup> October, 2013 for 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 Oil India Ltd. has proposed for carrying out drilling of six (6 Nos.) exploratory drilling wells in the block CY-OSN-2009/2, which is located in the offshore off the Thoothicudi in the Gulf of Mannar. Total block area is 1621 km<sup>2</sup>. The block has been awarded on by Government of India under Producing Sharing Contract (PSC) in NELP – VIII bidding ground to Oil India Ltd. with 50% participating interest as operator alongwith 50 % participation interest of Oil & Natural Gas Corporation Ltd. This project is an offshore exploratory drilling project. The nearest prospect area is located at an approximate aerial distance of 31 km from the nearest coastline. It is reported that the prospect areas within which wells are proposed to be drilled are located much beyond 12 Nm from LTL i.e. CRZ IV area. CRZ clearance is therefore not applicable for this project. Gulf of Mannar National Park (GoMNP) is located away from block boundary and none of the block area overlaps with GoMNP area. Gulf of Mannar Biosphere Reserve (GoMBR) boundary passes through block area located to

GoMBR and GoMNP boundary is prospect area 3 with approximate aerial distance of 8 Km and 21 Km respectively. Coordinates of CY-OSN-2009/2 Block are as given below:

Coordinates						
Point	Longitude			Latitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec.
A	78	50	00	09	04	19.51
B	79	22	11.05	09	04	19.51
C	79	14	09	08	49	21
D	79	03	45	08	47	56
E	78	52	07	08	44	02
F	78	50	00	08	44	5.77
A	78	50	00	09	04	19.51

Prospect Location	Approximate Distance from coast & CRZ line		
	Nearby Coast		12 Nm Line
	Km	Nm	Km
P-1	40	21.6	19
P-2	34	18.4	13
P-3	28	14.6	9
P-4	34	18.4	14
P-5	47	25.4	26
P-6	44	23.7	23

The average water requirement will be 20-30 m<sup>3</sup>/day for drilling including water requirement for mud preparation, washing and domestic activities. Wastewater generation from the drilling well is expected to be 9 m<sup>3</sup>/day. Blige fluids are a mix of sea water, petroleum products and other brackish material that settle to the bottom of a ship. The dirty oil will be periodically sent to shore in drums or special containers by supply vessels deployed for the purpose. Separated water can be directly discharged overboard, provided that oil content does not exceed 15 ppm as per MARPOL standards. Sewage will be treated in the mini STP. Produced water from well testing, if carried out, will be stored in storage tanks, gas will be flared and water will be discharged to sea after treatment. The Committee noted that oil and grease was found to be within range of 12 to 17 mg/L. The Committee was of the view that the data of oil and grease seems to be higher side in the sea water sample. After deliberations, the Committee sought the following additional information:

- (i) Recheck sea water quality in respect of oil and grease.
- (ii) Clarification to be submitted regarding the location of drilling wells whether they are outside the notified eco sensitive zone of Gulf of Mannar National Park (GoMNP) and Gulf of Mannar Biosphere Reserve (GoMBR).

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 response of the PP will be discussed internally without calling project proponent.

## **Lunch Break: 1:30 – 2:00 PM**

### **2<sup>nd</sup> Session: Time: 2.00 PM**

#### **Reconsideration for Environmental Clearance**

**30.3.8** Sugar Plant (5000 TCD to 7500 TCD) at Survey No. 19, 18A, Village Nellikuppam,, Tehsil Pantruti, District Cuddalore, Tamil Nadu by M/s EID Parry (India) Limited-reg.EC

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 26<sup>th</sup> meeting held during 29<sup>th</sup> - 30<sup>th</sup> October, 2014 for grant of Environmental Clearance. As per the minutes of the meeting, the Committee had sought the following documents from the proponent for reconsideration of the proposal:

- 1 Confirmation w.r.t. EIA-EMP report prepared by accredited Environmental Consultant.
- 2 Response to complaint of Shri T Arulselvam, Sipcot Area Community Environment Monitoring regarding partial compliance of TOR points in the EIA-EMP report.

PP vide letter dated 24.11.2014 has submitted the following:

- i) EIA is done by M/s K R S Enterprises which is accredited by QCI, NABET ( List of Accredited EIA Consultant Organizations – 171 as on November 07, 2014), S. N. 92). As per latest amended list their case is subjudice. They have obtained an interim order from Karnataka High Court and they are authorized to conduct EIA studies.
- ii) The response to complaint of Shri T Arulselvam, SIPCOT Area Community Environment Monitoring regarding partial compliance of TOR in the EIA-EMP report is submitted.

M/s EID Parry (India) Limited has proposed for expansion of Sugar Plant ( from 5000 TCD to 7500 TCD) at Survey No. 19, 18A, Village Nellikuppam,, Tehsil Pantruti, District Cuddalore, Tamil Nadu. Expansion will be done in the existing plot area of 7.48 acres and no additional land will be acquired. Out of which area earmarked for greenbelt is 1.96 acre. It is reported that no national park, wild life sanctuary/elephant/tiger reserve, migratory routes/wildlife corridor around 10 km radius of the project site. Existing unit comprises sugar plant crushing capacity (5000 TCD), Sugar refinery (120 Tons/day), Co-generation Power Plant (23 MW), Distillery Plant (75 KLPD). Sugar unit will be operated for 300 days.

Additionally, PAs informed to the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2012 – May, 2012 and submitted baseline data indicate range of concentrations of PM10 (39.6 µg/m<sup>3</sup> to 60.4 µg/m<sup>3</sup>), PM2.5 (21.6 µg/m<sup>3</sup> to 35.4 µg/m<sup>3</sup>), SO<sub>2</sub> (13.4 µg/m<sup>3</sup> to 19.2 µg/m<sup>3</sup>) and NO<sub>2</sub> (24.6 µg/m<sup>3</sup> to 33.6 µg/m<sup>3</sup>) respectively.

Total water requirement in the sugar unit will be increased from 3669 m<sup>3</sup>/day to 5493 m<sup>3</sup>/day after expansion. Out of which water available in sugarcane will be 5473 m<sup>3</sup>/day, which will be used in process. Remaining water requirement (20 m<sup>3</sup>/day) will be met from ground water source. Effluent generation will be increased from 372 m<sup>3</sup>/day to 572 m<sup>3</sup>/day after expansion. Effluent will be treated in the ETP. Treated effluent will be reused for horticulture/sugar cane farming purpose within plant premises. No effluent will be discharge outside the plant premises. ETP Sludge will be used as manure.

Committee deliberated upon the monitoring report dated 10<sup>th</sup> September, 2014 of Regional Office, MoEF&CC, Chennai on compliance of the conditions of the existing environmental clearance, which was submitted by the PP. It is reported that the most of the environmental conditions have been complied by the PP.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Tamil Nadu Pollution Control Board on 25<sup>th</sup> September, 2013. The issues were raised regarding discharge of effluent from distillery during monsoon period; 15 villages are dependent on the operation of the sugar mill; local employment, welfare measures etc. In response, PP informed that the unit does not dispose any effluent to the nearby water bodies. Effluent is treated in the ETP and reused for greenbelt development. ESP has been installed in the boiler to control particulate emissions. It was also informed that employment potential skilled, semi skilled and unskilled labour both during construction and operation phase of the project with specific attention to employment potential of local population as well as necessity for imparting any specialized skills to them to be eligible for such employment in the project on a long term basis. 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) The said unit is located within 5 Km (i.e. 4 Km) from Pannaiyar River. Therefore, the Unit shall obtain exemption from the Govt. of Tamil Nadu as per G O Ms No. 123 for carrying out expansion.
- ii) In plant, control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored and records shall be maintained. The emissions shall conform to the limits imposed by TN Pollution Control Board (TNPCB).
- iii) The company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the TNPCB. The levels of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and HC (Methane) in ambient air shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.
- iv) Total fresh water requirement from ground water source for sugar unit shall not exceed 20 m<sup>3</sup>/day.
- v) Wastewater generation from the sugar unit shall not exceed 572 m<sup>3</sup>/day. Effluent from sugar unit shall be treated in the effluent treatment plant (ETP). Water quality of treated effluent shall be monitored regularly. In any case, no wastewater/treated effluent shall be discharged into river/natural stream. Domestic effluent shall be treated in treatment plant.

- vi) As proposed, no effluent from sugar shall be discharged outside the premises and Zero effluent discharge concept shall be followed.
- vii) Baggage storage should be done in such a way that it does not get air borne or fly around due to wind. 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.
- viii) 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.
- ix) Green belt should be developed in 1.96 acres out of 7.48 acres to mitigate the effects of fugitive emissions all around the plant as per CPCB guidelines in consultation with the local DFO.
- x) 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.
- xi) All the commitments made during the Public Hearing / Public Consultation meeting held on 25<sup>th</sup> September, 2013 should be satisfactorily implemented and adequate budget provision should be made accordingly.
- xii) 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 Chennai. Implementation of such program should be ensured accordingly in a time bound manner.

### **30.4 Terms of Reference (TOR)**

#### **30.4.1 Synthetic Organic Manufacturing Unit at Sy. No. 32, Tupakulagudem Village, Tallapudi Mandal, West Godavari District, Andhra Pradesh by M/s. Vensar Laboratories Private 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 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. Vensar Laboratories Private Ltd. has proposed for setting up of Synthetic Organic Manufacturing Unit at Sy. No. 32, Tupakulagudem Village, Tallapudi Mandal, West Godavari District, Andhra Pradesh. Plot area is 7 acres, of which greenbelt will be developed in 2.5 acres. Cost of project is Rs. 6 crores. River Godavari is at a distance of 6.5 km from the plant site in East direction. The major forest in the study area is Karakapadu Reserve forest is at a distance of 9.4 km in Northwest direction to the plant site. The main approach road is Gopavaram to Saggonda road passing at a distance of 1 km from the plant site. The nearest human settlement from the site is Suraiahpet located at distance of 1.2 km

in South direction. It is reported that there are no ecologically sensitive areas like national parks, sanctuaries within 10 km radius of the site. Following products will be manufactured :

S.N.	Product name	Capacity	
		TPA	TPM
1	Tramadol hydrochloride	60.0	5.0
2	Ramipril	60.0	5.0
3	Carvedilol	60.0	5.0
4	Sertraline hydrochloride-	60.0	5.0
5	Citalopram hydro bromide	24.0	2.0
6	Ketrolac Tromethamine	60.0	5.0
7	Terbinafine hydrochloride	48.0	4.0
	<b>Total</b>	<b>372.0</b>	<b>31.0</b>

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

#### List of Utilities

S.No	Description	Capacity
1	Agro Waste Fired Boiler`	3 TPH
2	DG Set	250 KVA

Multicyclone separator will be provided to Agro waste Fired boiler (3 TPH). The committee suggested to install bagfilter instead of Multicyclone for better efficiency. DG set (250 KVA) will be installed as standby arrangement. Scrubber will be provided to control process emissions viz. HBr, HCl. The total water requirement will be 74.71 m<sup>3</sup>/day and same will be met by Ground water source. Effluent generation will be 71.6 m<sup>3</sup>/day and segregated into HTDS and LTDS effluent stream. HTDS effluent stream will be sent to stripper followed by MEE, and AFTD. LTDS effluent stream including the condensate from MEE and ATFD will be treated along with utility blow downs and domestic effluent of 8.4 KLD, which will be treated in biological treatment plant followed by RO. The permeate from RO is reused in cooling towers, while the reject is sent to MEE. The salts from ATFD are sent to TSDF. 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 will be sent to authorize recyclers. The sludge from effluent treatment plant is sent to TSDF. Ash generated from coal fired boilers sent to brick manufacturers.

It was noted that the unit obtained environmental clearance vide letter no. F. No. J-11011/898/2008-IA II (I) dated 14.10.2009. The environmental clearance has expired and the unit did not apply the application for extension of validity of existing environmental clearance within valid period of EC. Hence the project is submitted afresh for EC.

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. 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 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
20. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
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 16<sup>th</sup> 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**

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 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. 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.

**30.4.2** Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 4.45 TPM to 28.1 TPM) at Plot. Nos. 116, 116A, 116B & 126C, S.V. Cooperative Industrial Estate, IDA, Bollaram Village, Jinnaram Mandal, Medak District, Telangana by M/s. Dr. Reddy's Laboratories Ltd., Chemical Techops – III – 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 Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. It was informed General Condition viz. critically polluted area is applicable project is located within 10 km distance. Therefore, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s. Dr. Reddy's Laboratories Ltd., Chemical Techops has proposed for Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 4.45 TPM to 28.1 TPM) at Plot. Nos. 116, 116A, 116B & 126C, S.V. Cooperative Industrial Estate, IDA, Bollaram Village, Jinnaram Mandal, Medak District, Telangana. It is proposed to expand the API manufacturing capacity from 4.45 TPM to 28.1 TPM in existing area of 5.77 acres. Out of which, area earmarked for greenbelt is 1.65 acres. The capital cost for expansion is Rs. 12 crores, towards

modernization of zero liquid discharge facility, debottlenecking and additional equipment to enhance the capacity. A number of reserve forests are located within 10 km radius; Wailal RF is 6.4 km in north direction, Pottaguda RF is 8.7 km in northwest direction, Kazipalli RF is 3.2 km in north direction, Kodakanchi RF is 8.9 km in northwest direction, Dundigal RF is 8.6 km in northeast direction, Suraram RF is 9.4 km in east direction, Gajularamaram RF is 9.2 km in east direction and Borampet RF is 9 km in east direction. It is reported that there are no ecologically sensitive areas like national parks, and sanctuaries within 10 km radius of the site. The site is located within the critically polluted area of Bollaram and Patancheru Industrial estates, which was notified as critically polluted area. The manufacturing capacity after expansion is as follows:

S.No	Name of the Product	CAS No.	Capacity (TPM)
1	Esomeprazole Mg	161973-10-0	2
2	Omeprazole	73590-58-6	4
3	Omeprazole Magnesium	95382-33-5	1.5
4	Omeprazole Sodium	95510-70-6	0.3
5	Omeprazole Form B	73590-58-6	1
6	Pantoprazole Sodium	138786-67-1	3
7	Rabeprazole Sodium	117976-90-6	2.5
8	Amlodipine Besylate	111470-99-6	4
9	Amlodipine Maleate	88150-47-4	0.9
10	Lacipidine	103890-78-4	0.15
11	Alendronate Sodium Trihydrate	121268-17-5	0.2
12	Apprepitant	170729-80-3	0.1
13	Levocetirizine Di HCl	130018-87-0	0.3
14	Ramipril	87333-19-5	3
15	TerbinafineHCl	78628-80-5	4
16	TizanidineHCl	64461-82-1	0.5
17	Zolendronic Acid	118072-93-8	0.01
18	AtomoxetineHCl	82248-59-7	0.05
19	Disodium Pamidronate	57248-88-1	0.01
20	RopinroleHCl	91374-20-8	0.055
21	Lansoprazole	103577-45-3	0.25
22	Voriconazole	137234-62-9	0.25
23	R&D Products		0.03
	<b>Total</b>		<b>28.1</b>

#### List of Utilities

S.No	Utility	Permitted	Proposed	After Expansion
1	Oil Fired Boiler (TPH)	3	---	1 x 3 TPH
2	DG Set (kVA)*	320 250 500	1450 1010	1 x 1450 KVA 1 x 1010 KVA 1 x 500 KVA 1 x 320 KVA 1 x 250 KVA

\* DG set will be used during load shut down.

Stack of adequate height will be provided to fired boiler (3 TPH Oil) and 1x 320 kVA, 1 x 250VA, 1 x 500 kVA DG sets. Total water requirement will be increased from 88.5 m<sup>3</sup>/day to 330.5m<sup>3</sup>/day after expansion. Out of which 216.5 m<sup>3</sup>/day will be fresh water and sourced from APIIC Industrial supply. Remaining water requirement 114 KLD will be sourced from recycled water. The effluents are treated in "Zero Liquid Discharge" system at common effluent treatment facility at CTO-II. The high TDS effluents in the order of 99.2 KLD are

sent to Stripper followed by MEE, AFTD. The condensate from MEE and AFTD is treated along with LTDS effluent from process, washings, scrubbers, DM plant, SRS system, detoxification, ZLD washings, domestic usage and utility blow downs of 48.5 KLD in biological treatment plant followed by Reverse Osmosis. The permeate from RO is reused in cooling towers, while the reject is sent to MEE. 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 authorized recyclers. The sludge from effluent treatment plant is sent to TSDF. Ash generated from coal fired boilers is 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. PP has obtained environmental clearance letter no. J-11011/190/2005 IA II (I) dated 22.06.2006 for the existing unit. Unit has not submitted the copy of notification for the industrial area. Therefore, the Committee suggested them to submit copy of the notified industrial area for exemption of public hearing.

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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, methane and non-methane hydrocarbon 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 16<sup>th</sup> 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 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. 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 AP Pollution Control Board for proposed expansion.
4. Toxic Chemical Management Plan to be submitted.

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 4<sup>th</sup> 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.

**30.4.3** Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 21.9 TPM to 68.76 TPM) at Plot. Nos. 75A, 75B, 1, 110,111 & 112, S.V. Cooperative Industrial Estate, IDA, Bollaram Village, Jinnaram Mandal, Medak District, Telangana by M/s. Dr. Reddy's Laboratories Ltd., Chemical Techops – II – 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 Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. It was informed General Condition viz. critically polluted area is applicable project is located within 10 km distance. Therefore, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s. Dr. Reddy's Laboratories Ltd., Chemical Techops-II has proposed for Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 21.9 TPM to 68.76 TPM) at Plot. Nos. 75A, 75B, 1, 110,111 & 112, S.V. Cooperative Industrial Estate, IDA, Bollaram Village, Jinnaram Mandal, Medak District, Telangana. It is proposes to expand the API manufacturing capacity from 21.9 TPM to 68.76 TPM in an area of 16.81 acres (Existing: 13.27 acres &additional proposed: 3.54 acres). The capital cost for expansion is Rs. 40 crores, towards modernization of zero liquid discharge facility, debottlenecking and additional equipment to enhance the capacity at Plot. Nos. 75A, 75B, 1, 110,111 & 112, S.V. Cooperative Industrial Estate, IDA, Bollaram Village, Jinnaram Mandal, Medak District, Telangana.A number of reserve forests are located within 10 km radius; Wailal RF is 5.8 km in north direction, Pottaguda RF is 8.9 km in northwest direction, Kazipalli RF is 3.4 km in north direction, Kodakanchi RF is 9.1 km in northwest direction, Dundigal RF is 8.3 km in northeast direction, Suraram RF is 9.2 km in east direction, Gajularamaram RF is 9 km in east direction and Borampet RF is 8.8 km in east direction. It is reported that there are no ecologically sensitive



areas like national parks, and sanctuaries within 10 km radius of the site. The site is located within Patancheru Bollaram Industrial estates, which was notified as critically polluted area. The manufacturing capacity after expansion is as follows:

S.No	Name of the Product	CAS No.	Capacity (TPM)
1	Atorvastatin	134523-00-5	11.275
2	Ciprofloxacin HCl	86393-32-0	16
3	Ciprofloxacin Base	86483-48-9	5.3
4	Ciprofloxacin Lactate	97867-33-9	1
5	Telmisartan	144701-48-4	3
6	Aripiprazole	129722-12-9	0.01
7	Tadalafil	171596-29-5	0.1
8	Zonisamide	68291-97-4	0.001
9	Rizatriptan Benzoate	145202-66-0	0.04
10	Rocuronium Bromide	119302-91-9	0.001
11	Levofloxacin	100986-85-4	6
12	Clopidogrel Premix	113665-84-2	5
13	Ketorolac	74103-06-3	2
14	Glimepiride	93479-97-1	0.4
15	Moxifloxacin	354812-41-2	3.5
16	Finasteride	98319-26-7	0.3
17	Tacrolimus	104987-11-3	0.15
18	Ezitimibe	163222-33-1	0.1
19	Vardenafil	224785-90-4	0.1
20	Fondaparinux Sodium	114870-03-0	0.01
21	Anastrozole	120511-73-1	0.025
22	Bicalutamide	90357-06-5	0.001
23	Amlodipine Besylate ( Ethyl 4 [2-(phthalamide)ethoxy] aceto acetate (TDM-2)	88150-75-8	3
24	Amlodipine Besylate	111470-99-6	1
25	Raloxifene	84449-90-1	1
26	Metoprolol Succinate	98418-47-4	8
27	Candesartan	139481-59-7	0.2
28	Repaglinide	135062-02-1	0.2
29	Rosiglitazone	122320-73-4	0.1
30	Mesylamine	89-57-6	0.001
31	Dutasteride	164656-23-9	0.1
32	MemantineHCl	41100-52-1	0.1
33	Letrozole	112809-51-5	0.001
34	Galantamine	357-70-0	0.001
35	Bivalirudin	128270-60-0	0.001
36	paroxetine HCl	78246-49-8	0.001
37	Revastigmine	123441-03-2	0.2
38	Cetirizine	83881-51-0	0.5
39	Diluted Everolimus 5%	159351-69-6	0.01
40	R&D Products		0.03
<b>Total</b>			<b>68.76</b>

#### List of Utilities

S.No	Utility	Permitted	Proposed	After Expansion
1	Coal Fired Boiler (TPH)	8	12	1 x 12 1 x 8
		2		

				1 x 2
2	Oil Fired Boiler (TPH)	6		1 x 6 *
3	Thermic Fluid Heater (Lac. K.Cal/hr)	---	2 x 1	2x 1
4	DG Set** (kVA)	1 x 750 2 x 500	2 x 1450	2 x 1450 1 x 750 2 x 500

\* Shall be kept as Standby.

\*\* DG set will be used during load shut down.

Bagfilter will be provided to coal fired boilers (1 x 8 TPH and 1 x 2 TPH) and thermic fluid heater. DG sets shall be provided with stack heights based on the CPCB formula for effective stack height. Total water requirement will be increased from 426 m<sup>3</sup>/day to 762 m<sup>3</sup>/day after expansion. Out of which, fresh water requirement from APIIC water supply will be 489.2 m<sup>3</sup>/day and remaining water requirement (273 m<sup>3</sup>/day) will be met from recycled water. The effluents are treated in "Zero Liquid Discharge" system. The high TDS effluents in the order of 186 KLD are sent to Stripper followed by MEE, AFTD. The condensate from MEE and AFTD is treated along with LTDS effluent from process, washings, scrubbers, DM plant, SRS system, detoxification, ZLD washings, domestic usage and utility blow downs of 94.5 KLD in biological treatment plant followed by Reverse Osmosis. The permeate from RO is reused in cooling towers, while the reject is sent to MEE. 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 the authorized recyclers. The sludge from effluent treatment plant is sent to TSDF. Ash generated from coal fired boilers is 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.

PP has obtained environmental clearance letter no. J-11011/189/2005 IA II (I) dated 22.06.2006 for the existing unit. Unit has not submitted the copy of notification for the industrial area. Therefore, the Committee suggested them to submit copy of the notified industrial area for exemption of public hearing.

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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, methane and non methanehydrocarbonincluding 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 16<sup>th</sup> 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 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. 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 AP Pollution Control Board for proposed expansion.
4. Toxic Chemical Management Plan to be submitted.

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 4<sup>th</sup> 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.

**30.4.4 Expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 14.7 TPM to 45.5 TPM) at Plot. Nos. 137,138,145 & 146 & Survey No. 172/A, 72A&U, 172/C, 172/E, S.V. Cooperative Industrial Estate, IDA, Bollaram Village, Jinnaram Mandal, Medak District, Telangana by M/s. Dr. Reddy's Laboratories Ltd., Chemical Tech Ops – I –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 Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. It was informed General Condition viz. critically polluted area is applicable project is located within 10 km distance. Therefore, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s. Dr. Reddy's Laboratories Ltd., Chemical Tech Ops – I has proposed for expansion of Bulk Drugs and Intermediates Manufacturing Unit (From 14.7 TPM to 45.5 TPM) at Plot. Nos. 137,138,145 & 146 & Survey No. 172/A, 72A&U, 172/C, 172/E, S.V. Cooperative Industrial Estate, IDA, Bollaram Village, Jinnaram Mandal, Medak District, Telangana. The said unit has obtained Environment Clearance Vide file no. F. No. J-11011/188/2005-IA.II (I), dt.18.10.2005 for their existing unit. It is proposed to expand the API manufacturing in existing area of 16.5 acres. Out of which area earmarked for greenbelt is 5.44 acres. The capital cost for expansion is Rs. 30 crores, towards modernization of zero liquid discharge facility, debottlenecking and additional equipment to enhance the capacity. A number of reserve forests are located within 10 km radius; Wailal RF is 6.3 km in north direction, Pottaguda RF is 8.6 km in northwest direction, Kazipalli RF is 3.1 km in north direction, Kodakanchi RF is 8.8 km in northwest direction, Dundigal RF is 8.7 km in northeast direction, Suraram RF is 9.5 km in east direction, Gajularamaram RF is 9.3 km in east direction and Borampet RF is 9.1 km in east direction. There are no ecologically sensitive areas like national parks, and sanctuaries within 10 km radius of the site. The site is located is within the critically polluted area of Bollaram and Patancheru Industrial estates, which was notified as critically polluted area. The manufacturing capacity after expansion is as follows:

S.No	Name of the Product	CAS No.	Capacity (TPM)
1	ClopidogrelBisulphate	144077-07-6	15
2	Fexofenadine Hydrochloride	153439-40-8	15
3	Ziprasidone Hydrochloride	138982-67-9	3
4	Cetirizine Hydrochloride	83881-52-1	2
5	Losartan Postassium	124750-99-8	4.5
6	Lamotragine	84057-84-1	1
7	Sparfloxacin	110871-86-8	0.1
8	Norfloxacin	70458-96-7	0.001
9	Risperidone	106266-06-2	0.4
10	Rivastigmine	123441-03-2	0.2
11	Zolmitriptan	139264-17-8	0.025
12	Alfuzosin	81403-68-1	0.07
13	Fluoxetine	54910-89-3	3.3
14	Gemcitabine	95058-81-4	0.4
15	Irinotecan	97682-44-5	0.01
16	Docetaxel	114977-28-5	0.057
17	Lomustine	13010-47-4	0.04

18	Topotecan	123948-87-8	0.002
19	Pemetrexed	137281-23-3	0.02
20	Paclitaxel	33069-62-4	0.01
21	Amsacrine	51264-14-3	0.002
22	Azacitidine	320-67-2	0.02
23	Bortezomib	179324-69-7	0.001
24	Altratemine	645-05-6	0.001
25	Temozolamide	85622-93-1	0.001
26	Valgaanciclovir	175865-60-8	0.001
27	Meloxicam	71125-38-7	0.001
28	BivalirudinTrifluoro Acetate	128270-60-0	0.001
29	Imatinib	152459-95-5	0.005
30	Cabazitaxel	183133-96-2	0.0005
31	Validation , R&D products		0.3
	<b>Total</b>		<b>45.5</b>

#### List of Utilities

S.No	Utility	Permitted	Proposed	After Expansion
1	Coal Fired Boiler (TPH)**	8#	---	1 x 8
2	Briquette Biomass /Coal Fired Boiler (TPH)**	10	---	1 x 10
3	DG Set (kVA)*	320 725 1000	4 x 1450	4 x 1450 1 x 1000 1 x 725 1 x 320

# shall be kept as standby

\* DG set will be used during load shut down.

\*\*Steam is also supplied to Chemical Techops Unit-III.

Bagfilter will be provided to 8 TPH (standby) coal fired boiler, 10 TPH Biomass briquette/coal fired boiler. It is proposed to add DG sets of 4 x 1450 KVA capacity. DG sets shall be provided with stack heights based on the CPCB formula for effective stack height. Total water requirement will be increased from 180 m<sup>3</sup>/day to 580.6 m<sup>3</sup>/day after expansion. Out of which fresh water requirement will be 360.6 m<sup>3</sup>/day from APICC water supply. Remaining water (220m<sup>3</sup>/day) will be sourced from recycled water. The effluents are treated in common "Zero Liquid Discharge" system of the group located at Chemical Techops unit - II. The high TDS effluents in the order of 150.56 KLD are sent to Stripper followed by MEE, AFTD. The condensate from MEE and ATFD is treated along with LTDS effluent from process, washings, scrubbers, DM plant, SRS system, detoxification, ZLD washings, domestic usage and utility blow downs of 77KLD in biological treatment plant followed by Reverse Osmosis. The permeate from RO is reused in cooling towers, while the reject is sent to MEE. 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 authorized recyclers. The sludge from effluent treatment plant is sent to TSDF. Ash generated from coal fired boilers is 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.

PP has obtained environmental clearance letter no. J-11011/189/2005 IA II (I) dated 22.06.2006 for the existing unit. Unit has not submitted the copy of notification for the industrial area. Therefore, the Committee suggested them to submit copy of the notified industrial area for exemption of public hearing.

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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, methane and non methanhydrocarbonincluding 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 16<sup>th</sup> 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 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.

2. 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 AP Pollution Control Board for proposed expansion.

4. Toxic Chemical Management Plan to be submitted.

5. Odour control management plan.

6. Utilization programme for MEE salt.

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 4<sup>th</sup> 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.

#### **30.4.5 Exploratory / Appraisal Drilling in KG-OSN-2009/3 Block in Offshore KG Basin, Prakasam & Guntur Districts, Andhra Pradesh by M/s Cairn Energy India. – reg TOR**

The project authorities and their Consultant (AECOM India 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 the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at central level.

M/s Cairn Energy India has proposed for exploratory / appraisal Drilling ( 64 wells) in KG-OSN-2009/3 Block in Offshore KG Basin, Prakasam& Guntur Districts, Andhra Pradesh. KG-OSN-2009/3 offshore block in Bay of Bengal along the coast of Andhra Pradesh is spread over an area of about 1988 km<sup>2</sup>. The block covers partly the offshore areas of Prakasam and Guntur Districts. The coastal areas are well connected by rail and road, the nearest airport being Vijayawada. About 13 prospects have been identified in the KG-OSN-2009/3 block and around 64 (Sixty four wells in total) wells including both exploratory and appraisal wells are proposed to be drilled in of these prospects to explore hydrocarbon potential of the block. Krishna Wildlife Sanctuary is located at a minimum distance of 0.8 km from eastern boundary of the block. The Krishna sanctuary, spread over an area of 194.81 km<sup>2</sup> of Krishna and Guntur districts, is a mangrove habitat restricted within the shore areas. It includes Sorlagondi reserve forest (RF), Nachugunta RF, Yelichetladibba RF, Kottapalem RF, Molagunta RF, Adavuladivi RF and Lankivanidibba RF. Only 5 lead points identified for drilling wells are located at a distance of 4.5-5 km from the Krishna WLS. Only 5 identified lead points fall within 10km of Krishna WLS. Till date, no Ecologically Sensitive Area has been notified for Krishna WLS. The recommendations of Standing Committee of the National Board for Wildlife (NBWL) will be obtained prior to drilling of these wells. Proposed drilling project is entirely an offshore activity and no onshore activities are envisaged. Hence the project will fall under CRZ IV. The application for CRZ clearance shall be submitted by the PP. Cost of project is Rs. 13000 Crores. Water based and synthetic oil based mud will be used depending on the well depth, casing size and formation characteristics. Quantity of water required for drilling one well is estimated as 2500 m<sup>3</sup> (over 60 – 90 days while fresh water for domestic consumption will be 25 m<sup>3</sup>/day. Approximately 4

MW of power generating capacity will be available at rig using approximately 14 KLD of high speed diesel. Approx. 400 m<sup>3</sup> of drill cuttings per each well will be generated for 3000 m well depth. Drill cuttings are separated from the waste mud using shale shaker. Approx. 600-800 m<sup>3</sup> of spent water based mud will be generated per well, which will be discharged to the sea. There will be no discharge of spent SBM. Onboard STP will be provided to treat sewage. Rig wash will be routed through closed drain to an oil separation unit where the free oil is removed as bilge. The bilge will be collected in a bilge tank and periodically treated and disposed to sea

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

1. Executive summary of the project.
2. No. of exploratory wells for which environmental clearance is accorded and No. of new wells proposed during expansion. Status and No. of the wells which are completed and closed.
3. Project Description and Project Benefits;
4. Distance from coast line.
5. Commitment for no drilling will be carried within 1.0 Km.
6. Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.
7. Approval for the forest land from the State/Central Govt. under Forest (Conservation) Act, 1980, if applicable.
8. Recommendation of SCZMA/CRZ clearance as per CRZ Notification dated 6<sup>th</sup> January, 2011.
9. Climatology and meteorology including wind speed, wave and currents, rainfall etc.
10. Base line data collection for surface water for one season leaving the monsoon season within 1 km for each exploratory wells, particularly in respect of oil content in the water sample and sediments sample.
11. Actual source of water and 'Permission' for the drawl of water from the Competent Authority. Detailed water balance, waste water generation and discharge.
12. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case coastally located.
13. Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.
14. Procedure for preventing spills and spill contingency plans.
15. Procedure for treatment and disposal of produced water.
16. Procedure for sewage treatment and disposal and also for kitchen waste disposal.

17. Procedure for handling solid waste and any waste segregation at source for organic, inorganic and industrial waste.
18. Storage of chemicals on site.
19. Commitment for the use of WBM and synthetic oil based mud in special case.
20. Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices have been followed.
21. Handling of spent oils.
22. Handling of oil from well test operations.
23. Mud make up and mud and cuttings disposal procedures.
24. H<sub>2</sub>S emissions control plans, if required.
25. Details of all environment and safety related documentation within the company in the form of guidelines, manuals, monitoring programmes including Occupational Health Surveillance Programme etc.
26. Restoration plans and measures to be taken for decommissioning of the rig and restoration of on-shore support facilities on land.
27. Documentary proof for membership of common disposal facilities, if required.
28. Any litigation pending against the project or any directions/order passed by any Court of Law against the project. If so, details thereof.
29. Total capital and recurring cost for environmental pollution control measures.
30. A tabular chart with index for point-wise compliance of above TOR.

The following general points should be noted:

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

The Committee decided that the proponent should prepare EIA/EMP Report based on the above TORs. The EIA/EMP Report should be as per the generic structure given in Appendix-III of EIA Notification, 2006. The final EIA/EMP alongwith 'Certificate of Accreditation' issued by the QCI should be submitted to the Ministry for obtaining

environmental clearance. The committee noted that public hearing is not required as project site is located in off-shore.

**30.4.6** Expansion of Agrochemicals Manufacturing Unit (From 13.2 TPD to 14.5 TPD) at Survey no's 191, 213-217 and 220, Cheruvukommupalem Village, Ongole Mandal of Prakasam District, Andhra Pradesh by M/s Bhagiradha Chemicals & Industries Limited. -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 Bhagiradha Chemicals & Industries Limited has proposed for expansion of Agrochemicals Manufacturing Unit (From 13.2 TPD to 14.5 TPD) at Survey no's 191, 213-217 and 220, Cheruvukommupalem Village, Ongole Mandal of Prakasam District, Andhra Pradesh. The Unit obtained Environment Clearance from MoEF&CC vide file no. F. No. J - 11011/429/2008-IA. II(I), dt. 21.10.2008. Project proposal is to enhance the production capacity from 13.2 TPD to 14.5 TPD in the existing area of 35.7 acres to meet the ever changing market demand for technical grade pesticides, under "no increase in pollution load". Area earmarked for greenbelt is 11.8 acre. The cost for expansion is Rs. 5 crores, towards replacement of old equipment, debottlenecking and additional equipment to enhance the capacity. The proposed enhancement of production capacity was based on increased reaction yields without much change in raw materials. Increase in yield is achieved by changing the process parameters like reaction temperatures, raw material ratios, solvent ratio, improved process for finished product and excess raw material recovery etc to see that there is no increase in pollution loads after introducing the new process. It is reported that there are no ecologically sensitive areas like national parks, sanctuaries within 10 km radius of the site. Existing production capacity and proposed after expansion are as given below:

S.N.	Description	Capacity	
		13.2	14.5
1	Agro chemicals ( TPD)	13.2	14.5
2	No of products on campaign basis (nos)	5	4
3	Formulations (KLD)	5	5

The manufacturing capacity after expansion is as follows:

S.N.	Name of the Product	Capacity After Expansion (Agro Chemicals)	
		TPD	TPA
1	<b>Chlorpyriphos (or) Chlorpyriphos-Methyl</b>	<b>8.5</b>	<b>2805</b>
2	Azoxystrobin	0.5	165
3	<b>Triclopyr</b>	<b>2.5</b>	<b>825</b>
4	R (+) -2-(4- Hydroxyphenoxy) Propionic Acid (HPPA):	0.5	165
5	<b>Fluroxypyr</b>	<b>1.5</b>	<b>495</b>
6	Clodinafop-Propargyl	0.5	165
7	Cloquintocet-Mexyl	0.5	165
8	Fipronil	1	330

9	Imidacloprid	2	660
10	Thiamethoxam	1	330
11	2-chloro-5-chloromethylpyridine	1	330
12	2,6-Dichloroaniline	1	330
13	Nitenpyram	1	330
	<b>Total (Worst Case – Products)</b>	<b>14.5</b>	<b>4785</b>

#### Manufacturing Capacity – After Expansion (Formulations)

S.No	Name of the Product	Capacity (KLD)
<b>Emulsifiable Formulations</b>		
1	Chlorpyriphos	5.0
2	Chlorpyriphos-Methyl	5.0
3	Triclopyr	5.0
4	Fluroxypyr	5.0
5	Imidacloprid	5.0
6	ClodinafopPropargyl	5.0
7	Fipronil	5.0
<b>Wettable Powder</b>		
1	Clodinafop – 15%	5.0
<b>Wettable Granules</b>		
1	Imidacloprid – 70%	5.0
2	Fipronil -80%	5.0
3	Thiamethoxam – 25%	5.0
<b>Suspension Concentrates</b>		
1	Fipronil – 5%	5.0
2	Buprofezin – 25%	5.0

**Note: One product will be formulated at any point of time from each group.**

#### List of Utilities

S. No	Description	Capacity	Remarks
1	Coal Fired Boilers	12 TPH	Existing
		3 TPH	Existing – Shall be dismantled
2	Oil Fired Boiler	5 TPH	Existing – Shall be dismantled
3	Coal Fired Boilers	8 TPH*	New boiler-Stand by
3	DG Sets*	2X500 kVA	Existing
		1X250 kVA	Existing
		2X500 kVA	Proposed
4	Rotary Kiln	1200 kg/hr	Existing
5	Incinerator	50 kg/hr	Existing

\* 8TPH boiler shall be kept as standby

Bag Filters will be provided as air pollution control equipment for proposed 8TPH coal fired boiler. DG sets shall be provided with stack heights based on the CPCB formula for effective stack height.

The present water consumption and effluent generation is 317 m<sup>3</sup>/day and 188.65m<sup>3</sup>/day respectively. The total water requirement after the proposed expansion is 312.8 m<sup>3</sup>/day which shall be sourced from ground water using bore-wells within plant premises. The inorganic effluents generated from various processes are segregated based on TDS/COD.

The Low TDS/COD effluents of about 50.87 KLD are first stripped to remove volatile organics. The stripped effluents are treated in Multiple Effect Evaporators (MEE-I) to recover the water. The condensate from MEE-I is sent to biological treatment followed by Reverse osmosis. The permeate from RO is reused for cooling tower make up, while the reject is sent to MEE-II. The concentrate from MEE-I are further concentrated in batch reactors. Condensate from batch reactors sent to biological treatment plant and residue from the batch reactors are sent to rotary kiln for drying. The dried sludge is sent to secured land filling. The High COD/TDS effluents of about 46.39 KLD are stripped to remove volatile organics. The stripped effluents are treated in Batch Reactors and the condensate is sent to biological treatment plant (ETP), followed by treatment in RO plant. The treated water is used for cooling tower make-up. The residue from the batch reactors are sent to rotary kiln for drying. The dried sludge is sent to secured land filling. The non-process effluents like boiler blow downs, utility blow downs, RO rejects are treated separately in Multiple Effect Evaporator (MEE-II) and the condensate obtained is used for boiler water make up. The concentrate from MEE is sent to batch reactors for further treatment. Domestic wastewater will be treated in biological treatment plant. Treated effluent reused for cooling tower make up.

The stripper distillate, process residue and solvent residue are sent to TSDF/cement plants for co-incineration. The evaporation salts are sent to TSDF. Waste oil and used batteries from the DG sets are sent to the authorized recyclers. The sludge from effluent treatment plant is considered hazardous and the same is sent to TSDF. Ash from boiler is sold to brick manufacturers.

After deliberation, the Committee sought following additional information:

- i) Present production capacity alongwith details on any product change.
- ii) Present emissions/pollution load in respect of air, water and solid waste.
- iii) Predicted emissions/pollution load in respect of air, water and solid waste.
- iv) Details on requirements of water, power and fuel requirement.
- v) Details of measures to be taken to reduce pollution load.

The Committee also recommended for site visit to assess the ground reality of environment status of the existing environment. The proposal is deferred till addl. information is submitted and site visit is conducted.

#### **30.4.7 Replacement of reactors & allied modernization jobs of Coker A and Installation of Biturox Unit in the existing Barauni Refinery in District Begusarai, Bihar 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 replacement of reactors & allied modernization jobs of Coker A and Installation of Biturox Unit in the existing Barauni Refinery in District Begusarai, Bihar. PP informed that Coker revamp & Biturox project conceptualized in 2006. EC was obtained vide MEF&CC's letter no. J-11011/491/2007. IA(II) I dated March 2008. EC expires after five years as PP did not submitted application within



validity period of environmental clearance. Therefore, PP submitted fresh proposal for environmental clearance.

- a) **Coker A** : Mainly intended for the replacement of 30 years old Coke Drums/Reactors for reliability improvement. The Coke drums will be replaced by higher metallurgy to process high sulphur feed. No capacity augmentation is envisaged. It will retain its original capacity of 0.6 MMTPA. Automation of facilities like heading un-heading devices, Coke drum level indication, coke cutting system etc. 05 nos of new heat exchangers In preheat circuit, which will lead to one furnace operation against present 02 furnace operation. Cost of project is Rs. 480.31 Crore. No additional land is required. One furnace operation is envisaged against two furnace operation, which will lead lower emission, lower fuel consumption and power consumption. SO<sub>x</sub> reduction will be 9.4 Kg/hr.
- b) **New Biturox Unit** : Intended for production of 0.15 MMTPA of different grades of bitumen viz. VG-10, 20, 30 & 40. It will consists of feed blending, feed-product heat exchanger, biturox reactor, process air/water supply, off gas treatment section and other related facilities. Existing incinerator of FCCU will be utilized for flue gas. Cost of project is Rs. 71.43 Crore. No additional land is required. SO<sub>2</sub> will be increased by 0.3 kg/h due to incinerator.

Coker A will be operating with only one furnace against present two furnace configuration. Whereas flue gas of Biturox Unit will be routed through existing FCCU incinerator. Overall the increase emission from FCCU stack will be less than 2<sup>nd</sup> furnace emission of Coker A (which will be cut off after project). Additionally, installation of more CAAQMS and analyzers is under approval for better monitoring and control of emissions. Modernization of ETP and BTP has been completed recently in 2014-15 with new facility like UF and bio-towers. Effluent water generation from Coker A will reduce due to new coke cutting system and additional effluent from Biturox Unit of 1.5 m<sup>3</sup>/hr will be taken care within high capacity modernized ETP and BTP. More over new RO plant in ETP/BTP with capacity of 510 m<sup>3</sup>/hr is likely to be commissioned in 2015-16. This will further reduce overall fresh water consumption by recycling ETP/BTP water.

The Committee suggested to modify/update the said EIA-EMP report by taking this proposal into consideration. The Committee recommended following TOR to be incorporated in the EIA-EMP report :

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. Project Description and Project Benefits.
3. Manufacturing process details alongwith the chemical reactions and process flow diagram for the proposed project.
4. Is there additional storage required for the proposed project, if yes details thereof.
5. Baseline data for air, water and soil for last one year:
6. Ambient air quality monitoring data for PM<sub>2.5</sub>, PM<sub>10</sub> SO<sub>2</sub>, NO<sub>x</sub>, (methane & non-methane HC) and VOCs particularly in the downwind direction.
7. Existing status of stack emission, raw water requirement, treated effluent quantity & quality data, noise pollution and solid waste management in the existing units.
8. Details of Sulphur balance in the existing refinery unit.
9. Additional SO<sub>2</sub> emissions due to the proposed project.

10. A note on how SO<sub>2</sub> and NO<sub>x</sub> will be controlled at the existing level leading to no increase in pollution load.
11. Unit-wise air pollution control devices to be installed. For the proposed units.
12. Water Balance chart for the existing unit and due to the proposed project. Action plan for reduction of water requirement.
13. Quantity of effluent generation and the existing effluent treatment scheme.
14. Detailed solid waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
15. Oily sludge management plan.
16. Details of membership of TSDF for hazardous waste disposal.
17. Details of proposed preventive measures for leakages and accident.
18. Environmental Management Plan
19. Risk Assessment & Disaster Management Plan
  - a. Identification of hazards
  - b. Consequence Analysis
  - c. Risk assessment should also include leakages and location near to refinery & proposed measures for risk reduction.
20. Total capital cost and recurring cost/annum for environmental pollution control measures.

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 25<sup>th</sup> September, 2007 and no significant pollution load increase has been envisaged.

**30.4.8** Proposed Synthetic Organic Manufacturing unit at Survey No.: 1905/1 Village: Gangad, Taluka: Bavla, District: Ahmedabad, Gujarat by M/s. Rheomax Gums Ltd.-reg TOR

The project authorities and their Consultant (M/s Anandconsultant) 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. Rheomax Gums Ltd has proposed for setting up of Synthetic Organic Manufacturing unit at Survey No.: 1905/1 Village: Gangad, Taluka: Bavla, District: Ahmedabad, Gujarat. Plot area is 17199 m<sup>2</sup>. Cost of project is Rs. 7.60 Crore of which greenbelt will be developed in 6074 m<sup>2</sup>. Following products will be manufactured :

S.N.	Name of Product	Quantity (MT/Month)
1	Chloro compound (2-chloromethyl-3,4-dimethoxy pyridine hydrochloride)	10
2	Pantaprazole sodium	5
3	Phenylephrine HCl	2
4	Pregabalin	2
5	Temisartan	2
6	Montekulast sodium	2
7	Ondansetron HCl	2

Bagfilter alongwith stack of adequate height will be provided to coal fired boiler. Wet scrubber will be provided to distillation unit. DG set (100 KVA) will be installed. Total water requirement will be 58 m<sup>3</sup>/day of which fresh water requirement from ground water source/ tanker supply will be 33 m<sup>3</sup>/day. Remaining water requirement of 25 m<sup>3</sup>/day will be met from recycled/treated effluent. Effluent generation will be 25 m<sup>3</sup>/day. High TDS effluent will be evaporated in MEE and condensate will be treated in ETP alongwith other trade effluent. No effluent will be discharged outside the plant premises. ETP sludge, sludge from wet scrubber and MEE salts will be sent to TSDF. Used oil will be sent to the authorized processors. Fly ash will be sent to brick /cement manufacturers. Power requirement from Gujarat Electricity Board will be 125 kVA.

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 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
18. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> 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 specifically suggested by the Committee as Bagfilter to be installed for the effective control of gaseous emissions within permissible limits.
20. Name of all the solvents to be used in the process and details of solvent recovery system.
21. Design details of ETP, incinerator, boiler, scrubbers/bag filters etc.
22. Details of water and air pollution and its mitigation plan
23. Action plan to control ambient air quality as per NAAQES Standards notified by the Ministry on 16<sup>th</sup> September, 2009.

24. An action plan to control and monitor secondary fugitive emissions from all the sources.
25. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
26. Source and permission for the drawl of total 397.5 m<sup>3</sup>/day 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.
27. Action plan for 'Zero' discharge of effluent should be included.
28. Ground water quality monitoring minimum at 6 locations should be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
29. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste.
30. Action plan for the management of fly ash generated from boiler should be included. Tie-up or agreement with brick manufacturer to be provided.
31. Precautions to be taken during storage and transportation of hazardous chemicals should be clearly mentioned and incorporated.
32. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they will utilize all the organic solid waste generated.
33. A copy of 'Memorandum of Understanding' (MoU) signed with coal supplier for imported coal and brick manufacturers for management of fly ash.
34. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
35. Material Safety Data Sheet for all the Chemicals are being used/will be used. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
36. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
37. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
38. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
39. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
40. Details of occupational health programme.
  - i) To which chemicals, workers are exposed directly or indirectly.
  - ii) Whether these chemicals are within Threshold Limit Values (TLV)/ Permissible Exposure Levels as per ACGIH recommendation.
  - iii) What measures company have taken to keep these chemicals within PEL/TLV.
  - iv) How the workers are evaluated concerning their exposure to chemicals during pre-placement and periodical medical monitoring.
  - v) What are onsite and offsite emergency plan during chemical disaster.
  - vi) Liver function tests (LFT) during pre-placement and periodical examination.
  - vii) Details of occupational health surveillance programme.
41. Socio-economic development activities should be in place.
42. Note on compliance to the recommendations mentioned in the CREP guidelines.
43. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.
44. EMP should include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

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

46. A tabular chart with index for point wise compliance of above TORs.

## **B. Additional TOR**

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.

47. The following general points shall be noted:

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

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

### **30.4.9 Proposed Specialty Chemical & Pesticide Intermediates Plant at plot no. D-2/CH-105, GIDC , Dahej-2, Tahsil Vagra, Dist: Bharuch-392 130, Gujarat by M/s. Janvi Chemicals– 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. Janvi Chemicals has proposed for setting up of Specialty Chemical & Pesticide Intermediates Plant at plot no. D-2/CH-105, GIDC, Dahej-2, TahsilVagra, District Bharuch, Gujarat. Total plot area is 5000 m<sup>2</sup> of which greenbelt will be developed in 1000 m<sup>2</sup>. Cost of project is Rs. 3.5 Crore. Following products will be manufactured:

Sr. No.	Name of the Products	Quantity in (MTPM)
		Proposed

1.	Chlorination Derivatives (e.g. MCB, DCB, ODCB, PDCB, MDCB)	200
2.	Chloro Acetyl Chloride	200
3.	Mono Chloro Acetic Acid	150
4.	Calcium Chloride	250
<b>5. Pesticide Intermediates</b>		
a)	2,4,6-Trimethyl Benzaldehyde	100
b)	2,4-Dichloro Phenyl Acetic Acid	
c)	2,4-Dichloro Meta Cresol	
d)	4,4-Dihydroxy Benzophenone	
<b>Total</b>		<b>900</b>

#### LIST OF BY PRODUCTS

S. N.	Name of the Products	Quantity in (MTPM) Proposed
1.	HCl (32%)	550

Multicyclone followed by bagfilter will be provided to briquette fired (3 TPH) to control particulate emissions. DG set ( 250 KVA) will be provided. Water followed by alkali scrubber will be provided to process emissions viz. HCl, Cl<sub>2</sub> and SO<sub>2</sub>. Total water requirement will be 55m<sup>3</sup>/day and met from GIDC water supply. The wastewater generation is 31m<sup>3</sup>/day. The industrial effluent (27m<sup>3</sup>/day) will be sent to proposed ETP consists of primary, secondary & tertiary treatments and treated effluent shall be discharged into GIDC drainage line or sent to CETP. Domestic Waste water (4m<sup>3</sup>/day) will be sent in secondary treatment unit of ETP. ETP sludge will be sent to TSDF. Process sludge from CaCl<sub>2</sub> will be sent for agriculture use. Used oil and spent oil will be sent authorized recycler/re-processors. Fly ash will be sent to brick manufacturers. PP informed that PCPIR is in process for obtaining environmental clearance for the said SEZ. So far, the said SEZ has not obtained environmental clearance. 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 16<sup>th</sup> 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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, Cl<sub>2</sub>, HCl, SO<sub>2</sub>, HBr, HF 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.

**30.4.10** Expansion of Pesticide Technical at Plot No.100 to 103, GVMM, GIDC – Odhav, Ahmedabad, Gujarat by M/s. GSP Crop Science 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. GSP Crop Science Pvt. Ltd. has proposed for expansion of Pesticide Technical at Plot No.100 to 103, GVMM, GIDC – Odhav, Ahmedabad, Gujarat. Total plot area is 11000 m<sup>2</sup>. Cost of project is Rs. 5.0 Crore. Following products will be manufactured :

S. N.	Product	Existing Capacity (MTPM)	Additional Capacity (MTPM)	Total after Proposed Expansion (MTPM)
1	Acephate Technical	30	300	330
<b>Formulation of Pesticide Cliqued + Dust</b>				
2	Acephate 75%	300	-	300
3	Hexaconazole 5%	180	-	180
4	Ethion 50%	40	-	40
5	Sulphin-M	100	-	100
6	Chloropyriphos (CPP) 20%	63 300	-	63 300
	1.5%			
7	Cyperme thrin (CPM) 10%	18 62	-	18 62
	25%			
8	Fenvalerate (FE) 20%	46	-	46
	0.4%	300		300
9	Methylparathion 2.0%	300	-	300
10	Monocrotophos 36%	100	-	100
11	Alpnamethin 10%	18	-	18
12	Culnaiphos 25%	92	-	92
	1.5%	300		300
13	Combination CPP 50%	2	-	2
	CPM 5%			

14	Propiconazole 25%	20	-	20
15	Triazophos 20% 40%	20	-	20
	<b>Total</b>	<b>30 (Technical) + 2261 (Formulation)</b>	<b>300 (Technical)</b>	<b>330 (Technical) + 2261 (Formulation)</b>
	<b>Grand Total</b>	<b>2291</b>	<b>300</b>	<b>2591</b>

Additional boiler will be installed. Bagfilter will be provided to white coal fire boiler to control particulate emissions. Additional DG set ( 625 KVA) will be installed. Wet scrubber has been provided to incinerator. Water requirement will be increased from 25.1 m<sup>3</sup>/day to 63 m<sup>3</sup>/day after expansion and met from GIDC water supply. Effluent generation will be increased from 3.8 m<sup>3</sup>/day to 10 m<sup>3</sup>/day after expansion. Effluent will be treated in ETP and treated effluent will be discharged to CETP for further treatment. Hazardous waste generation will be Used Oil, ETP Sludge, Process Waste, Discarded Drums, ETP Sludge, Incineration Ash. All the Solid/Hazardous Waste generated will be disposed as per the norms. Additional fuel requirement will be White Coal: 225 Ton/Month (Additional Proposed)&HSD (Additional Proposed): 50 Liter/Hr. Energy requirement will be increased from 550 KVA to 1100 KVA and sourced from MGVCL.

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 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
22. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, Cl<sub>2</sub>, HCl, SO<sub>2</sub>, including HC and VOCs should be collected. The monitoring stations should take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring should also be included.
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 exempted under section 7 (iii) subject to submission of document of notified Industrial area.
2. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
3. Recommendation of SPCB.

The following general points shall be noted:

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

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

It was decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006, subject to submission of authentic document from the State Govt. indicating that the project is located in the notified industrial area. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

**30.4.11** Expansion of bulk drugs and intermediate manufacturing unit at Sy. Nos. 842 to 843, Village Karakhadi, TalukaPadra, District Vadodara in Gujarat by M/s Alembic Limited Unit – III– 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 along with the draft Term of References for the preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry (Bulk Drugs & Intermediates) located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s Alembic Limited Unit – III has proposed for Expansion of bulk drugs and intermediate manufacturing unit at Sy. Nos. 842 to 843, Village Karakhadi, TalukaPadra, District Vadodara, Gujarat. Total 1,08,653 m<sup>2</sup> of land area is available. Out of which area earmarked for greenbelt is 56243.35 m<sup>2</sup>. Cost of expansion project is Rs. 120 crores. Rs. 8 Crores are earmarked toward environmental protection measures. Following products will be manufactured:

Sr. No.	Product	Existing (MTPM)	Total after Proposed Expansion (MTPM)
1	Pilot Plant	0.95	100
2	Erythromycin Oxime Base	14	
3	Aza Erythromycin Stage-II	2.05	
4	Agomelatine	-	
5	Aripiprazole	-	
6	Asenapine	-	
7	Azilsartan	-	
8	Bazedoxifene	-	
9	Bosentan	-	
10	Bupropion Hydrochloride	-	
11	Candesartan Cilexetil	-	
12	Celecoxib	-	
13	Clopidogrel Bisulfate	-	
14	Dabigatran	-	
15	Darifenacin	-	
16	Donepezil	-	

17	Dronedarone	-	
18	Duloxetine	-	
19	Erlotinib	-	
20	Etoricoxib	-	
21	Febuxostat	-	
22	Felodipine	-	
23	FesoterodineFumarate	-	
24	Gefitinib	-	
25	Iloperidone	-	
26	Irbesartan	-	
27	Losartan Potassium	-	
28	MEM Chloride	-	
29	Minodronic acid	-	
30	Moclobemide	-	
31	Modafinil	-	
32	Nisoldipine	-	
33	O Des Venlafaxine	-	
34	Olmesartan	-	
35	PramipexoleDihydrochloride Monohydrate	-	
36	PrasugrelHCl	-	
37	Rabeprazole Sodium	-	
38	Rivaroxaban	-	
39	Ropinirole Hydrochloride	-	
40	Silosodine	-	
41	Tadalafil	-	
42	Ticagrelor	-	
43	Valsartan	-	
44	Vilazodone Hydrochloride	-	
45	Warfarin	-	
46	Warfarin Acid	-	
47	Zolmitriptan	-	
48	VortioxetineHydrobromide	-	
49	Lurasidone Hydrochloride	-	
50	Solifenacin Succinate	-	
51	Vemurafenib	-	
52	Canagliflozin	-	
53	Apixaban	-	
54	Dapagliflozin	-	
55	Lapatinib	-	
56	Axitinib	-	
57	AfatinibDimaleate	-	
	<b>Total</b>	<b>17</b>	<b>100</b>

Additional coal fired boiler -1 (1x3 Ton + 1x 10 Ton) will be installed. The Committee suggested them to install bagfilter to control particulate emissions. Additional DG set (1x1500 KVA + 1 x 320 KVA) will be installed. Scrubber will be provided to control process emissions viz. SO<sub>2</sub>, HCl, Cl<sub>2</sub> and NH<sub>3</sub>. Fresh water requirement from ground water source will be increased from 50 m<sup>3</sup>/day to 450 m<sup>3</sup>/day after expansion. Wastewater generation will be increased from 35 m<sup>3</sup>/day to 335 m<sup>3</sup>/day after expansion. In Existing Scenario i.e. 30 KL/Day treated effluent conforming to the GPCB norms shall be sent to the CETP of M/s. EICL, Umraya through designated Tankers. In Proposed Scenario i.e. 285 KL/Day shall be treated in ETP, out of which 150 KL/Day of treated effluent conforming to the GPCB norms shall be sent to the CETP of M/s. EICL, Umraya through designated Tankers. 100 KL/Day

will be treated through RO Plant and the Permeate i.e. 75 KL/Day will be used for Gardening. RO Reject i.e. 25 KL/Day will go to MEE for further treatment and MEE Condensate will again go to ETP for treatment and its salts will be disposed in TSDF site. 35 KL/Day will be Sludge and Losses after treatment in ETP. Further, the Committee suggested them to segregate the effluent into high TDS and low TDS effluent stream and suggest treatment scheme accordingly. Sewage should be treated in the sewage treatment plant. ETP sludge will be sent to TSDF. Spent catalyst, oil and organic solvent will be sent to authorized re-processors. Process residue/distillation residue will be sent to Common Hazardous Incineration Facility (CHWIF). The power requirement will be 1600 KW. Company shall purchase power from GEB.

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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.

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 16<sup>th</sup> 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. Effluent treatment Scheme based on segregation of high TDS/low TDS stream along with treatment of sewage.
2. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
3. 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.
4. Recommendation of Gujarat Pollution Control Board for proposed expansion as unit is located in the Padra Region, a polluted area.

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 4<sup>th</sup> 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.

**30.4.12** Expansion Synthetic Organic Manufacturing Unit at Plot No: 20/C, 20/B, A-1/5 & A-1/10, 1st phase, G.I.D.C, VAPI, Gujarat by M/s KasyapSweetners Limited—reg. TOR

The project authorities and their consultant (Eco Chem Sales & Service, Surat) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken alongwith the draft Term of References for the preparation of EIA/EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, project site is located in the CPA and treated as category 'A' project due to applicability of general condition of the EIA notification, 2006 and appraised at Central level.

M/s KasyapSweetners Limited has proposed for expansion of Synthetic Organic Manufacturing Unit at Plot No: 20/C, 20/B, A-1/5 & A-1/10, 1st phase, G.I.D.C, VAPI, Gujarat. The existing production capacity is 2400 TPM of Sorbitol/Glucose, proposed production capacity will be 11100 TPM of Sorbitol/Glucose/Dry Starch/Liquid Glucose/Fructose/Dextrose mono hydratethus after proposed expansion, total capacity will be 13500 TPM of Sorbitol/Glucose/Dry Starch/Liquid Glucose/Fructose/Dextrose mono hydrate (either of the product). Total plot area of the existing unit is 40626 m<sup>2</sup> of which area earmarked for greenbelt is 13500 m<sup>2</sup>. The cost of the proposed expansion project is Rs. 132.23 Crore. Following products will be manufactured:

S. N.	Product	Capacity, TPM		
		Existing	Proposed	Total after expansion
1	Sorbitol/Glucose	2400	-2400	0
2	Sorbitol/Glucose/Dry Starch/Liquid Glucose/Fructose/Dextros	0	13500	13500

	e mono hydrate			
	Total	2400	11100	13500

S. N.	By-Products	Quantity, TPM		
		Existing	Proposed	Total After expansion
1	Fibre	327.8	1493.3	1821.1
2	Gluten	128.9	587.2	716.11
3	Germ	152.2	693.3	845.5
4	Grit/Cattle feed	46.8	213.2	260

At present, the unit is having one number of 17 TPH steam boiler & one number of 5 TPH (Standby). ESP has been installed in the existing coal fired boiler. ESP will be installed in the additional coal fired boiler (17 TPH + 50 TPH). Ventury scrubber followed by alkali scrubber will be provided to sulphur burning chamber to control SO<sub>2</sub> and H<sub>2</sub>S emission. Two stage wet ventury scrubber followed by alkali scrubber will be provided to Gluten Dryer. Additional DG set (1x 1000 KVA + 1250 KVA) will be installed. Water requirement will be increased from 999.2 m<sup>3</sup>/day to 5346 m<sup>3</sup>/day after expansion. Out of which, total fresh water requirement from GIDC water supply will be 2659 m<sup>3</sup>/day and remaining water 2687 m<sup>3</sup>/day will be met from recycled/treated effluent. Effluent generation will be increased from 609.1 m<sup>3</sup>/day to 3311 m<sup>3</sup>/day after expansion. Effluent will be treated in the ETP comprising anaerobic, aerobic and tertiary treatment facilities. Treated effluent quantity 2709 m<sup>3</sup>/day will be passed through Reverse Osmosis plant and permeate will be recycled in the process. RO rejects will be sent to MEE. Condensate (249 m<sup>3</sup>/day) will be recycled. Remaining treated effluent (602 m<sup>3</sup>/day) will be sent to CETP for further treatment. After proposed expansion; 1212 TPA of waste from the ETP, 4896 TPA from MEE, 3.6 TPA of spent resin, 75 TPA of sludge from wet scrubber will be generated & dispose off into TSDF of Vapi. About 12.0 TPA of Discarded containers shall be partly reused for packing & partly sold to authorized recycler, 1.5 TPA of Used oil will be sold to registered re-refiner, 113 TPA of spent catalyst will be sent to actual re-processor for manufacture of Nickel salts & 1693 TPA of spent carbon will be sent to cement industries for co-processing. Total power requirement will be 6000 KVA from DGVCL.

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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
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 16<sup>th</sup> 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. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
36. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
37. Material Safety Data Sheet for all the Chemicals are being used/will be used.
38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.

39. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
40. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
41. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health programme.
  - 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.
43. Socio-economic development activities shall be in place.
44. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
45. Note on compliance to the recommendations mentioned in the CREP guidelines.
46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 49. Corporate Environmental Responsibility**
  - (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non-compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

## **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 30<sup>th</sup> May, 2012 issued by MoEF, a

- certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. Recommendation of State Pollution Control Board for proposed expansion as project located in the CPA.

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 4<sup>th</sup> 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 decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006, subject to submission of authentic document from the State Govt. indicating that the project is located in the notified industrial area. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

**30.4.13** Synthetic Organics manufacturing unit at S.No.466/2, Consolidated Block No.522, Village Dudhdwada, Taluka Padra, District Vadodara, Gujarat by M/s Associated Dyestuff Pvt. – 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 along with the draft Term of References for the preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry (Dyes & 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 Associated Dyestuff Pvt. Has proposed for setting up of Synthetic Organics manufacturing unit at S.No.466/2, Consolidated Block No.522, Village Dudhdwada, Taluka Padra, District Vadodara, Gujarat. The total plot area is 37210 Sq. meter. Area

earmarked for greenbelt is 15000 Sq. meter. Cost of project is Rs. 15 Crores. It is reported that no national Park / wildlife sanctuary / reserve forests within 05 Km from our unit. Following products will be manufactured :

Sr. No.	Name of Product	Quantity in MT / M.
1.	Vinyl Sulphone	500
2.	CPC	500
3.	Alpha Blue	200
4.	Beta Blue	200
5.	CPC Green 7	200
6.	Dyes	800
7.	Direct Turquoise Blue 86	600
8.	Direct Turquoise Blue FBL -199	
9.	Reactive Blue G	
10.	Reactive Turquoise Blue H5G	
11.	Reactive Blue 72	
<b>[A]</b>		<b>3000</b>

Sr. No.	Name of By Product	Quantity in MT / Day.
1	Hydrochloric Acid	47
2	Ammonium Sulphate	16.4
3	Spent Sulphuric Acid	434
4	Ammonium Carbamate	28.60
5	NaOCl	3.5

Multicyclone dust collector followed by wet scrubber will be provided to boiler and hot air generator. Quenching followed by ventury scrubber followed by spray tower will be provided to incinerator. Three stage scrubber system will be provided to reaction vessel to control process emissions viz. HCl, NH<sub>3</sub> and SO<sub>2</sub>. Cyclone separator followed by water scrubber will be provided to spray dryer. Total fresh water requirement will be 790.7 m<sup>3</sup>/day. Effluent generation will be 593.94 m<sup>3</sup>/day. Effluent generation will be 597 m<sup>3</sup>/day and treated in ETP comprising primary, secondary and tertiary unit. Treated effluent will be sent to Nano filtration and permeate from NF will be recycled in process. The NF rejects will be sent to MEE. Condensate generation will be 190 m<sup>3</sup>/day and reused in the process. No effluent will be discharged outside the plant premises and 'Zero' effluent discharge concept will be followed. Spent acid will be sent to authorized recycler/re-processor. ETP sludge, incinerator ash and centrifuge waste will be sent to TSDF. Spent oil /used oil will be sent to authorized re-processors.

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 16<sup>th</sup> 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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, Cl<sub>2</sub>, HCl, SO<sub>2</sub>, HBr, HF 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. 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.
2. Recommendation of State Pollution Control Board for proposed project is located in Padra region.
3. Commitment to adopt cleaner technology.

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.

**30.4.14** Manufacturing of Pesticides, Intermediates & speciality chemicals at Plot No.D-2/CH/150, GIDC Dahej Phase II, District Bharuch, Gujarat by M/s UPL Ltd. – reg TOR.

The project proponent did not attend the meeting. The Committee decided to consider the proposal through online as and when fresh applied by the proponent.

**30.4.15** Expansion of Nylon chip from 750 to 3750 tons/month by M/s Gujarat Films Pvt. Ltd. J/110111/267/2014 IA II (I) – reg TOR

The project proponent did not attend the meeting. The Committee decided to consider the proposal through online as and when fresh applied by the proponent.

**30.4.16** Expansion of Specialty Chemicals & Intermediates Manufacturing Unit at Plot no. B:36,37,39 Village Birwadi, Tehsil Mahad, District Raigarh, Maharashtra by M/s. Odyssey Organics Pvt Ltd– 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 along with the draft Term of References for the preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised by SEIAA. As per minutes of SEAC-1, Maharashtra, location of project falls within 5 Km distance of Eco sensitive area and project is treated as category 'A'

M/s. Odyssey Organics Pvt Ltd has proposed for expansion of Specialty Chemicals & Intermediates Manufacturing Unit at Plot no. B:36,37,39 Village Birwadi, Tehsil Mahad, District Raigarh, Maharashtra. Production capacity will be increased from 34.0 MTPM to

1801MTPM after expansion. It is proposed to manufacture 13 products of Dyes Intermediates – Nitro Amino Phenol groups and 14 products of Bulk drugs and intermediates. Cost of Project is Rs. 215.0 crores. Total plot area of the existing plant is 25000 m<sup>2</sup> and no additional land is required. Area earmarked for greenbelt is 5399 Sq.m. Water requirement will be increased from 52 m<sup>3</sup>/day to 468 m<sup>3</sup>/day after expansion and met from MIDC water supply. Effluent generation will be increased from 26 m<sup>3</sup>/day to 255 m<sup>3</sup>/day after expansion. Effluent will be treated in ETP followed by MEE. Treated effluent (229 m<sup>3</sup>/day) will be recycled through MEE and remaining treated effluent (10 m<sup>3</sup>/day) will be disposed to CETP. Hazardous waste generated from process will be sent to M.S.W.L. for Land Fill or Incineration. The Source of Electricity is from M.S.E.B. The power demand for the existing manufacturing activity is 146 KVA and additional 3431 KVA will be required for proposed expansion. Thus total power requirement will be 3577 KVA.

PP has to clarify as to whether location of the said project falls under MoEF&CC circular no. F No. 1-4/2012-RE (Pt.) dated 13<sup>th</sup> November, 2013 regarding direction under section 5 of the Environment (Protection) Act, 1986.

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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
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 16<sup>th</sup> 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. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
36. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
37. Material Safety Data Sheet for all the Chemicals are being used/will be used.
38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
39. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
40. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
41. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
42. Details of occupational health programme.
  - 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.
43. Socio-economic development activities shall be in place.
  44. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
  45. Note on compliance to the recommendations mentioned in the CREP guidelines.
  46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
  47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
  48. Total capital cost and recurring cost/annum for environmental pollution control measures.
- 49. Corporate Environmental Responsibility**
- (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - (b) Does the Environmental Policy prescribe for standard operating process/procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA report.
  - (c) What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
  - (d) Does the company have a system of reporting of non-compliance / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
50. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof.

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 4<sup>th</sup> 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 decided that TORs prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of detailed report for the above mentioned project in addition to all the relevant information as per the Generic Structure of EIA given in Appendix III and IIIA in the EIA Notification, 2006. After detailed deliberations, the Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006, subject to submission of authentic document from the State Govt. indicating that the project is located in the notified industrial area. The final EIA/EMP report shall be submitted to the Ministry for obtaining environmental clearance.

**30.4.17** Expansion of Synthetic Organic Unit, Soda Ash Plant, Caustic Soda Plant and CPP at Survey No.478/P, 447-453, 455-457, Village Kalatalav, Tehsil & Tehsil Bhavnagar, Gujarat by M/s Nirma Ltd. – reg. TOR

The project authorities and their Consultant (M/s Team Labs and Consultants and San Envirotech 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). Soda ash plant, Caustic Soda Plant and CPP are listed at S.N. 4 (e), 4 (d) and 1 (d) under category 'A'.

M/s Nirma Ltd. has proposed for expansion of Synthetic Organic Unit, Soda Ash Plant, Caustic Soda Plant and CPP at Survey No.478/P, 447-453, 455-457, Village Kalatalav, Tehsil & Tehsil Bhavnagar, Gujarat. Total plant area is 555 acres. Cost for the proposed expansion is Rs. 1420 crores. Environmental clearance obtained from MoEF's letter no J-11011/456/2007-IA II (I) dated 24<sup>th</sup> June, 2008. Further, Ec for the expansion was obtained vide letter no. J-11011/423/2010-IA (I) dated 08.08.2014. CRZ clearance for sea water intake and cooling water return from DoEF, Gandhinagar vide letter no ENV-1098-1123-P dated 14.10.1998. CRZ clearance for laying of the treated effluent disposal pipeline for soda ash effluent vide letter no. ENV-1099-1740-P1 dated 19/08/2000 and amendment vide letter no. ENV-10-1099-1371 dated 21.07.2010. CRZ clearance for development of solar salts works from MoEF vide letter no. J-16011/25/2003-IA III dated 11.08.2004 and amendment dated 30.07.2007. Details of products with capacity are given below:

Sr. No.	Products/By-Products	Units	Existing Capacity	Proposed Capacity	Total Capacity after Expansion
<b>1</b>	<b>Soda Ash Plant</b>				
A	Light Soda Ash	TPD	2000	800	2800
B	Dense Soda Ash	TPD	1200	600	1800
C	Vacuum Salt	TPD	1600	---	1600
<b>2</b>	<b>Caustic Soda Plant</b>				
A	<b>Product</b>				
	Caustic Soda (100%)	TPD	480	270	750
	Hydrochloric Acid (100%)	TPD	40	240	280
B	<b>By-Products</b>				

	Chlorine Gas (100%)	TPD	425.2	240	665.2
	Hydrogen (100%)	TPD	12	6.75	18.75
	Sodium Hypo Chlorite (100%)	TPD	6	6	12
<b>3</b>	<b>Captive Power Plant</b>				
	Power	MW	97.18	100	197.18
<b>4</b>	<b>Chlorine &amp; Hydrogen Derivatives</b>				
A	Hydrogen Peroxide (100%)	TPD	---	84	84
B	Epichlorohydrine (ECH)	TPD	---	150	150
C	Glycerin	TPD	---	160	160
D	Mono Chloro Acetic Acid (MCAA)	TPD	---	120	120
	<b>By-Products</b>				
	Hydrochloric Acid (100%)	TPD	---	48	48
	Mother Liquor of MCAA	TPD	---	30	30
	Sodium Hypo Chlorite (100%)	TPD	---	10	10
	<b>Product</b>				
E	Trichloro Acetyl Chloride (TCAC)	TPD	---	10	10
	<b>By-Product</b>				
	Hydrochloric Acid (100%)	TPD	---	9	9
	Sodium Hypo Chlorite (100%)	TPD	---	1	1
	Sodium Bisulfite Solution (100%)	TPD	---	3	3
<b>5</b>	<b>Toilet Soap Plant</b>				
	Toilet Soap	TPD	200	---	200
	Detergent Powder	TPD	414.66	---	414.66
	Detergent Cake	TPD	414.66	---	414.66
	Fatty Acid	TPD	150	---	150
	Glycerin	TPD	167	---	167
<b>6</b>	<b>Bromine Plant</b>				
	Bromine	TPD	10	---	10

ESP will be provided to the coal fired boiler (100 TPH) for Soda Ash plant. ESP will be provided to coal fired boiler of caustic soda plant. 3 scrubbers and two ESP in series will be provided in Lime Kilns (A to F)-6 nos. Brine scrubber will be provided to ammonia recovery unit to control process emission NH<sub>3</sub>. Bagfilter will be provided to lime grinding system (2 Nos.) Water scrubber will be provided to HCl synthesis Unit-1 to control HCl & Cl<sub>2</sub>. Caustic scrubber will be provided to waste gas dechlorination system-1 to control Cl<sub>2</sub> emission. Ceramic and activated carbon filter will be provided to solvent recovery and Hydrogenation plant. Scrubber will be provided to control process emission viz. HCl, SO<sub>2</sub>, SO<sub>2</sub>. Water requirement will be increased from 942.292 MLD to 1399.6 m<sup>3</sup>/day after expansion. Source of water supply is existing seawater intake facility i.e. from Sonarai Creek, near village: Gundala. Effluent generation will be increased from 413.21 m<sup>3</sup>/day to 581.92 m<sup>3</sup>/day after expansion. The effluent from soda ash plant will be passed through settling pond to remove suspended solids. The effluent from caustic soda plant will be treated in ETP for pH correction. Effluent from H<sub>2</sub>O<sub>2</sub> plant will be treated in ETP. Effluent from ECH plant after giving adequate treatment will be sent to salt works for salt recovery.

Settling Pond Sludge will be used in road construction, salt works bund preparation. Lime stone rejects /under size will be used in boilers for desulphurization in boilers. Brine sludge (Nonhazardous) in nature will be used dumped in identified area. Fly ash/ Bottom ash will be used as brick manufacturing and road making.

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

**B. 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 materials 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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, HCl, Cl<sub>2</sub>, NH<sub>3</sub>, methane and non-methane Hydrocarbon 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 16<sup>th</sup> 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. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
36. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
37. Material Safety Data Sheet for all the Chemicals are being used/will be used.
38. Chlorine handling and management plan
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 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. 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. Compliance report on the suggestions made during visit of the Sub-committee of EAC.

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 4<sup>th</sup> 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.

**30.4.18** Synthetic organic chemicals industry (dyes & dye intermediates at Sakarwadi, TalukaKopargaon, District Ahmednagar, Maharashtra by M/s Godavari Biorefineries Ltd.– reg. TOR

The project proponent did not attend the meeting. The Committee decided to consider the proposal through online as and when fresh applied by the proponent.

**30.4.19** Additional exploratory drilling of 35 wells in PEL offshore blocks IA,IB&IG,IE and IF in KG offshore, Kakinada rural, East Godavari District, Andhra Pradesh by M/s ONGC Ltd. – reg. EC

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

M/s ONGC Ltd. has proposed for Additional exploratory drilling of 35 wells in PEL offshore blocks IA,IB&IG,IE and IF in KG offshore, Kakinada rural, East Godavari District, Andhra Pradesh. PP informed that following ECs have been obtained for drilling in the block:

- i) J-11011/178/2008 IA – II (I) dated 28<sup>th</sup> April, 2008.
- ii) J-11011/474/2010 IA II (I) dated 11<sup>th</sup> May, 2011.
- iii) J-11011/70/2011-IA II (I) dated 6<sup>th</sup> March, 2014.

Status of existing EC's are as given below:

S.N.	Name of Block	Total No. of locations ( EC obtained)	No. of Wells drilled	Balance locations ( EC available)
1	IA	7	4	3
2	IB & IG	22	11	11
3	IE	10	6	4
4	IF	22	13	9

PP informed that several significant hydrocarbon discoveries have been made in these blocks in the wells so far drilled. At present GS-15-1, GS-15-13 A of IF Block, GS-49-4 & GS-49-6 Wells of IA block are under production. G-4-2, G-4-3, G-4-6, GS-29-5, GS-29-10 of IB & IG blocks are potential oil and gas wells and produced oil @ 2400-3800 bbls/day and gas @ 50,000-4,00,000 SCMD during testing.

Water depth in drilling varies from 5.0 – 430 m and depth of drilling varies from 2000-4000 m from seabed. Distance of the proposed locations from the coast varies from 2.0 – 18.5 km and no permanent construction will be carried out for exploratory drilling. Type of drilling fluid will be WBM/SOBM. It is reported that no eco-sensitive zone is located within 15 Km distance. Cost of project is Rs. 2800 Crore. Water requirement from sea shall be about 25-30 m<sup>3</sup>/day for each well. Residual water /synthetic based mud will be treated onboard and reused while the rejected solids will be collected washed and discharged as per MoEF guidelines. Rejected drilling mud drill cuttings shall be disposed off in the sea as they are inert washed, washings will be collected and recirculated for making drill mud composition, cuttings will be collected and brought to the onshore for disposal. Drill cuttings will be generated around 220-250 m<sup>3</sup>/day per well. Spent lube will be collected, stored, transported through offshore support vessels (OSVs) to shore base and disposed as per the MoEF guidelines and in compliance to the Hazardous Waste ( Handling & Management ) Rules, 2008. Fire, blowout oil spill contingency plans will be developed before commencement of operations for all the risks envisaged in the drilling operations. DG set (4 nos.) of 1430 KVA shall be installed. The Committee exempted the project proposal from EIA report preparation/public hearing as per para 7 (ii) of EIA Notification, 2006.

After detailed deliberations, the Committee recommended the proposal for amendment in the existing environmental clearance and stipulated the following specific conditions along with other environmental conditions:

- i. Only high efficiency DG set with adequate stack height and modern emission control equipment and low sulphur clean diesel shall be used. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- ii. Gas produced during testing shall be flared with appropriate flaring booms.
- iii. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The stack height shall be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.
- iv. Total water requirement shall not exceed 30 m<sup>3</sup>/day/well and prior permission shall be obtained from the Competent Authority for the drawl of water. Only water based mud system shall be used.
- v. Water based drilling mud shall be discharged to the sea after proper dilution as per E(P) Rules vide G.S.R 546(E) dated 30<sup>th</sup> August, 2005.
- vi. The Company shall ensure that there shall be no impact on flora fauna due to drilling of wells in the offshore sea. The company shall undertake conservation measures to protect the marine animals/biota in the region. The company shall monitor the petroleum hydrocarbons and heavy metals

concentration in the marine fish species regularly and submit report to the Ministry.

- vii. Treated wastewater (produced water or formation water) shall comply with the marine disposal standards notified under the Environment (Protection) Act, 1986. Sewage treatment on board of the rig as per MARPOL regulation. Residual chlorine shall not exceed 1 mg/l before disposal.
- viii. The drill cutting (DC) wash water shall be treated to conform to limits notified under the Environment (Protection) Act, 1986, before disposal into sea. The treated effluent shall be monitored regularly.
- ix. All the guidelines shall be followed for the disposal of solid waste, drill cutting and drilling fluids for onshore and offshore drilling operation notified vide GSR.546(E) dated 30<sup>th</sup> August, 2005. Different types of wastes shall be kept segregated.
- x. High efficiency equipment shall be used to separate solids, hydrocarbons and water such as shale shakers with improved capacity to filter smaller solids, low shear pumps for use in produced water shall be employed.
- xi. Good book keeping practices shall be put in place to manage wastes such as waste tracking program i.e. identify where and when the waste generated, the type of waste and its volume, the disposal method and its location, and the personnel responsible for the waste management.
- xii. A waste minimization plan shall be developed and followed through proper inventory management following best practices in drilling operations, good housekeeping practices and optimized equipment maintenance schedules.
- xiii. Only essential rig personnel shall be on board the rig. Emergency Response Plan and health, safety and environment (HSE) system shall be installed. Geo- hazard and geotechnical studies shall be carried out to ensure safe drilling operations.
- xiv. All the hazardous waste generated at the rig/offshore facility shall be properly treated, transported to on shore and disposed of in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2008. No waste oil shall be disposed off into sea. Waste/used oil shall be brought on-shore and sold to MoEF/CPCB authorized recyclers/re-processors only.
- xv. Requisite infrastructure facilities shall be provided near the offshore installations so that booms and skimmers/chemical dispersants could be deployed immediately in case of oil leakage from the installations. Efforts shall

be made to curtail the oil slick within 500 meters of the installation and accordingly, action plan and facilities to check the oil slick within 500 meters shall be provided.

- xvi. Approval from DG Shipping under the Merchant Shipping Act prior to commencement of the drilling operations shall be obtained. At least 30 days prior to the commencement of drilling, the exact location shall be intimated to the Director General of Shipping and the Company shall abide by any direction he may issue regarding ensuring the safety of navigation in the area.
- xvii. The International 'Good Practices' adopted by the Petroleum Industry following International norms to safeguard the coastal and marine biodiversity shall be implemented by the company.
- xviii. The Company shall take necessary measures to reduce noise levels such as proper casing at the drill site and meet DG set norms notified by the MoEF. Height of all the stacks/vents shall be provided as per the CPCB guidelines.
- xix. 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.
- xx. The project proponent shall also comply with the environmental protection measures and safeguards recommended in the EIA /EMP/RA/NIO report.
- xxi. Full drawings and details of Blow Out Preventorto encounter well kick due to high formation presence, if encountered, shall be submitted to the Ministry within 3 months of the issue of environment clearance.
- xxii. On completion of activities, the well shall be either plugged and suspended (if the well evaluation indicates commercial quantities of hydrocarbon) or killed and permanently abandoned with mechanical plugs and well cap. If well is suspended, it shall be filled with a brine solution containing small quantities of inhibitors to protect the well. The position at the end of the activities shall be communicated in detail to the Ministry indicating the steps taken i.e. whether all the wells are plugged or abandoned and necessary precautions taken.
- xxiii. A brief report on environmental status & safety related information generated and measures taken as well as frequency of such reporting to the higher Authority shall be submitted to this Ministry and its respective Regional Office at Bhubaneshwar.
- xxiv. Petroleum and Natural Gas (Safety in Offshore Operations) Rules 2008 of OISD should be strictly adhered to.

- xxv. Recommendations mentioned in the Risk Assessment & Consequence Analysis and Disaster Management Plan shall be followed.
- xxvi. Adequate funds both recurring and non-recurring shall be earmarked to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.
- xxvii. An independent audit shall be done to ensure that the Environment Management Plan is in place in totality.

**30.4.20** Development drilling of 45 wells in KG offshore, KG-DWN-98/2 Block, at Allavaram, East Godavari District, Andhra Pradesh by M/s ONGC Ltd. - reg. TOR

The said project was already considered in the 26<sup>th</sup> EAC meeting held during 29<sup>th</sup>-30<sup>th</sup> October, 2014 at item no. 26.4.10.

**Time: 5.00 PM**

**30.5**      **Any Other Items**

**30.5.1** Environmental clearance for Expansion of Molasses based Distillery from 45 KLPD to 75 KLPD at Nillikuppam town, Panruti Taluk, District Cuddalore, Tamil Nadu by EID Parry- Amendment to EC issued vide letter no. 11011/233/2008-IA II (I) dated 09.07.2008

MoEF vide letter no J-11011/233/2008 IA II (I) dated 9<sup>th</sup> July, 2008 has issued environmental clearance for the above mentioned project with following condition:

*“The spent wash generated (302 m<sup>3</sup>/day) after bio-methanation shall be composted with press mud.”*

Now, PP vide letter dated 22.1.2008 has requested for the following spent wash treatment scheme:

*“After biomethanation, treated spent wash will be passed through RO plant followed by MEE, ATFD and Drum dryer. The dried spent wash powder (95% TS) will be sold as potash fertilizer. Permeate water, condensate water will be treated in condensate polishing unit. Treated condensate effluent will be recycled/reused for process and cooling towers. Distillery will be operated for 365 days”*

After detailed deliberation, the Committee recommended the above amendments in EC letter dated 9<sup>th</sup> July, 2008.

**30.5.2** Capacity Augmentation of existing DAP/NPK Plant of M/s Gujarat State Fertilizers & Chemicals Ltd, Sikka Unit, Post Motikhavdi, Jamnagar, Gujarat J-11011/17/2013-IAII(I) – correction/amendment of EC

MoEF vide letter no J-11011/17/2013 dated 9<sup>th</sup> October, 2014 has issued environmental clearance for the above mentioned project with following condition:

There are 2 storage tanks of 3000MT in the plant and decided that there would be 2 storage tanks of 10,000 MT capacity and storage at any time will not exceed 16,000 MT of a total capacity of 26,000MT.

Now, Gujarat State Fertilizers & Chemicals Ltd. vide letter no. GSFC/SU/EC/1/11 dated 14<sup>th</sup> November, 2014 has informed that two ammonia tanks at SST looking to receipt of higher capacity of ammonia marine tanker. Now a day, Marine tanker with higher capacities are available. If two marine tankers loaded with 20000 to 25000 MT each reaching our liquid cargo berth jetty, ammonia can be unloaded at a rate of 500 MT/hr from marine tanker to Sikka Shore terminal (SST) tanks, hence can be unloaded within three to four days where transfer rate of ammonia from SST to plant site is only 25 MT/hr. It means the unloading rate from marine tanker to SST is 20 times higher than transfer rate from SST to plant site. In this case marine tanker has to wait for more time to unload ammonia due to space limitation at SST tanks and incurred a huge demurrage in foreign currency. Hence it is required to install two ammonia tanks as ST and one at plant site. Therefore, PP has requested for the following amendment :

**1 Amedment-1:**

GSFC can construct ammonia tanks as per TOR, but after installation of new ammonia tanks, the total storage capacity of ammonia will be 56000 MT and GSFC will not store ammonia more than 46000 MT in a distributed manner. It means that GSFC will not store ammonia more than 82 % of the tank capacity at any point of time.

**2 Amendment-2:**

GSFC (Sikka Unit) will spend for CSR/ESC up to 3 % of the project cost and 2 % of the average net profit of last three years as per companies act in vogue.

After detailed deliberation, the Committee recommended the above amendments in EC letter dated 9<sup>th</sup> October, 2014.

**30.5.3** Drilling of Exploratory/Appraisal Wells (300) at RJ-ON-90/1 Block of M/s Cairn India Ltd at District Barmer & Jalore, Rajasthan F.No.J-11011/25/2013-IAII(I) – reg. correction/amendment in EC

MoEF vide letter no J-11011/25/2013 dated 8<sup>th</sup> August, 2014 has issued environmental clearance for the above mentioned project with following condition:

*“Total water requirement shall not exceed 25 m<sup>3</sup>/day and prior permission shall be obtained from the concerned agency.”*

PP vide letter no CIL/GGN/MoEF/14/9/5/57 dated 5<sup>th</sup> September, 2014 has informed that water requirement will be vary from 41 m<sup>3</sup>/day to 66 m<sup>3</sup>/day depending upon the well depth. Therefore, PP requested for amendment in the existing EC.



After detailed deliberation, the Committee recommended that quantity of water requirement may be considered as 66 m<sup>3</sup>/day instead of 25 m<sup>3</sup>/day due to deeper depth of drilling and necessary amendment may be done in the EC letter dated 8<sup>th</sup> August, 2014.

**30.5.4** Integrated sugar complex comprising of 5000 TCD Sugar plant, 26 MW co-gen power plant and 120 KLPD of Distillery plant in Hurugalawadi & Chikkonahalli, Villages, Maddur Taluk, Mandya District, Karnataka by M/s NSL Sugars (F.No.J-11011/11/2011-IAII(I) - reg. Amendment in EC

MoEF vide letter no J-11011/11/2011 dated 23<sup>rd</sup> April, 2013 has issued environmental clearance for the above mentioned project with following specific condition:

“Spent wash generation from molasses and grain based distillery shall not exceed 8 KI/KI of alcohol produced and 6 KI/KI of alcohol produced respectively. Spent wash from molasses/cane juice based distillery shall be treated in the existing bio-methanisation plant followed by concentration in MEE. Concentrate from MEE shall be biocomposted and remaining portion will be sent to rotary dryer. The powder from rotary dryer shall be incinerated in cogeneration boiler to achieve zero discharge.”

Now, PP vide letter dated 20<sup>th</sup> August, 2014 has informed that there is a heavy demand from local farmers for bio-organic manure. The press mud generated from the sugar plant & yeast sludge generated from the distillery plant will be utilized scientifically in the bio-composting. Therefore PP has requested for following amendment:

The total spent wash generation will be 480 KLD when molasses is used as feed stock. Out of 480 KLD of biomethanted spent wash 400 KLD will be treated in MEEs @ 25 brix to generate 96 KLD of concentrated spent wash which will be utilized in bio-composting. The balance 80 KLD will be treated in MEEs @ 40 brix to generate 12 KLD of concentrated spent wash, which will be mixed with bagasse and dried in rotary drier to use as fuel in existing incineration boiler. PP also requested for change in land required for biocomposting from 2 acres to 6.5 acres.

After detailed deliberation, the Committee recommended the above amendments in EC dated 23<sup>rd</sup> April, 2013. The Committee noted that PP has installed MEE @ 40 brix instead of 60 brix. Therefore, the Committee also recommended that the molasses based distillery unit shall not be operated during monsoon period. It was also recommended to change the land requirement for biocomposting from 2 acres to 6.4 acres of land.

**30.5.5** 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. F.No.J-11011/824/2007-IAII(I) – reg. Amendment in EC.

MoEF vide letter no J-11011/824/2007 dated 11<sup>th</sup> July, 2008 has issued environmental clearance for setting up of grain based distillery (60 KLPD) distillery alongwith Captive Power Plant and 1 KLPD Malt Spirit Plant. Further amendment in environmental clearance letter dated 11<sup>th</sup> July, 2008 was granted on 3<sup>rd</sup> June, 2009 for enhancing boiler’s capacity from 20 TPH to 28 TPH.

Now, PP has proposed for capacity enhancement from 60 KLPD to 75 KLPD by making modifications in the process. The Committee noted that there is change in scope of the project. Therefore, the Committee suggested to submit form1 alongwith pre-feasibility report

and comparative data for 60 KLPD to 75 KLPD. The Committee, therefore deferred the project proposal.

**30.5.6 Additional Exploratory drilling 28 wells in KG Basin on-land PML acreages of Krishna District, Andhra Pradesh of M/s Oil and Natural Gas Corporation Limited- R. (Old F.No.J-11011/68/2011-IA-II(I)-Regarding Amendment in EC**

MoEF had earlier granted Environmental Clearance for exploratory drilling of 25 wells in the PEL 1A & 1B blocks of KG Basin vide **EC no J-11011/68/2011-IA II (I) dated 14<sup>th</sup> June'2013** after EIA studies and Public hearings.

M/s Oil and Natural Gas Corporation Limited has proposed for additional exploratory drilling 28 wells in KG Basin on-land PML acreages of Krishna District, Andhra Pradesh. The details of the public hearings held earlier in Krishna and West Godavari districts are as given below.

Name of the district	Place of PH	Date of PH
Krishna	Bantumilli	10.11.2011
	Kaikaluru	08.01.2014
West Godavari	Bhimavaram	04.11.2011
	Penugonda	13.03.2014

In the block, the following ECs have earlier been issued by MEF&CC

1. No. J-11011/178/2008-IA II( I) dated 28<sup>th</sup> April 2008      38 wells
2. No. J-11011/478/2010 -IA II( I) dated 18<sup>th</sup> May 2012      24 wells
3. No. J-11011/68/2011-IA II( I) dated 14<sup>th</sup> June 2013      25 wells

Public hearing has also been already conducted in the district while obtaining the aforesaid EC. The Committee noted that instance proposal is the extension of number of wells in the existing block wherein hydrocarbon is being explored for last 20 years. Therefore, the committee was of the view that instant proposal can not be considered for award of TORs. But, the proposal may be treated as amendment in existing EC with increased number of wells as EIA-EMP report has been prepared alongwith public consultation. Accordingly, the Committee exempted the project proposal from EIA report preparation/public hearing as per para 7 (ii) of EIA Notification, 2006.

The Committee, therefore, recommended the proposal as amendment of existing EC No. J-11011/68/2011-IA II( I) dated 14<sup>th</sup> June 2013, which was issued for 25 wells and has now recommended for amendment in the existing EC for additional 28 wells with the following specific conditions along with other environmental conditions:

- i. The present EC is for Exploratory Drilling only. In case Development drilling to be done in future, prior environmental clearance must be obtained from the Ministry.
- ii. Ambient air quality shall be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, methane & Non-methane HC etc.

- iii. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- iv. Approach road shall be made pucca to minimize generation of suspended dust.
- v. The company shall make the arrangement for control of noise from the drilling activity. Acoustic enclosure shall be provided to DG sets and proper stack height shall be provided as per CPCB guidelines.
- vi. Total water requirement shall not exceed 20 m<sup>3</sup>/day and prior permission shall be obtained from the concerned agency.
- vii. The company shall construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards.
- viii. 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. The membership of common TSDF shall be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill shall be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bhopal.
- ix. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.
- x. Oil spillage prevention scheme shall be prepared. In case of oil spillage/contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.
- xi. 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 30<sup>th</sup> August, 2005.
- xii. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare shall be explored. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
- xiii. The company shall develop a contingency plan for H<sub>2</sub>S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H<sub>2</sub>S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xiv. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xv. Blow Out Preventer (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvi. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xvii. 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 to the 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.

- xviii. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xix. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xx. In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.
- xxi. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bhopal.
- xxii. Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office at Bhopal.
- xxiii. 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. Implementation of such program shall be ensured accordingly in a time bound manner.
- xxiv. An audit shall be done to ensure that the Environment Management Plan is implemented in totality and report shall be submitted to the Ministry's Regional Office.
- xxv. All personnel including those of contractors shall be trained and made fully aware of the hazards, risks and controls in place.
- xxvi. Company shall have own Environment Management Cell having qualified persons with proper background.
- xxvii. Company shall prepare operating manual in respect of all activities. It shall cover all safety & environment related issues and system. Measures to be taken for protection. One set of environmental manual shall be made available at the drilling site/ project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office.

### **23<sup>rd</sup> December, 2014 (Day 2)**

#### **1<sup>st</sup> Session: Time: 10:00 AM**

#### **30.6 Environmental Clearance**

##### **30.6.1** Grain based Distillery (90 KLPD) alongwith Cogeneration Power Plant (4 MW) at Khasara No. 212, Plot No. 2, Besides, NH 34, Village Paschim Mateshpur District Uttar Dinajpur, West Bengal by M/s Tantia Agrochemicals Pvt. Ltd. – reg. EC

The project proponent and their consultant (Mantras Green Resources 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 3<sup>rd</sup> Meeting of the Expert Appraisal Committee (Industry) held during 3<sup>rd</sup> to 5<sup>th</sup> December, 2012 for preparation of EIA-EMP report. All the grain based Distillery Units are listed at S.N. 5(g) (ii) under Category 'A' and appraised at the Central level.

M/s Tantia Agrochemicals Pvt. Ltd. has proposed for setting up of Grain based Distillery (90 KLPD) alongwith Cogeneration Power Plant (4 MW) at Khasara No. 212, Plot No. 2, Besides, NH 34, Village PaschimMateshpur District Uttar Dinajpur, West Bengal. Earlier PP informed that the total plot area is 28000 m<sup>2</sup>. However, as per EIA/EMP report, it is reported that plot area is 50380 m<sup>2</sup>. Out of which area earmarked for greenbelt is 12500 m<sup>2</sup>. Total cost of project is Rs. 119.90 Crores. River Sudhani is flowing at a distance of 5 Km. It is reported that no national park/ wildlife sanctuary is located within 10 Km distance. However, Raiganj Bird sanctuary is located at a distance of 45 Km. Interstate boundary Bihar is 6 Km away. Distillery will be operated for 330 days in a year.

Ambient air quality monitoring was carried out at 4 locations April, 2013 –May, 2013. The Committee noted that submitted data of ambient air quality monitoring data seems to be unrealistic. ESP will be provided to control rice husk fired boiler (30 TPH) to control particulate emissions. DG set (2 MW) will be installed. Fresh water requirement from ground water source will be 864 m<sup>3</sup>/day. Spent wash generation will be 430 m<sup>3</sup>/day and centrifuged in decanter to form wet cake. Thin slop will be evaporated in MEE and concentrated will be mixed with wet cake to form DWGS. Copy of public hearing report is not legible. The Committee suggested to incorporate legible copy of public hearing proceedings and suggested to modify the EIA-EMP report on following lines;

- i) Collect baseline data in respect of AAQM, Water Quality of surface water and ground water and Noise level for one month.
- ii) Submit background data of AAQM.
- iii) Market survey of availability of grain.
- iv) legible copy of public hearing proceedings to be submitted.
- v) Quantify steam requirement for MEE.
- vi) Treatment scheme for Spentlees and MEE condensate.
- vii) Water balance chart.
- viii) Layout plan for proposed greenbelt.

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

**30.6.2** Specialty Chemical Manufacturing Plant at Village Mandali, Tehsil & District Mehsana, Gujarat by M/s Keshav Fertilizers Pvt. Ltd. J-11011/374/2012-IA-II(I) – reg. EC

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

**30.6.3** Pesticide Technical Product Manufacturing Unit at Village Seerapalayam, Taluka Madukkarai, District Coimbatore, Tamil Nadu M/s Fytocare Chemicals (p) Ltd. J-11011/285/2012-IA-II(I) – reg. EC

The project proponent and their consultant (Anand 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

5<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 31<sup>st</sup> January, 2013 to 1<sup>st</sup> February, 2013 for preparation of EIA-EMP report. 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 Fytcare Chemicals (P) Ltd have proposed for setting up of Pesticide Technical Product Manufacturing Unit at Village Seerapalayam, Taluk Madukkarai, District Coimbatore in Tamil Nadu. Unit is engaged in pesticide formulation activity in the existing unit. Total plot area is 14000 m<sup>2</sup> and no additional land is required for proposed activity. It is reported that no eco sensitive zone ( National Park, Wildlife Sanctuary) is located within 10 Km distance. Cost of project is Rs. 75 Lakhs. Following product will be manufactured:

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

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during March, 2013-May, 2013 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (35.0 µg/m<sup>3</sup> to 57.1 µg/m<sup>3</sup>), PM<sub>2.5</sub> (11 µg/m<sup>3</sup> to 27.3 µg/m<sup>3</sup>), SO<sub>x</sub> (7.0 µg/m<sup>3</sup> to 11.9 µg/m<sup>3</sup>) and NO<sub>x</sub> (8.5 µg/m<sup>3</sup> to 15.0 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.61 µg/m<sup>3</sup>, 1.14 µg/m<sup>3</sup> and 1.64 µg/m<sup>3</sup> with respect to PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>2</sub>. The resultant concentrations are within the NAAQS.

Dust collector will be provided to agro waste/ coconut wood fired boiler to control particulate emissions. However, the Committee suggested bagfilter instead of dust collector for better efficiency. Fresh water requirement from ground water source will be 18.99 m<sup>3</sup>/day. Effluent generation will be 0.98 m<sup>3</sup>/day and effluent will be distilled to evaporate the water content of the stated effluent. The distilled water will be passed through activated carbon column and the resultant water will be used for calk making in the existing chalk production process. Used oil will be reused for lubrication of some small parts of machinery & for rust proofing and leftover quantity will be sold to MoEF/ CPCB registered recyclers. Process water/ distillation residue will be sent to co-processing to the nearby ACC cement factory. Spent solvent will be sent to recycled/reused or incineration. Ash generation will be used for landfilling in the plant land or sent to paver block /building block manufacturers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the TN Pollution Control Board on 17<sup>th</sup> September, 2014. The issues were raised regarding local employment, satisfactory performance of the existing unit 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) Bagfilter shall be provided to agro waste/ coconut wood fired boiler to control particulate emissions .
- ii) Total fresh water requirement from ground water source shall not exceed 18.99 m<sup>3</sup>/day.

- iii) Effluent generation will be 0.98 m<sup>3</sup>/day and effluent will be distilled to evaporate the water content of the stated effluent. The distilled water will be passed through activated carbon column and the resultant water will be used for calk making in the existing chalk production process..
- iv) No effluent will be discharged outside the plant premises.
- v) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- vi) 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.
- vii) All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 28<sup>th</sup> November, 2011 shall be satisfactorily implemented.
- viii) 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.
- ix) At least 2.5 % 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.

**30.6.4 Pigment Manufacturing Unit at Sy. No 71/2, Village Shikarpur, Taluka Bhachau, District Kutchh, Gujarat by M/s Green Sea Industries Pvt. Ltd. – reg. EC**

The project proponent and their consultant (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 6<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 5<sup>th</sup> – 7<sup>th</sup> March, 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 at Central level.

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

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

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during October, 2013-December, 2013 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (52.8 µg/m<sup>3</sup> to 68.9 µg/m<sup>3</sup>), PM<sub>2.5</sub> (24.1 µg/m<sup>3</sup> to 37.4 µg/m<sup>3</sup>), SO<sub>x</sub> (7.2 µg/m<sup>3</sup> to 12.7 µg/m<sup>3</sup>) and NO<sub>x</sub> (9.3 µg/m<sup>3</sup> to 16.5 µg/m<sup>3</sup>) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.688 µg/m<sup>3</sup>, 0.271 µg/m<sup>3</sup> and 0.207 µg/m<sup>3</sup> with respect to SPM, SO<sub>2</sub> and NO<sub>x</sub>. The resultant concentrations are within the NAAQS. Cyclone and bagfilter will be provided to coal fired boiler and thermic fluid heater to control particulate emissions. Three stage scrubber will be provided to the reaction vessel to control process emissions viz. HCl and Cl<sub>2</sub>. Total water requirement will be 114 m<sup>3</sup>/day. Out of which fresh water requirement from Gujarat Water Infrastructure will be 38 m<sup>3</sup>/day and remaining water requirement (76 m<sup>3</sup>/day) will be met from recycled/treated effluent. Effluent will be treated in ETP followed by RO. RO permeate will be recycled/reused in the process. RO rejects will be concentrated in MEE. ETP waste and MEE salt will be sent to TSDF site. Used oil will be sent 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 26<sup>th</sup> August, 2014. The issues were raised regarding CSR, local employment, waste management and disposal, amount earmarked towards pollution control measures, odour 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 EC and stipulated the following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- I. 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. The system shall be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant shall be automatically stopped.
- II. Ambient air quality data shall be collected as per NAAQS standards notified by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> September, 2009. The levels of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, HCl and Cl<sub>2</sub> and HC (Methane and Non-methane) shall be monitored in the ambient air and emissions from the stacks and displayed at a convenient location near the main gate of the company and at important public places.
- III. In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored.
- IV. Total fresh water requirement from Gujarat Water Infrastructure shall not exceed 38 m<sup>3</sup>/day.



- V. Total industrial wastewater generation shall not exceed 1153 m<sup>3</sup>/day. Industrial effluent shall be treated in ETP followed by RO. RO permeate will be recycled/reused in the process. RO rejects will be concentrated in MEE.
- VI. No effluent will 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. 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.
- IX. 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.
- X. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.

**30.6.5** Installation of Feed Preparation Unit (FPU) for Catalytic Dewaxing Unit (CDWU) at Haldia Refinery, West Bengal by M/s Indian Oil Corporation Ltd. (IOCL) – reg. EC

The Committee noted that M/s IOCL Haldia Refinery has submitted the project proposal in a piece meal basis. A project proposal namely “expansion of Refinery capacity from 7.5 MMTPA to 8.0 MMTPA by revamping CDU-I (from 3.3 to 3.8 MMTPA) & revamping VDU-I (from 1.5 to 1.7 MMTPA) at Haldia Refinery” was discussed in the 28th EAC meeting held during 1st-2nd December , 2014, wherein the Committee recommended them to update the existing EIA – EMP report and submit the proposal for consideration. The Committee also noted that PP has not given any photograph of the existing Environmental management system in the EIA report and during presentation. Therefore, the Committee recommended to submit the updated or integrated EIA-EMP report to know the overall cumulative impacts.

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 response of the PP will be discussed internally without calling project proponent.

**30.6.6** Expansion of Synthetic Organic Chemicals Manufacturing Unit at Plot No. 4, Sy. No. 277/1, Village Ukharal, Tehsil Ghogha, District Bhavnagar, Gujarat by M/s Medinex Specialty Chemicals Pvt. Ltd.– reg. EC

The project proponent and their consultant ( Earth Care Enviro Solution 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 6<sup>th</sup> Meeting of the Expert Appraisal Committee (Industry) held during 5<sup>th</sup> – 7<sup>th</sup> March, 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 at Central level.

M/s Medinex Speciality Chemicals Pvt. Ltd has proposed for expansion of Synthetic Organic Chemicals Manufacturing Unit at Plot No. 4, Sy. No. 277/1, Village Ukharal, Tehsil Ghogha, District Bhavnagar, Gujarat. No national park or wildlife sanctuary is located within 10 Km. total plant area is 3857 m<sup>2</sup>. The cost of project is Rs. 32.84 Lakh. Following products will be manufactured:

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

Stack height of 12 m will be provided to oil fired boiler. Water requirement from ground water source will be increased from 3.325 m<sup>3</sup>/day to 4.915 m<sup>3</sup>/day after expansion. Industrial effluent will be increased from 0.385 m<sup>3</sup>/day to 1.590 m<sup>3</sup>/day after expansion. Industrial effluent will be treated in ETP. ETP sludge and Hyflow powder will be sent to TSDF. Used oil will be sent to the authorized recyclers/re-processors.

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 8 locations during March, 2013-June, 2013 and submitted baseline data indicates that ranges of concentrations of PM<sub>10</sub> (29.28 µg/m<sup>3</sup> to 99.04 µg/m<sup>3</sup>), PM<sub>2.5</sub> (5.48 µg/m<sup>3</sup> to 40.94 µg/m<sup>3</sup>), SO<sub>x</sub> (1.36 µg/m<sup>3</sup> to 13.43 µg/m<sup>3</sup>) and NO<sub>x</sub> (1.59 µg/m<sup>3</sup> to 19.64 µg/m<sup>3</sup>) respectively. FO fired boiler will be used. Water requirement will be increased from 3.325 m<sup>3</sup>/day to 4.915 m<sup>3</sup>/day after expansion. Wastewater generation will be increased from 0.385 m<sup>3</sup>/day to 1.94 m<sup>3</sup>/day after expansion. Industrial effluent will be treated in the ETP comprising primary, secondary and tertiary treatment facilities. ETP sludge will be sent to TSDF. Spent oil and spent catalyst will be sent to the authorized re-processor. M/s Medinex Specialty Chemicals Pvt. Ltd. has not obtained EC as the same was not required at that time. The Committee suggested them to submit a copy of consent to establish issued by the GPCB.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 18<sup>th</sup> July, 2014. The issues were raised regarding free medical camp, eye check up, local employment etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

The Committee noted that PP has submitted the draft EIA-EMP report for two units together and with different products list. Therefore, the Committee was of the view to recast final EIA-EMP report for the proposed unit i.e. M/s Medinex Specialty Chemicals Pvt. Ltd. as per the procedural requirement.

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 response of the PP will be discussed internally without calling project proponent.

### 30.6.7 Expansion of grain/molasses based Distillery (from 120 KLPD to 140 KLPD) of M/s Radico NV Distilleries Maharashtra Ltd., at Plot No. D 192 – 195, Five Star Industrial Area (MIDC), Shendra, Tehsil and District Aurangabad, Maharashtra- reg. EC.

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 21<sup>st</sup> Meeting of the Expert Appraisal Committee (Industry) held during 30<sup>th</sup> – 31<sup>st</sup> July, 2014 for preparation of EIA-EMP report. All molasses based distilleries are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Radico NV Distilleries Maharashtra Ltd. has proposed for expansion of grain/molasses based Distillery (from 120 KLPD to 140 KLPD) at Plot No. D 192 – 195, Five Star Industrial Area ( MIDC), Shendra, Tehsil and District Aurangabad, Maharashtra. PP has obtained environment clearance vide MoEF letter no J-11011/441/2006 IA II (I) dated 8<sup>th</sup> June, 2007 for setting up of 120 KLPD distiller. Plot area is 93 acres of which greenbelt will be developed in 30.7 acres. It is reported that no national park/ wildlife sanctuary/ biosphere reserves are located within 10 Km distance. Few patches of Reserve forests existing with 10 km distance. Sukhna River and Dudhana River are flowing with 10 Km distance. Cost of expansion project is Rs. 15 Crore. Rs. 3.5 Crore and Rs. 35 Lakhs per annum are earmarked towards capital cost and recurring cost per annum for pollution control measures. Distillery will be operated for 330 days.

Ambient air quality monitoring was carried out at 9 locations during April, 2014 –June, 2014 and submitted data indicates as PM10 (59.3–90.2 ug/m<sup>3</sup>), PM2.5 (29.0–43.2 ug/m<sup>3</sup>), SO<sub>2</sub> (6.4 – 12.3 ug/m<sup>3</sup>) and NO<sub>2</sub> (15.0-23.2 ug/m<sup>3</sup>). Predicted value of ground level concentration due to proposed project is SPM (0.9 ug/m<sup>3</sup>) and SO<sub>2</sub> (4.6 ug/m<sup>3</sup>).

Fresh water requirement for molasses based distillery will be increased from 1043 m<sup>3</sup>/day to 1170 m<sup>3</sup>/day after expansion. Fresh water requirement for grain based distillery will be increased from 966 m<sup>3</sup>/day to 1071 m<sup>3</sup>/day after expansion. Spent wash after anaerobic treatment in the bio-methanation plant will be evaporated in MEE. After evaporation the net effluent generation will be 175.5 m<sup>3</sup>/day. Concentrate will be utilized over press mud for bio-composting. For bio-composting, 16 acres of land is available while the required land is 8.6 acres for 140 KLPD production, of which 4 acres is proposed to be covered BC yard. The condensate from MEE is further treated in process condensate treatment plant and reused in the process as well as cooling tower make up. RO is kept as standby treatment facility. Total 16 acres bio-composting yard consisting of 14 acres open composting and two acres of covered composting yard already exists. No effluent will be discharged outside the plant premises and 'Zero' effluent discharge concept will be followed. PP informed that:

- i) The capacity expansion proposal is about 17 % only from 120 KLPD operation to 140 KLPD by adopting improved fermentation.
- ii) Process improvement in fermentation to achieve higher alcohol concentration and higher efficiency.
- iii) Installation of additional re-boiler for reducing effective volume from 10 L/L to 8.5 L/L.
- iv) No increase in steam consumption. Therefore no additional boiler and fuel consumption.
- v) The project is based on “ Zero Effluent Discharge”.
- vi) No additional land is required for the proposed expansion project as the proposed expansion will be done within the existing premises.
- vii) Fresh water requirement for per KL of alcohol produced has been reduced to about 9 KL/KL.

Bio-compost manure generation after expansion will be 11580 MTPA for which company has buy back arrangement with reputed fertilizer companies like TATA Rallis India, Tata Chemicals and Nav Bharat Fertilizer. The ash collected from boiler & ESP will be collected in the Silos where there will be closed loading arrangement with access only from the front side for ash loading. The ash will be disposed in wet state in covered vehicles. Ash is also mixed with press mud in wet state. Water is being sprayed periodically to keep the ash heap in wet condition. Yeast sludge, digester sludge & boiler ash mixed with press mud & finally disposed as bio-manure.

The Committee noted that one of the TOR point was to submit certified compliance report from the MoEF&CC's Regional Office for the environmental conditions prescribed in the existing EC. However, PP did not submit the certified compliance report of the environmental conditions. The proposal was deferred till the desired information is submitted. The above information shall be provided with the uploading of minutes on the website.

### **Reconsideration for Environmental Clearance**

#### **30.6.7 Expansion of Bulk Drugs Manufacturing Unit at Gat No.350, Village Wadhirwarhe, Tehsil Igatpuri, District Nashik, Maharashtra by M/s Delta Finochem (P) Ltd – reg. EC**

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 10<sup>th</sup> meeting held during 29<sup>th</sup> – 31<sup>st</sup> July, 2013. It was decided that since parameter of ground water is in higher side, the Committee desired to obtain view of State Pollution Control Board.

In response, Assistant Secretary (Tech.), Maharashtra Pollution Control Board vide letter no. MPCB/AS(T)/TB/B-2968 dated 24<sup>th</sup> July, 2014 informed that the Officials of Board at Nashik had collected JVS of effluent treatment plant on 02.07.2013. However, they have not carried out ground water sampling in the vicinity of the unit. In this regard, the MPCB had issued Show Cause Notice dated 27.05.2014 to M/s Delta Finochem (P) Ltd. for submitting false information to the Ministry of Environment & Forests. MPCB has recommended the analysis report of the ground water sample carried out by the MEF accredited lab namely M/s Ashwamedh Engineers & Consultants, CSL Nashik. The Committee noted that ground water quality analysis reports seem to be satisfactory.

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

- i) Adequate stack height shall be provided to furnace oil fired boiler as per CPCB/MPCB guidelines.
- ii) As proposed, scrubber shall be provided to control process emissions viz. HCl and Bromine. 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) Total fresh water requirement from tanker supply shall not exceed 40 m<sup>3</sup>/day. No ground water shall be used.
- iv) Effluent shall be treated in ETP followed by RO and treated effluent will be recycled/reused within factory premises. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.
- v) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- vi) As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge and process inorganic shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers.
- vii) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.
- viii) 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.
- ix) 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.
- x) All the commitment made regarding issues raised during the Public Hearing/consultation meeting held on 28<sup>th</sup> November, 2011 shall be satisfactorily implemented.

- xi) 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 Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- 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.

**30.6.8 Expansion of Fertilizer Plant at Sy.No.20/4 K.M. Stone, Indore-Ujjain Road, Dharampuri, Village Rajoda, Tehsil-Sanwar, District Indore, Madhya Pradesh by M/s Rama Phosphates Ltd .– reg. EC**

The above mentioned project proposal was considered in the meetings of REAC (I) held during 8<sup>th</sup>-9<sup>th</sup> January, 2013 and 29<sup>th</sup>-31<sup>st</sup> July, 2013. The Committee recommended the project proposal for environmental clearance. In the meantime, MoEF vide OM dated 17.09.2013 has re-imposed a moratorium on the consideration of project for environmental clearance in respect of CPA area namely 'Indore'. MoEF vide OM dated 10.06.2014 has issued order regarding keeping in abeyance of OM dated 17.09.2013 w.r.t. re-imposition of Moratorium in aforesaid eight Critical Polluted area.

After detailed deliberation, the Committee recommended the project for environmental clearance subject to the following specific conditions:

- i) 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/m<sup>3</sup>. 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) Cyclone followed by bag filter should be provided to SSP plant and grinding section for controlling fugitive emissions.
- iii) The gaseous emissions (SO<sub>2</sub>, NO<sub>x</sub>, CO and Fluoride) and particulate matter from process stacks shall conform to the norms prescribed by the CPCB/ MP Pollution Control Board (MPPCB) 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.
- iv) Fluoride monitoring through continuous fluoride analyzer shall be carried out in ambient air as well as stack.
- v) Internal road shall be shall be cemented on priority basis and action taken report be sent to MoEF Regional Office at Bhopal.
- vi) Total fresh water requirement from water tanker supply shall not exceed 343 m<sup>3</sup>/day. No ground water shall be used.
- vii) Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- viii) As proposed, industrial effluent shall be treated in effluent treatment plant (ETP) and recycled back in the process.

- ix) No effluent shall be discharged outside the premises and 'Zero' discharge shall be ensured.
- x) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xi) On-site temporary storage of hazardous waste (Hydro-fluorosilic acid) shall be done as per the guidelines prescribed by MoEF/CPCB. Piezometric wells shall be installed to monitor the leaching of waste.
- xii) All the commitments made to the public during public hearing/public consultation meeting held on 20<sup>th</sup> April, 2012 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiii) At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on public hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.
- xiv) A comprehensive Green belt development plan shall be developed in at least 33 % area in and around the plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO. The plan shall be submitted to the Regional Office of the Ministry at Bhopal 3 months of issue of environment clearance letter.

## 2<sup>nd</sup> Session

### 30.7 Terms of Reference ( TOR)

**30.7.1** Expansion of Existing Intermediate to Bulk Drug & Intermediates ( 461.11 kg/day to 068.67 kg/day) at plot nos 222 to 224 & 235 to 237, Pjase-II, IDA Pashamailaram, Patancheru Mandal, Medak district, Telangana by M/s. Synthokem Labs Pvt Ltd. , UNIT-II. – 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, non-existent of SEIAA/SEAC, in Telangana, the proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s. Synthokem Labs Pvt Ltd. , UNIT-II has proposed for expansion of Existing Intermediate to Bulk Drug & Intermediates ( 461.11 kg/day to 068.67 kg/day) at plot nos 222 to 224 & 235 to 237, Pjase-II, IDA Pashamailaram, Patancheru Mandal, Medak district, Telangana. The Environmental Clearance was issued by MEF &CC to the existing unit on 14<sup>th</sup> July 2005.

Plot area is 23495 m<sup>2</sup> of which greenbelt will be developed in 8600 m<sup>2</sup>. Cost of project for its expansion is Rs. 15.0 Crores. It is reported that no protected area, national park, reserved and protected forests or other environmental sensitivities are located within 10 km distance. Three ponds namely Isnapur, Kotta Cheruvu and Pedda Cheruvu are informed to be located at distance of 1.0 km, 1.6 km and 4.25 kms respectively. Details of proposed products are as given below

S.No.	Product Name	Quantity in Kg/Day
1	Alfuzosin Hydrochloride	5.67
2	Chlorphenesin	<b>666.67</b>
3	Chlorphenesin carbamate	<b>100.00</b>

4	Dextromethorphan Hydrobromide	<b>333.33</b>
5	Drotaverine Hydrochloride	<b>100.00</b>
6	Guaifenesin	<b>5000.00</b>
7	1-(4-Hydroxyphenyl) piperazine	<b>16.67</b>
8	Mebeverine Hydrochloride	<b>100.00</b>
9	Mephenesin	<b>666.67</b>
10	Methocarbamol	<b>666.67</b>
11	Potassium gulacol sulfonate	<b>56.67</b>
12	Prazosin Hydrochloride	<b>14.00</b>
13	Rabavirin	<b>1.67</b>
14	Ropinirole Hydrochloride	<b>1.67</b>
15	Terazosin Hydrochloride	<b>5.67</b>
16	Veratrole	<b>333.33</b>
<b>TOTAL</b>		<b>8068.67</b>

Total water requirement for the proposed expansion is 198 m<sup>3</sup>/day, which shall be supplied by TSIC supply. About 86.65 m<sup>3</sup>/day of wastewater will be generated and treated through ETP. Zero liquid waste system will be maintained. 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. 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 from D G sets and used batteries are sent to authorize recyclers. Fly ash will be sent to brick manufacturers.

Existing Coal fired boiler (2 TPH) will be continued and additional two coal fired boiler (4 TPH) will be installed. Additional DG set of 250 KVA shall be installed beside existing 2 x 250 KVA. Distillation column/dedicated reactors with condensers for effective recovery of solvents will be installed. All the solvent storage tanks are connected with vent condensers.

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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
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 16<sup>th</sup> 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. (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. (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. (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. (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 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. Public hearing is exempted for preparation of EIA/EMP Report as unit is located in notified Industrial area established prior to 2006.

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

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 4<sup>th</sup> 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' 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 EIA/EMP report shall be submitted accordingly to Ministry.

#### **30.7.2. Installation of Gas Turbine Generator and Heat Recovery Steam Generator under energy reduction scheme at Tehsil Alibagh , district Raigarh, Maharastra by M/s Rashtriya Chemical Fertilizer- reg. TOR**

The project authorities and their Consultant (M/s Project & Development India Ltd. Dhanbad) 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 Chemical Fertilizer are listed at S.N. 5(a) under category 'A' and appraised at Central level.

M/s Rashtriya Chemical Fertilizer has proposed for installation of Gas Turbine Generator and Heat Recovery Steam Generator under energy reduction scheme at Tehsil Alibagh , district Raigarh, Maharastra The company has obtained Environmental Clearance of the existing unit vide letter dated June 10, 2009 for its expansion. Public Hearing/Consultation was exempted as per para 7 (ii) of EIA, Notification, 2006.

The cost of proposed project is 362.82 crore. There is Khadatal river flowing at distance of 3 km and notified Archeological alibagh fort at distance of 7 km. RCF Thal complex comprised of two trains of ammonia plant of 1750 MTPD capacity each i.e.

combined capacity 3500 MTPD and three trains of urea plant of combined capacity of 6060 MTPD alongwith necessary utilities and infrastructure. The Thal Complex started the production in 1985. Subsequently, DMF group of Chemical plant was added to the manufacturing facilities, which made the Thal unit as integrated Chemical Complex. RCF has since gone for de-bottlenecking of Thal I & II and enhance the urea capacity from 1.7 million MTPA to about 2 million MTPA.

The project proposal includes the followings design modification with reduction in energy consumption and without increase in production capacity.

- (i) To stop 2 nos of running steam turbine generator of 15 MW capacity each and 3 nos of gas fired steam boilers-1 no. 275 MT/hr and 2 nos of 80 MT/hr
- (ii) To convert 15 nos of steam turbine driven equipment into motors in Ammonia plant
- (iii) To install Gas Turbine Generator & Heat Recovery Steam Generator to meet new requirement under energy reduction.

The company has summed up the following comparison of existing with new operation measures;

Items	Unit	Existing	New operation ( modernization)	Difference
HP steam requirement	MTPH	582	349	- 233
Power requirement	MW	28	46	+18
Fuel Gas	SM3/hr	46444	35843	-10601
Raw water make up	m 3/day	52000	45357	-6643

After detailed deliberation, the committee noted that the industry is applying for modernization of existing process by design modification without increasing production capacity. Changing the utilities, reducing power and water consumption has been proposed by the industry. Therefore, Committee recommended for exemption of public hearing as per para 7 (ii) of EIA, Notification, 2006 and preparation of EIA-EMP report. However, a detailed reports to be prepared to cover the followings points;

1. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. List of products alongwith the production capacities.
3. Detailed list of raw material required and source, mode of storage and transportation.
4. Manufacturing process details alongwith the chemical reactions and process flow chart.

5. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
6. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
7. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, Cl<sub>2</sub>, HCl, SO<sub>2</sub>, HBr, HF including HC and VOCs should be collected.
8. Data for water and noise monitoring should also be collected.
9. Details of existing air pollution control measures and proposed for the effective control of gaseous emissions within permissible limits.
10. Design details of ETP, incinerator, if any along with control of Dioxin & Furan, boiler, scrubbers/bag filters etc.
11. Details of water and air pollution and its mitigation plan.
12. Modelling to be done indicating that there is no increase in pollution by the addition of new utilities and fuel change. A report to be prepared accordingly.
13. An action plan to control and monitor secondary fugitive emissions from all the sources.
14. Action plan for odour assessment and control to be submitted.
15. Risk assessment for storage for chemicals/solvents. Risk assessment for Cyanide.
16. Material safety data sheet to be submitted. CAS No./RTECS No./DOT/UN etc to be mentioned against each chemicals.
17. An action plan to develop green belt in 33 % area. Layout map indicating greenbelt to be submitted.
18. 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.
19. Details of occupational health surveillance programme.

### **30.7.3 Proposed expansion of pesticide ( 25 MTPM to 345 MTPM) unit at Plot no. A-2/2214 & 2215, 3<sup>rd</sup> phase, GIDC Vapi, District Valdad, Gujarat by M/s Heranba Industries Limited (Unit-II) – reg. TOR**

The project authorities and their Consultant (M/s Eco Chem Sales & Service, Surat) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft 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 Heranba Industries Limited (Unit-II) has proposed for expansion of pesticide ( 25 MTPM to 345 MTPM) unit at Plot no. A-2/2214 & 2215, 3<sup>rd</sup> phase, GIDC Vapi, District Valdad, Gujarat. The company has not provided a copy of EC of the existing unit. The unit is located in the notified Industrial area set up prior to 2006.

Following products will be manufactured:

S.No.	Product	MT/MONTH		
		Existing	Proposed	Total after proposed expansion
1	Cyper methric Acid Chloride	10	170	180
2	Cyper Methrin technical	5	95	100
3	Alpha Cyper Methrin technical	5	55	60
4	Permethrin technical	5	0	5
	<b>Total</b>	<b>25</b>	<b>320</b>	<b>345</b>
	<b>By-products</b>			
1	Ammonium Chloride Powder (85%)	5.08	86.36	91.44
2	Sodium Sulphite Powder (80%)	22.4	380.8	4.3.2
3	Hydro Chloric Acid solution (80%)	18.765	290.7	309.465
4	Sodium Sulphate powder (80%)	17.22	292.74	309.96

No National Park, Wildlife sanctuaries, Biospher reserve, Heritage site , rivers, tank, reserved forest located within 10 km radial distance from the site. Total plot area is 3584.8 m<sup>2</sup>. Total cost of project is Rs. 29 Crore.

The water requirement will be increased from 82.8 m<sup>3</sup>/day to 217 m<sup>3</sup>/day, which shall be provided by GIDC Vapi from the river Damanganga. Wastewater generation will increase from 3.01 m<sup>3</sup>/day to 19.15 m<sup>3</sup>/day . The wastewater shall be treated in ETP with treatment upto tertiary level and thereafter treated effluent confirming the treated water discharge norms laid by GPCB will be sent to CETP for final treatment. Final effluent from CETP at GIDC will be disposed to Arabian Sea through Vapi Effluent Channel line. ETP sludge, process residue and MEE salt will be sent to TSDF for landfill. Used oil, discarded container and Spent catalyst or spent oil will be sent to the authorized recycler/re-processors.

At present, the unit is having one number of 3TPH steam boiler. Additional 3 TPH boiler shall be installed after expansion. Natural Gas and furnance oil will be used as fuel. Capacity of additional DG set will be 500 KVA beside existing 750 KVA. Adequate stack height and stack monitoring facilities will be proved. Presetly the unit has installed two nos of two stage water scrubber followed by alkali to scrub HCL & SO<sub>2</sub> gas generated from the process. After expansion additional 2 nos of two stage water scrubber followed by alkali scrubber will b provided to scrub HCL and SO<sub>2</sub>. Adequate height of process vent will be provided.

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 16<sup>th</sup> 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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, Cl<sub>2</sub>, HCl, SO<sub>2</sub>, HBr, HF 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.
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.
  - a. To which chemicals, workers are exposed directly or indirectly.
  - b. Whether these chemicals are within Thresh 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.
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. Vapi being a critically polluted area, therefore, a permission from the SPCB to be obtained particularly w.r.t. adequacy of CETP wherein effluent to be discharged.
- 2. A separate chapter on status of compliance of Environmental Conditions granted by State/Centre to be provided. As per circular dated 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
- 3. Public hearing is exempted for preparation of EIA/EMP Report as unit is located in notified Industrial area (Vapi) established prior to 2006.

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' 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 to MEF&CC.

**30.7.4 Proposed Capacity expansion ( 1715 MTPM to 3000 MTPM) for manufacturing of Surfactants & Specialty Surfactants Chemicals at Survey No. 193, Village Kherdi, Khanvel Udhva Road, Silvassa, UT of Dadar Nagar Haveli by M/s Aarti Industries Ltd. – Reg. TOR.**

The project authorities and their Consultant (M/s Precitech Laboratory 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 and its location with the interstate boundary of Maharashtra within 5 KM distance, the proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Aarti Industries Ltd. has proposed for capacity expansion ( 1715 MTPM to 3000 MTPM) for manufacturing of Surfactants & Specialty Surfactants Chemicals at Survey No. 193, Village Kherdi, Khanvel Udhva Road, Silvassa, UT of Dadar Nagar Haveli. The existing unit does not attract the provisions of EIA, Notification 2006 as it was established in the year 2001. A copy of consent to establish was issued by the Daman, Diu and Dadar Nagar Haveli on 12/09/2001 vide letter no. PCC/DDD/0-1594/WA/UR/2001-2002/521.

It is reported that D &NH wildlife sanctuary ( deer park ) is located at distance of 2.5 km. However, distance of reserved forests from the project site is not specifically indicated in FORM-I. Proposed expansion will be carried out in the existing plot with the total plot area of 30000.00 m<sup>2</sup> out of which 10140 m<sup>2</sup> is allotted for green belt area. The total cost of proposed project will be Rs. 10.70 Crore.

Details of existing and proposed products are as given below:

S r. N o.	Name of Finished products	Existing Qty (in MT/Month)	Total Qty after Expansion (in MT/Month)	
<b>Group A – Surfactants (100% Purity Basis)</b>				
1.	Alfa Olefin Sulfonate (AOS)	250	3000	
2.	Sodium Lauryl Sulfate (SLS)/ Primary Alcohol Sulfate (PAS)	250		
3.	Sodium Lauryl Ether Sulfate (SLES)	165		
4.	Linear Alkyl Benzene Sulfonic Acid (LABSA/Acid Slurry)	650		
5.	Liquid Detergents	250		
6.	Household Cleaners	150		
7.	Ammonium Lauryl Sulfate (ALS)	--		
8.	Ammonium Lauryl Ether Sulfate (ALES)	--		
<b>Group B - Speciality Surfactants</b>				
1.	Fatty Monoethanol Amide	--		
2.	Fatty Diethanol Amide	--		
3.	Cocoamidopropyl Betaine	--		
4.	Coco betaines	--		

5.	Amine oxides	--	
6.	Sodium Lauryl Sulfosuccinate (LSS)	--	
7.	Sodium Lauryl Sulfosuccinate (LES)		
8.	Benzalkonium Chloride 50%	--	
9.	Benzalkonium Chloride 80%		
1	Ether Carboxylate, Sodium Salt		
1	Alcohol / Amine Ethoxylates	--	
1	Ethylene Glycol Mono Stearate	--	
1	Ethylene Glycol Di Stearate	--	
1	Sorbitan Mono Oleate	--	
The unit propose to manufacture “ <b>Surfactants (Group-A)</b> ” & “ <b>Specialty Surfactants (Group-B)</b> ” @ <b>3000 MT/M</b> for any one of the products or cumulative production capacity not exceeding more than <b>3000 MT/M</b> .			

The source of fresh water will be In house bore-well/Tanker Water Supply. Total fresh water requirement for existing project is 27.1 m<sup>3</sup>/day which after proposed Expansion will be 232 m<sup>3</sup>/day. After proposed expansion domestic wastewater @14 KLD will be treated in the proposed Sewage Treatment Plant and treated water from STP will be used for gardening purpose. In existing operations, industrial wastewater generated @3.1 KLD is treated in the ETP and used for gardening. For the industrial effluent (@ 50KLD) from the proposed production activities, necessary maintenance and modifications will be made in the existing ETP and the treated in RO & Evaporator. The RO permeate and evaporator condensate will be reused as cooling tower make-up.

In existing unit, Acid Mist and SO<sub>2</sub> are generated from the process of Sulfonation. The company has provided ESP and Alkali Scrubber as an Air Pollution Control Device. The same will be the control measures for the proposed project. For proposed expansion project Process emission will occur from the manufacturing process so; the company has proposed to install a Spray Dryer Plant with Bag Filter as an Air pollution control device in order to control the particulate matter.

In proposed expansion additional one Thermic fluid heater having capacity of 2 lakhkcal/hr will be installed and will be operated on 100% load and existing steam boiler of 4 TPH will be operated on 100 % load and steam boiler of 2 TPH will act as standby facility. Existing D.G. sets will be replaced by 2 Nos. of D.G. sets of 1500 kVA and 750 kVA capacities which will act as standby unit and will be used only in case of power failure.

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. The evaporation salts and ETP sludge will be sent to TSDF. Organic residue, spent catalyst and Distillation residue will be sent to GEPIL site, Silvassa. Waste oil and used batteries from the DG sets are sent to authorize recyclers. Fly ash will be sent to brick manufacturers. The PP has submitted letter dated 09.09.2014 from the Planning and Development Authority, Silvassa regarding allotment of plot in the Industrial area.

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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
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 16<sup>th</sup> 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. Permission to use ground water to be obtained.
38. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
39. Material Safety Data Sheet for all the Chemicals are being used/will be used.
40. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
41. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
42. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
43. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
44. 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.
45. Socio-economic development activities shall be in place.
46. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
47. Note on compliance to the recommendations mentioned in the CREP guidelines.

48. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure shall be provided.
49. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
50. Total capital cost and recurring cost/annum for environmental pollution control measures.

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

**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 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. Public hearing is exempted being site location in the notified industrial area.
3. Since site is located at a distance of 2.5 km from the D &NH wildlife sanctuary ( deer park ), necessary permission to be obtained from the state/ NBWL.

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 4<sup>th</sup> 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**' 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.

### **30.7.5 Additional Exploratory Drilling of 24 wells in KG Basin on-land PML acreages of West Godavari District, Andhra Pradesh by M/s ONGC– reg. TOR converted to amendment of EC.**

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

M/s ONGC Ltd. has proposed for additional Exploratory Drilling of 24 wells in KG Basin on-land PML acreages of West Godavari District, Andhra Pradesh. ONGC has informed that exploration is being carried out in KG on land erstwhile PEL-1A and PEL-IB blocks of Krishna Godavari Basin. So far Environment Clearance has been obtained by ONGC for IA and IB block to drill 26 and 61 wells. In the block, the following ECs have earlier been issued by MEF&CC

- |   |          |
|---|----------|
| 4. No. J-11011/178/2008-IA II( I) dated 28 <sup>th</sup> April 2008 | 38 wells |
| 5. No. J-11011/478/2010 -IA II( I) dated 18 <sup>th</sup> May 2012  | 24 wells |
| 6. No. J-11011/68/2011-IA II( I) dated 14 <sup>th</sup> June 2013   | 25 wells |

Public hearing has also been already conducted in the district while obtaining the aforesaid EC. The Committee noted that instance proposal is the extension of number of wells in the existing block wherein hydrocarbon is being explored for last 20 years. Therefore, the committee was of the view that instant proposal can not be considered for award of TORs. But, the proposal may be treated as amendment in existing EC with increased number of wells as EIA-EMP report has been prepared alongwith public consultation. Accordingly, the Committee exempted the project proposal from EIA report preparation/public hearing as per para 7 (ii) of EIA Notification, 2006.

The Committee, therefore, recommended the proposal as amendment of existing EC No. J-11011/68/2011-IA II( I) dated 14<sup>th</sup> June 2013, which was issued for

25 wells and has now recommended for amendment in the existing EC for additional 24 wells subject to compliance of specific conditions of existing EC.

**30.7.6 Proposed 65 KLD Molasses and Grain based Distillery with captive power generation ( 24.2 MW) & production of 2.5 MW power from the spent wash incinerator boiler and expansion of sugar unit at Rajeswarapuram Village, Nelakondapalli Mandal, district Khammam, Telangana State by M/s Madhucon Sugar and Power Industries- 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.

M/s Madhucon Sugar & Power Industries Ltd. has proposed for 65 KLD Molasses and Grain based Distillery with captive power generation ( 24.2 MW) & production of 2.5 MW power from the spent wash incinerator boiler and expansion of sugar unit at Rajeswarapuram Village, Nelakondapalli Mandal, district Khammam, Telangana State. The industry has obtained EC for the establishment of 65 KLPD molasses/grain based distillery for producing ENA/Ethanol from this Ministry's letter no. No: J-11011/359/2006-IA-II(I) dated 27<sup>th</sup> August 2007 and later amendment in the existing EC vide letter no J-11011/2359/2006-IA II (I) dated 4<sup>th</sup> May 2009 for enhanced co-generation plant capacity from 20 MW to 24.2 MW. The Industry could not complete the proposed plant distillery plant till date due to financial crisis in sugar factory in terms of high sugar cane cost and low sugar price.

The validity of existing EC was expired on 26<sup>th</sup> August 2012. The Industry has now applied a fresh application for seeking TOR for preparation of EIA-EMP report. Following further changes are proposed in the revised proposal;

1. Addition of Incineration boiler 25TPH (2.5 MW additional power generation) to meet Zero discharge by adding MEE instead of Biocomposting.
2. Raw material Molasses as well as Grain
3. Increase in operational days from 270 days to 330 days

Total land available with the industry is 134 acres out of which only 20 acres will be acquired for installation of distillery. Total fresh water requirement for the distillery about 650 KLD for process. The process system designed to meet 8 lit/1lit and 6 lit/1lit of alcohol from molasses and grain plant as effluent respectively. Total workers employed will be 55 and cost of the project is estimated as Rs. 114.54 crore with Rs. 11.45 crore towards Environment Management. Plant conducted public hearing on 28-12-2006 for Distillery. The industry has proposed for Zero discharge system i.e MEE along with Incinerator boiler, 2.5 MW additional power and increase in operational days of distillery from 270 days to 330 days without Public hearing.

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 SO<sub>2</sub> 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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> as per GSR 826(E) dated 16<sup>th</sup> November, 2009.
16. One month site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO 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 30% 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 August 2007, the committee, therefore, exempted the public hearing 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 4<sup>th</sup> 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.

#### 30.7.7 Manufacturing Plant for H-Acid and Vinyl Sulphone at village Suryapur, Tehsil & District 24 Parganas (N), West Bengal by M/s Spectrum Dyeing (P) Ltd. – reg. TOR

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

#### 30.7.8 Manufacturing of Synthetic Organic Chemicals ( 5400 kg/day capacity) at Sy No. 159/1 (Part), Kandivalasa Village, Pusapatirega Mandal, Vizianagaram District, Andhra Pradesh by M/s. Sessa Sai Chemicals 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 outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A'.

M/s. Sessa Sai Chemicals Pvt. Ltd has proposed for Manufacturing of Synthetic Organic Chemicals (5400 kg/day capacity) at Sy No. 159/1 (Part), Kandivalasa Village, Pusapatirega Mandal, Vizianagaram District, Andhra Pradesh. The unit has earlier obtained TOR vide letter no J-11011/584/2011-IA II (I) dated 24.07.2012. Further, the PP has represented for change of Sy. No on 29<sup>th</sup> October 2014. Since, there is change in Sy. No, of

the land, the Committee recommended to apply afresh TOR. The unit and its sister concern M/s Sessa Sai Organic Pvt. are co-located.

Plot area is 14.8 acres, of which greenbelt will be developed in 4.79 acres (33%). Cost of project is Rs. 25.5 Crores. It is reported that no protected area and eco-sensitive zone is located within 10 km distance. Kandivalasa river is flowing at distance of 3.3 km northwest direction. Reserved forest namely Kumili is located at distance of 3.3 km.

Details of proposed products are as given below:

S.No.	Name of then Product	Capacity (Kg/day)
<b>Phase I</b>		
1	Benzyle Chloride	1000
2	Benzyle alcohol	1000
3	Benzaldehyde	1000
4	Benzyl acetate	1000
	<b>Total-Phase I</b>	<b>4000</b>
<b>Phase-II</b>		
1	Amlodipine Besylate	400
2	Amoldipine Maleate	400
3	Carvedilol	300
4	Carvedilol Phosphoate	300
5	Carvedilol RM	300
6	Clopidogrel-Form 1 and Form 2	200
7	Clopidogrel Hydrogen Sulfate	250
8	Clopidogrel Intermediate	250
9	Eprosartan Mesylate	300
10	Escitalopram Oxalate	300
11	Flecainide	300
12	Glimepride	300
13	Lamotrigine	200
14	Lansoprazole	200
15	Levofloxacin Hemihydrate	300
16	Moxifloxacin	300
17	Moxifloxacin Hcl	300
18	Nateglinide Form H	300
19	Nabivolol Hcl	250
20	Norfloxacin	300
21	Olanzapine	250
22	Omeprazole	300
23	Pantoprazole Sodium	300
24	Paroxetine Hc1	250
25	Rolaxifence Hc1	300
26	Saprofloxacin	300
27	Sertaline Hc1	250
28	Telmisartan	200
29	Thalidomide	200
30	Topiramate	300
<b>Total- Phase II (Worst Case Scenario- Only 4 products)</b>		<b>1400</b>
<b>Grand Total (Phase 1 + Phase II)</b>		<b>5400</b>

### List of By-Products

Sl.No.	Name of the By Product	Quantity (Kg/day)
1	Benzyl Ether	624.91
2	Benzyl Alcohol	1077.57
3	Benzolic acid	324.78

Total water requirement will be 203 m<sup>3</sup>/day which shall be sourced from ground water. About 69.6 m<sup>3</sup>/day of wastewater will be generated and treated in phases through ETP. 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. 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.

Coal fired boilers (2 TPH and 4 TPH ) will be installed and connected to stack of 21m and 25m height. Two DG sets of 125 KVA and 250 KVA shall be installed. Multicyclone alongwith stack of adequate height will be provided to coal fired boilers. Process emission shall be scrubbed. All the solvent storage tanks are connected with vent condensers.

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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
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 16<sup>th</sup> 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. 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. Recommendation of AP Pollution Control Board for proposed expansion.

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 4<sup>th</sup> 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 for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report.

**30.7.9 Proposed capacity expansion of existing facility at survey no. 265 (P), Express Way, Manali Village, Thiruvottiyur Taluk, Thiruvallur District, Tamil Nadu by M/s. Indian Additives 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 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, Manali being covered under list of critically polluted area and attracted General condition of EIA, Notification, 2006. The proposal is therefore, treated as category ‘A’ and appraised by Expert Appraisal Committee (I).

M/s. Indian Additives Limited has proposed capacity expansion of existing facility at survey no. 265 (P), Express Way, Manali Village, Thiruvottiyur Taluk, Thiruvallur District, Tamil Nadu. The Environmental Clearance was issued by MEF &CC to the existing unit on 23<sup>rd</sup> December 2009.

Details of existing and proposed products are as given below

Sl. No.	Product	Existing	Proposed
		MT/ annum	
1	Automotive, Marine, Industrial, Rail Road and Natural gas engine Lubricating Oil additive packages	25000	60000
2	Succinimides	10000	25000
3	Phenate/ sulfonate	10000	20000
4	PIBSA	8500	20000
5	By product (Mix of sodium sulphide, sodium hydrogen sulphide & caustic)	3500	7000

Plot area is 23.57 acre of which greenbelt will be developed in 8.56 acre ( 33%). Cost of project for its expansion is Rs. 12.00 Crores. It is reported that no protected area, local legislation for their ecological landscape, cultural or other related value are located within 10 km distance. Distance of bay of Bengal is 3.13 km towards East. Three lakes namely Madhavaram, Kadapakkam and Periyathoppu are at distance of 3.57 km, 4.56 km and 3.1 km respectively. Surplus canal from Kottalaiyar river is at distance of 0.13 km from the project site.

Fresh water requirement will increase from 175 m<sup>3</sup>/day to 245 m<sup>3</sup>/day for the proposed expansion. The effluent quantity will increase from 167 m<sup>3</sup>/day to 236 m<sup>3</sup>/day, which will be treated through ETP. About 124 m<sup>3</sup>/day of wastewater will be recycled for use in process after the treatment.

Power requirement will be sourced from TNEB after its increase from 550000kwh/month to 750000 kwh/month. HSD fuel for diesel generator will increase from 60 KL/month to 80 KL/month and furnace oil for boiler and thermic fluid heater will increase from 240 KL/month to 400 KL/month.

Distillation residue will be sent to cement plant. Waste oil and used oil from the DG sets are sent to authorize recyclers. ETP sludge will be incinerated at authorized TSDF facility. Discarded container will be sent to the Authorized 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. 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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
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 16<sup>th</sup> 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. (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. (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. (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. (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 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. Public hearing is exempted for preparation of EIA/EMP Report as unit is located in notified Industrial area established prior to 2006.
3. Recommendation of Tamil Nadu Pollution Control Board for proposed expansion.

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 4<sup>th</sup> 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' 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 accordingly to the Ministry **for appraisal**.

30.7.10 Manufacturing of Synthetic Organic Chemicals at Sy. No. 29, Tupakulagudem Village, Tallapudi Mandal, West Godavari District, Andhra Pradesh by M/s. Vensub Laboratories Private Limited– reg. TOR

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

30.7.11 Expansion by adding new product of Organic Titanates at Plot No. C-1B/68, GIDC Vapi, Taluka Pardi, District Valsad, Gujarat by M/s Skyline Polycat Pvt. Ltd. (Formerly known as M/s. Ambica Polychem)– reg. TOR

The project authorities and their Consultant (M/s Unistar Environment and Research lab pvt. Ltd, Vapi) 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 and its location with the interstate boundary of UT of D&NH within 5 KM distance and CPA of the area, the proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Skyline Polycat Pvt. Ltd. has proposed for expansion by adding new product of Organic Titanates at Plot No. C- 1B/68, GIDC Vapi, Taluka Pardi, District Valsad, Gujarat. The unit is located in the notified Industrial area set up prior to 2006.

No National Park, Wildlife sanctuaries, Biospher reserve, Heritage site, rivers, tank, reserved forest located within 10 km radial distance from the site. River Daman Ganga is flowing at a distance of 2.7 Km. Total plot area is 855 m<sup>2</sup>, of which greenbelt will be developed in 155 m<sup>2</sup>. Total cost of project is Rs. 5 Crore. The project proponent has informed that due to non viability of existing product, the company decided to discontinue the same and proposed for manufacturing of new product has organic Titanates and its derivatives.

Following products will be manufactured;

SI. No.	Products Name	Production Capacity (TPM)		
		Existing	Proposed	Total
1	Synthetic Organic Dyes (i.e.( Dark Red 2 B, Navy Blue 3G, Yellow 7 GL)	1.60	-1.60	0.00
2	Organic Titanates i. Tetra isopropyl Titanate (TiPT), ii. Tetran-Butyl Titanate (TnBT) iii. Tetra Ethyl Titanate (TET)	0.00	200.00	200.00
3	TiPT Derivatives	0.00	200.00	200.00
4	Ammonium Chloride as By product during manufacturing of Organic Titanets	0.00	155.00	155.00

The water requirement will be 8 m<sup>3</sup>/day, which shall be provided by GIDC Vapi from the river Damanganga. Industrial Waste water in the form of cooling tower blow down, will be reused in the plantation within the premises. Domestic waste water will be disposed off through adequate soak-pit/Septic tank. Hence, there is no discharge of treated water. Used oil, discarded container and Spent catalyst or spent oil will be sent to the authorized recycler/re-processors.

Emissions from thermic fluid heater (2 nos.) using LDO as a fuel connected to stack of 15 mt height and DG set of 125 KVA using HSD will be connected to stack of 11 mt height. To control the fugitive emission during manufacturing process, scrubber shall be provided in alkali and water media.

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

1. Executive summary of the project
2. Justification of the project.
3. Promoters and their back ground.
4. Regulatory framework.
5. 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 16<sup>th</sup> 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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, Cl<sub>2</sub>, HCl, SO<sub>2</sub>, HBr, HF 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.
  - a. To which chemicals, workers are exposed directly or indirectly.
  - b. Whether these chemicals are within Thresh 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.
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**

45. 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.

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

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

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

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

50. A tabular chart with index for point wise compliance of above TORs.

**B. Additional TOR**

1. Public hearing is exempted for preparation of EIA/EMP Report as unit is located in notified Industrial area (Vapi) established prior to 2006.
2. Vapi being a critically polluted area, therefore, a permission from the SPCB to be obtained.

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 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 to MEF&CC.

- 30.7.12 Manufacturing Plant for H-Acid and Vinyl Sulphone at village Suryapur, Tehsil & District 24 Parganas (N), West Bengal by M/s Spectrum Dyeing (P) Limited – reg. TOR

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

- 30.7.13 Proposed Plant for Manufacturing of Alpha Olefin Sulphonate (Capacity: 21000 TPA) at Plot No. 119 A, Matsya Industrial area, Tehsil & District: Alwar (Rajasthan) by M/s RSPL Ltd. – reg TOR

The project authorities and their Consultant (M/s J.M. EnvirorNet 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 (dye & dye Intermediates) located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B'. However, non-existent of SEIAA/SEAC, in Rajasthan, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s RSPL Ltd. has Proposed Plant for Manufacturing of Alpha Olefin Sulphonate (Capacity: 21000 TPA) at Plot No. 119 A, Matsya Industrial area, Tehsil & District: Alwar, Rajasthan. Plot area is 20150 m<sup>2</sup> of which greenbelt will be developed in 33% of the land. Cost of project is Rs. 24.20 Crores. It is reported that no protected area, local legislation for their ecological landscape, cultural or other related value are located within 10 km distance. Rupalali river is flowing at distance of 8.5 kms from the project site.

Water required from the RIICO water supply will be 95 m<sup>3</sup>/day, of which 55 m<sup>3</sup>/day has been proposed to be drawn from ground water. Industrial effluent will be generated for AOS manufacturing process will be treated in ETP. No wastewater will be discharge outside the plant premises.

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. Copy of NOC/Consent to Establish for the existing unit.
6. Compliance to the conditions stipulated in the NOC granted by the SPCB.
7. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, compliance to the notice(s).
8. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
9. A map indicating location of the project and distance from severely polluted area.
10. Project location and plant layout.
11. Infrastructure facilities including power sources.
12. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.

13. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
14. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
15. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
16. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
17. Details of the total land and break-up of the land use for green belt and other uses.
18. List of products alongwith the production capacities.
19. Detailed list of raw material required and source, mode of storage.
20. Manufacturing process details alongwith the chemical reactions and process flow chart.
21. Action plan for the transportation of raw material and products.
22. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
23. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
24. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
25. Details of water and air pollution and its mitigation plan
26. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
27. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
28. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
29. Name of all the solvents to be used in the process and details of solvent recovery system.
30. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
31. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
32. 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.
33. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
34. No ground water shall be used. Water supply should be from RIICO water supply.
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. (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. (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. (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. (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. Public hearing is exempted for preparation of EIA/EMP Report subject to condition that the authenticated documents to be produced for industrial area established prior to 2006 or it has obtained environmental clearance from MEF&CC as per Ministry OM dated 10/12/2014.
2. No groundwater shall be allowed to use for industrial purpose.

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 4<sup>th</sup> 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' 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. Public hearing is exempted for preparation of EIA/EMP Report subject to condition that the industrial area where unit is located, established prior to 2006 or it has obtained environmental clearance from MEF&CC as per Ministry OM dated 10/12/2014. The draft EIA/EMP report shall be submitted accordingly to **State SEAC/SEIAA, Rajasthan for appraisal.**

30.7.14 Expansion of Existing Intermediate to Bulk Drug & Intermediate manufacturing (222.22 Kg/day to 3750 Kg/day) unit, Plot Nos 30,31,32,33. Phase-II, IDA, Pashamylaram Village, Patancheru Mandal, Medak district, Telangana by M/s. Virupaksha Organics Pvt. Ltd. UNIT-II– 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, non-existent of SEIAA/SEAC, in Telangana, proposal is treated as category 'A' and appraised by Expert Appraisal Committee (I).

M/s Virupaksha Organic Pvt. Ltd., Unit-II, has proposed for expansion of capacity ( 222.22 kg/day to 3750 kg/day ) for manufacturing of bulk drug & Intermediate at plot no. 30 to 33, phase-II, IDA, Pashamylaram village, Patancheru Mandal, Medak district, Telangana state. The Environmental Clearance was issued by MEF &CC to the existing unit

in the name of name of M/s Aurobinddo Pharma Ltd, Unit -IV on 21<sup>st</sup> June 2005. The company has now applied for expansion of unit in the name of M/s Virupaksha Organic Ltd.

Plot area is 15757.30 m<sup>2</sup> of which greenbelt will be developed in 5200 m<sup>2</sup> ( 33%). Cost of project for its expansion is Rs. 20.0 Crores. It is reported that no protected area, local legislation for their ecological landscape, cultural or other related value are located within 10 km distance. Total 10 water bodies have been informed (without defining the name ) to be located within 10 km radius. Details of existing and proposed products are as given below:

S.No	Product ( Existing as per CTO)	Quantity
1	1-(2-( 4-Difluoro Phenyl)-2, 3 – epoxy propyl)-1 H-1, 2,4- triazole methane sulfonate	222.22 kg/day

### List of Proposed Products

S.No.	Product Name	Quantity in Kgs/ Day
1	Atenolol	100.00
2	Cinnarizine	166.67
3	Cyano Diol Base	166.67
4	Dextromethorpan HBr	166.67
5	DFTA (2,4-Difluoro-2-(1 H)-1,2,4,-Triazole-1yl- Acephenone)	66.67
6	Epoxy Macelate	133.33
7	Escitalopram Oxalate	50.00
8	Fexofendine HCl (BCN)	166.67
9	Fexofendine HCl (MAC)	166.67
10	4-[1-(Hydroxy diphenyle methyl)-1-piperdiny]-buty] dimenthyl benzene ace6tic acid hydrochloride (Fexofenadine HCl)	166.67
11	Fluconazole	166.67
12	Metaprolol Succinate	333.33
13	Tramadol Base	66.67
14	Tramadol HCl (MBA)	833.33
15	Tramadol HCL (MCA)	833.33
16	Tramadol Nitrate	166.67
		3750.00

Total water requirement for the proposed expansion is 188 m<sup>3</sup>/day which shall be supplied by TSIIC supply. About 107.54 m<sup>3</sup>/day of wastewater will be generated and treated through ETP. High TDS/COD effluent stream will be treated through steam stripper followed by multiple effect evaporators (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. 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.

Existing Coal fired boiler (2 TPH) will be continued and additional two coal fired boiler (4 TPH) will be installed. Additional DG set of 500 KVA shall be installed beside existing 380 KVA. Bagfilter alongwith stack of adequate height will be provided to coal fired boiler(2

TPH). Distillation column/dedicated reactors with condensers for effective recovery of solvents will be installed. All the solvent storage tanks are connected with vent condensers.

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 16<sup>th</sup> 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<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
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 16<sup>th</sup> 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 30<sup>th</sup> May, 2012 issued by MoEF, a certified report by RO, MoEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.
2. Public hearing is exempted for preparation of EIA/EMP Report as unit is located in notified Industrial area established prior to 2006.
3. Recommendation of AP Pollution Control Board for proposed expansion.
4. The company need to apply for change the name for the proposed expansion as existing unit is in different name.

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 4<sup>th</sup> 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**' **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 accordingly to **State SEAC/SEIAA for appraisal**.

- 30.7.15 Expansion of Bulk Drug & Intermediates (capacity 237.6 TPA to 1548.0 TPA) at. Sy. No. 42, Ali Nagar, Village Gaddapotharam , Mandal Jinnaram , District Medak, Telangana by M/s. Sigachi Laboratories–reg. TOR

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

- 30.7.16 Greenfield project of Chlor-Alkali plant of 600 MTD (2x300 MTD) and Captive Power Plant of 32 MW at Khasra no. 15/11, 12,13, 18/3, 19,20, 17/7/2, 12/2, 13, 14, 15, 17, 18/1, 24/2, 25/1, Village Landha, Tehsil Saha and District Ambala, Haryana by M/s Shree Ganesh Fats (P) Ltd – reg. TOR

The project authorities and their consultant (Kadam Environmental Consultants) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken along with the draft Term of References for the preparation of EIA-EMP. All units producing Chlor Alkali listed at S.N. 4(d) are treated as category A due to its location outside the notified industrial area and have production capacity more than 300TPD.

M/s Shree Ganesh Fats (P) Ltd. has proposed Greenfield project of Chlor-Alkali plant of 600 MTD (2x300 MTD) and Captive Power Plant of 32 MW at Khasra no. 15/11, 12,13, 18/3, 19,20, 17/7/2, 12/2, 13, 14, 15, 17, 18/1, 24/2, 25/1, Village Landha, Tehsil Saha and District Ambala, Haryana. Following products are proposed to be manufactured;

Sl. No.	Products	Proposed Quantity (MTPA)
1	Caustic Soda	208800
2	Chlorine	183000
4	Hydrogen	80000
	<b>Bye products</b>	
1	Sodium hypochlorite	900
2	Hydrochloric Acid (Dil, HCL)	3,000

It is reported that no protected area, local legislation for their ecological landscape, cultural or other related value are located within 10 km distance. Total 10 water bodies have been informed ( without defining the name ) to be located within 10 km radius. Plot area is 5.2 hectare (52000 m<sup>2</sup>) of which greenbelt will be developed in 33%(15600 m<sup>2</sup>). Cost of project is Rs. 580 Crores for phase 1 & 2.

Water requirement for phase- 1 is reported to be 672m<sup>3</sup>/day and no figure reported for phase-2 with respect to production capacity of 300 TPD. It is presumed that water requirement shall enhance 2x672 i.e.1344m<sup>3</sup>/day. The project is based of zero liquid discharge concepts and no effluent will be discharge outside the plant premises. Waste water generated from the process will be treated using RO technology and permeate of RO will recycled back into the process. Hazardous waste is discarded bags and used oil will be sent to authorized vendor. Brine sludge will be sent to secured landfill and fly ash will be given to brick manufacturer.

Captive Power plant using coal and biomass having 32 MW will be installed. Coal/ Petcoke will be used as a fuel source for the Power plant. Basic process involves steam generation by combustion of coal in boiler. Steam is used to run turbine for power generation. Main source of gaseous emission will be from Power plant, waste chlorine absorption system and HCl plant. ESP will be connected to boiler with stack height of 80 meter. DG sets will be connected to stack of 30 meter height. Quantity of coal/bagas are not provided in the Form 1

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

### **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 APPCB.
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. Data for the stack emissions, fugitive emissions; water requirement and water balance chart; wastewater generation, treated effluent quality, re-utilization and disposal of solid/hazardous waste for the existing unit.
9. A map indicating location of the project and distance from severely polluted area.
10. Project location and plant layout.
11. Infrastructure facilities including power sources.
12. Total cost of the project alongwith total capital cost and recurring cost/annum for environmental pollution control measures.
13. Project site location alongwith site map of 10 km area and site details providing various industries, surface water bodies, forests etc.
14. Present land use based on satellite imagery for the study area of 10 km radius. Details of land availability for the project alongwith supporting document.
15. Location of National Park/Wild life sanctuary/Reserve forest within 10 km radius of the project.
16. Permission from the State Forest Department regarding the impact of the proposed plant on the surrounding reserve forests.
17. Details of the total land and break-up of the land use for green belt and other uses.
18. List of products alongwith the production capacities.
19. Detailed list of raw material required and source, mode of storage.
20. Manufacturing process details alongwith the chemical reactions and process flow chart.
21. Action plan for the transportation of raw material and products.
22. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
23. Ambient air quality monitoring at 6 locations within the study area of 5 km., aerial coverage from project site as per NAAQES notified on 16<sup>th</sup> September, 2009. Location of one AAQMS in downwind direction.
24. One season site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub> including VOCs shall be collected. The monitoring stations shall take into account the pre-dominant wind direction,

- population zone and sensitive receptors including reserved forests. Data for water and noise monitoring shall also be included.
25. Details of water and air pollution and its mitigation plan
  26. Air pollution control measures proposed for the effective control of gaseous/process emissions within permissible limits.
  27. An action plan prepared by SPCB to control and monitor secondary fugitive emissions from all the sources.
  28. Determination of atmospheric inversion level at the project site and assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. Air quality modelling for proposed plant.
  29. Name of all the solvents to be used in the process and details of solvent recovery system.
  30. Design details of ETP, incinerator, if any alongwith boiler, scrubbers/bag filters etc.
  31. Action plan to control ambient air quality as per NAAQS Standards notified by the Ministry on 16<sup>th</sup> September, 2009.
  32. Source and permission from Competent Authority for the drawl of 12233 m<sup>3</sup>/day water. Water balance chart including quantity of effluent generated recycled and reused and effluent discharge.
  33. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the standard.
  34. Zero discharge effluent concepts to be adopted.
  35. Ground water quality monitoring minimum at 6 locations shall be carried out. Geological features and Geo-hydrological status of the study area and ecological status (Terrestrial and Aquatic).
  36. The details of solid and hazardous wastes generation, storage, utilization and disposal particularly related to the hazardous waste calorific value of hazardous waste and detailed characteristic of the hazardous waste. Action plan for the disposal of fly ash generated from boiler shall be included.
  37. Material Safety Data Sheet for all the Chemicals are being used/will be used.
  38. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
  39. Risk assessment for storage for chemicals/solvents. Action plan for handling & safety system.
  40. An action plan to develop green belt in 33 % area. Layout plan for green belt shall be provided.
  41. Action plan for rainwater harvesting measures at plant site shall be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
  42. Details of occupational health programme.
    - 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.
  43. Socio-economic development activities shall be in place.
  44. At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and incorporated.
  45. Note on compliance to the recommendations mentioned in the CREP guidelines.
  46. Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency,

responsibility and time bound implementation plan for mitigation measure shall be provided.

47. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.
48. Total capital cost and recurring cost/annum for environmental pollution control measures.

#### **49. Corporate Environmental Responsibility**

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

#### **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. Permission to be obtained from State Pollution Control Board for allowing the project other than industrial area.
3. Permission also needs to be obtained from Ground Water Authority for withdrawal of water.

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 4<sup>th</sup> 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 for public hearing. The issues emerged and response to the issues shall be incorporated in the EIA report.

### **30.8. Any Other**

**30.8.1** Increase in Production of Pentaerythritol (from 450 MTPM to 560 MTPM) and Sodium Formate (275 MTPM to 336 MTPM) of M/s Asian Paints Limited at Plot No. B5-B10, Sy. No. 126-131, 137 & 165 at Sipcot Industrial Estate, Village Kudikadu, Mandal & District Cuddalore, Tamil Nadu J-11011/345/2011-IAII(I) – (Corrigendum sought vide letter dated 04.03.2014 on EC granted on 24.02.2014)

Proposal was considered in the 21<sup>st</sup> EAC meeting held during 30<sup>th</sup> July, 2014 to 1<sup>st</sup> August, 2014 and the Committee suggested that clarification may be obtained from the PP whether the above mentioned plant is a standalone plant or part of integrated paint complex.

PP vide letter dated clarified that the above mentioned plan is a standalone plant for manufacturing of Penta-erythriol and not a part of the integrated paint complex, they do not manufacture paints coming under 5 (h) (integrated paints industry ) of EIA 2006 schedule in the above project site.

After detailed deliberation, the Committee recommended the above amendments in EC dated 23<sup>rd</sup> April, 2013 for category of unit to be treated as 5 (f) instead of 5 (h).

**30.8.2** Petroleum Refinery at Numaligarh to be set up by IBP Co. Ltd. under Assam Accord – Letter of M/s Numaligarh Refinery Ltd. on condition No.3 of EC to NRL vide MoEF's OM No.J-11011/16/90-IAII dated 31.05.1991 – F.No.J-11011/1/2014-IAII(I) - amendment in EC.

Proposal was placed in the 14<sup>th</sup> EAC meeting held during 29<sup>th</sup>-30<sup>th</sup> January, 2014, wherein the following has been discussed:

- i) MoEF granted environmental clearance to M/s Numaligarh Refinery for setting up of petroleum refinery on 31<sup>st</sup> May, 1991 with the following specific condition No. (iii):

*"The national highway shall be diverted away from the Kaziranga National Park and that portion of this road through and along the National Park (from Jakhlabandh to Bokakhat) to be de-notified from all highway records and handed over to the National Park Authorities for regulating traffic. No movement of personnel, material or equipment for the project shall take place on the existing National Highway 37. The realignment of the National Highway 37 would be finalized in consultation with the Ministry of Environment & Forests so that the wildlife habitat in the nearby Mikir hills and areas rich in biological diversity therein are protected. Work on the diversion of NH37 will start before construction of refinery begins and*

*the Ministry of Petroleum shall ensure that the road is completed before the commissioning of the project.”*

(ii) After deliberations, the Committee noted that presently, construction of M/s Numaligarh Refinery project is over and equipment and machinery for the Plant have been already shifted/installed in the refinery, and hence the said specific condition is redundant and recommended dropping of EC condition (iii) of EC letter dated 31.05.1991. The Committee also recommended that in case of any modernization equipments/machinery to be installed in the refinery in future, the same shall be transferred by waterways/railways only and the NH-37 shall not be used for the purpose.

(iii) Now, PP has requested MoEF vide letter dated 20<sup>th</sup> May, 2014 to consider recommendation of EAC in the following perspectives:

- a. *NH-37 serves as the lifeline connecting Upper Assam with rest of the country through Kaziranga National Park with no suitable alternative at present.*
- b. *Restraining NRL from using NH037 alone shall not add significant benefit in ecological balance of the area. Besides, number of Central & State PSUs including Tea Industries etc. will continue to use this road for their activities.*
- c. *Further, use of waterways would require huge logistical support which may be cost prohibitive. River Brahmaputra can be used to transport heavy consignments only during peak rainy season of two/three months due to draft problem. In view of this, use of only riverways may cause the project unviable in today's context.*
- d. *Conditional withdrawal of the condition No. 3 of EC dated 31.05.1991 is not favourable to the interest of NRL and its modernization program for mandatory compliance of auto fuel policy in mid 2017/proposed expansion program.*
- e. *Considering above facts, NRL's interest will be seriously jeopardized if the second part of the EAC recommendation i.e. "not to use the said stretch of NH-37 for modernization equipments/ machinery to be installed in the Refinery in future" is not re-considered and expunged.*
- f. *PP also informed that their products and crude are being transported through pipeline.*

After detailed deliberation, the Committee sought following additional information:

- i. *Traffic study*
- ii. *Due to their activity, what will be impact on the transportation.*
- iii. *What are the safeguards to be adopted while using the stretch of NH-37 through Kaziranga National Park for future projects of NRL.*

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



**30.8.3 Applicability of EIA, Notification 2006 on method of extraction of natural product adopted by M/s Alchem International Ltd. at SP2-5, RIICO Industrial area, district Neemrana, Alwar- regarding clarification**

Member Secretary, Rajasthan Pollution Control Board vide letter dated 21.11.2014 has requested MEF&CC to give opinion as to whether the product manufactured by the industry may be categorized synthetic organic chemicals and attracts the provisions of EIA, Notification, 2006.

Accordingly, the project authorities gave a detailed presentation on the salient features of the project and proposed that unit may be exempted from applicability of EIA Notification, 2006 for the standard established methods for extraction of natural product.

The PP has submitted the followings in Sennoside process in three stages;

Stage-1: Extraction of Sennosides using organic solvents ( 40% water & Solvent 60% ) to get concentration of sennosides upto 20%(approx.)

Stage-2 : Concentration of Sennosides by distillation and column separation to get concentration of sennosides upto 80%. No bye product is isolated at this stage. The use of acid and alkali is for product purification.

Stage-3: The sennoside syrup is treated with Calcium-Choloride for stabilization and precipitated to get powder of desired purity. It is stated that this is product stabilization process and does not cause any molecular structure change.

The committee, after deliberation, was of the view that the third stage of above process involve reaction of  $\text{CaCl}_2$  in Alkaline media whereby Na, Mg, K, etc. are replaced by Ca that is only by substitution and it may not be treated as synthetic or molecular change. As there is no organic synthesis involved, it does not attract provisions of EIA, Notification, 2006.

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**LIST OF PARTICIPANTS OF EAC (Industry) IN 30<sup>th</sup> MEETING OF EAC (INDUSTRY) HELD  
ON 22-23<sup>rd</sup> December 2014**

<b>S.N.</b>	<b>Name</b>	<b>Designation</b>	<b>Attendance</b>
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	A
10.	Dr. Antony Gnanamuthu	Member	P
11.	Prof. C. S. Dubey	Member	P
12.	Shri Niranjana Raghunath Raje	Member	P
<b>MOEF Representatives</b>			
13.	Shri Lalit Bokolia	Additional Director & MS Industry-(2)	P
14.	Shri A.N.Singh	Joint Director	P

