MINUTES OF 12th EXPERT APPRAISAL COMMITTEE (INDUSTRY-2) MEETING HELD DURING 23-24th AUGUST , 2016

VENUE: Teesta, First Floor, Vayu Wing, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan Aliganj, Jorbagh Road, New Delhi -110003.

Time : Meeting to be held at 10: 00 AM

- **12.1** Opening Remarks of the Chairman
- Time : 10: 00 10: 15 AM
- **12.2** Confirmation of the Minutes of the 11th Expert Appraisal Committee (Industry-2) held during 20-21st July, 2016.
- The following modifications/correction in the minutes of the 9th Expert Appraisal Committee (Industry-2) held during 27-28th June 2016 confirmed:

Name of the project	Corrections sought	Read as
Setting up of synthetic	Para 3 : line 6 &7	
organic chemical manufacturing unit at Plot No 193, APIIC Growth Center Hindupur, Village Thumkunta, Mandal Hindupur, District Anantapur, Andhra Pradesh	Total water requirement will be 72.5 m3/day. Out of which fresh water requirement from APIIC will be 12.84 m3/day	Total water requirement will be 72.5 m3/day. Out of which fresh water requirement from APIIC will be 59.66 m3/day
by M/s Srikar Chem & Pharma India Pvt. Ltd	Specific condition no. v i.e Total fresh water requirement from APPIIC shall not exceed 12.84 m3/day.	Total fresh water requirement from APPIIC shall not exceed 59.66 m3/day
Proposed expansion of	Specific condition no. vi i.e	Specific condition no. vi i.e
Chemicals unit at plot no. 2 & 3, Village Ukharala, District. Bhavnagar, Gujarat by M/s Medinex Laboratories Pvt. Ltd reg. EC	Total fresh water requirement from ground water source shall not exceed 13.7 m3/day and prior permission shall be obtained from the CGWA/SGWA.	Total fresh water requirement from ground water source shall not exceed 8.784 m3/day and prior permission shall be obtained from the CGWA/SGWA.

23nd August, 2016 (Day 1)

1st Session: Time: 10.15 AM

12.3 Environmental Clearance

12.3.1 Expansion of Synthetic Organic Chemical Manufacturing Unit at GIDC Sarigam, Village Sarigram, Tehsil Umbergaon, District Valsad, Gujarat by M/s MAC Industry- reg EC.

PP has applied the project through online system. Meanwhile, PP requested to transfer the project to state Authority being B category project. However, PP did not attend the meeting.

12.3.2 Proposed LPG Bottling Plant (21000 MTPA) at SIPCOT Industrial Park, Village Thervoy Kandigai, Tehsil Gummidipoondi, District Thiruvallur, Tamil Nadu by M/s SHV Energy Private Limited.- reg EC.

The project proponent and their consultant (M/s Hubert Enviro Care Systems (P) Ltd and Eco Chem Sales & Services) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of References (TORs) awarded in the 2nd Meeting of the Expert Appraisal Committee (Industry -2) held during 16th- 17th December, 2015 respectively for preparation of EIA-EMP report.

All the project related to Isolated storage & handling of hazardous chemicals are listed at item no. 6 (b) under category 'B' of the Schedule of EIA Notification and appraised at State level. However, applicability of general condition i.e. 3.4 km from an interstate boundary, proposal is treated as category 'A' project and appraised by Expert Appraisal Committee (Industry-2).

M/s SHV Energy has proposed for setting up of new LPG Bottling Plant for a capacity of 21,000 MTPA at plot no. A - 11/2 Part A SF No. 32/2, SIPCOT Industrial Estate, Thervoy Kandigai village, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu. Total plot area is 40468.6 m². Cost of project is Rs. 22.0 Crore. LPG of Capacity 12148.8 MTPA is for single shift operation. The total proposed capacity of 21000 MTPA will be accomplished in two shifts. The proposed facility will receive LPG through road by tankers from Tuticorin. The LPG from tankers is unloaded and stored in two bullet tank of 125 MT and bullet of 50 MT.

Additionally, PP informed the Committee that ambient air quality monitoring was carried out at 8 locations during January, 2016 to March 2016 and submitted baseline data indicates that ranges of concentrations of PM10 (55.48 µg/m3 to 58.40 μg/m3), PM2.5 (22.49 μg/m3 to 24.68 μg/m3), SO2 (12.10 μg/m3 to 14.78 μg/m3), NO2 (22.08 µg/m3 to 24.61 µg/m3) and VOC (2.2 to 3 ppm) respectively. The only major point sources of emissions from this industry are D.G sets. These sources will be fitted with stacks of adequate height so as to disperse the emanating flue gases containing particulate matter, oxides of sulfur and nitrogen without affecting the ground level concentrations of the surrounding environment. Fresh water requirement from SIPCOT water supply will be 10 m3/day. Total effluent generation will be 5.0 m3/day. The committee suggested them to treat domestic wastewater in the mini STP. Industrial effluent should be treated in the ETP. Treated effluent should be recycled/reused. Damaged cylinders will be segregated and stored on site prior to disposal as scrap metal. STP sludge will be used as manure. As a part of ESR activity, the committee suggested the PP to distribute LPG cylinders to the BPL card holders to the nearby villagers out of 2.5 % of total project cost. PP agreed to the suggestion and estimated about 5000 LPG cylinders for distribution.

Public hearing was exempted as per section 7 (i), (iii) Stage (3), para (i) (b) of EIA, Notification 2006, being site is located in the Notified Industrial area.

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

- i. Adequate buffer zone around the LPG Marketing Terminal shall be provided, as may be required as per OISD or other statutory requirements.
- ii. Regularly monitoring of VOC and HC in the work zone area in the plant premises should be carried out and data be submitted to Ministry's Regional Office at Chennai, CPCB and State Pollution Control Board. Quarterly monitoring for fugitive emissions should be carried out as per the guidelines of CPCB and reports submitted to Ministry's Regional Office at Chennai.
- iii. Total fresh water requirement from SIPCOT water supply should not exceed 10 m³/day. No ground water shall be used.
- iv. Domestic sewage should be treated in mini STP and Industrial effluent should be treated in the ETP.
- v. The company should construct the garland drain all around the project site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system should be created for oil contaminated and non-oil contaminated streams. During rainy season, the storm water drains should be connected to oil water separator and passed through guard pond. Water quality monitoring of guard pond should be conducted.
- vi. Necessary approvals from Chief Controller of Explosives must be obtained before commission of project. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented.
- vii. The company should obtain all requisite clearances for fire safety and explosives and should comply with the stipulation made by the respective authorities.
- viii. Emergency Response Plan should be based on the guidelines prepared by OISD, DGMS and Govt. of India. Mock drill should be conducted once in a month.
- Additional safety measures should be taken by using remote operated shut off valve, double block & bleed valve (DBB), impervious dyke wall and un-bonded flexible roof drain pipe.
- x. Unit should carry out safety audit and report submitted to the Ministry and its Regional Office at Chennai within six months.
- xi. LPG transfer line from refinery to the LPG terminal shall be laid underground with adequate Cathodic protection against External Corrosion and the SCADA system.
- xii. Occupational health surveillance of worker should be done on a regular basis and records maintained as per the Factory Act.

- xiii. Green belt should be developed in 33% of the plot area to mitigate the effect of fugitive emission all around the plant in consultation with DFO as per CPCB guidelines. Thick green belt around factory premises should be ensured.
- xiv. The Company should harvest surface as well as rainwater from the rooftops of the buildings proposed in the project and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.
- xv. All the recommendations mentioned in the EMP should be implemented.
- xvi. As proposed, 5000 cylinder (domestic) shall be distributed under Enterprise Social Commitment (ESR) to the BPL card holders to the nearby villagers for domestic use with consultation of district administration. Proper record to be maintained and monthly report to be given district authority.
- xvii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

12.3.3 Expansion of Mumbai Refinery from 7.5 MMTPA to 9.5 MMTPA at BD Patil Marg, Mahul, Mumbai, Maharashtra by M/s HPCL – reg EC.

The project proponent and their consultant (M/s EIL gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of References (TORs) awarded in the 32nd and 36th Meeting of the Expert Appraisal Committee (Industry -2) held during 20th 21st January, 2015 and 16th–17th March, 2015 respectively for 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 HPCL has proposed to enhance the refining capacity of its Mumbai refinery upto 9.5 MMTPA including Propylene Recovery Unit (PRU) and revamp of existing Captive Power Plant (CPP).

SI. No	Projects/ Units	Environment Clearance document	Date	Compliance
1	MR-II Tankage Project	J-11011/121/2013-IA II (I)	05/04/2016	In Progress
2	DHT Project	J/11011/415/2008– IA.II(I)	04/09/2009	Complied
3	GFEC Project	J-11012/1/2002-IA II (I)	10/04/2003	Complied

Previous Environmental Clearances issued to HPCL Mumbai refinery is as follows.

The total cost of the project is Rs.3223.43 Crores for refinery expansion and PRU & revamping of CPP with a capital investment of Rs.622.45 Crores. All new facilities are coming up within existing refinery having 13, 95,477 sq.m. The total area for setting up of

new units within refinery premises is 2.1 acres. It is reported that no National Park and Wildlife Sanctuary is located within 10 km of the project site. Mahul creek is a shallow wetland area where lots of birds are seen in winter season. Capacities of existing and proposed units are as given below:

PRODUCTS	Existing production (KTPA)
LPG	332
LAN	272
SCN	96
Treated Hexane	30
Solvent 1425	8.5
MS Euro III	1075
MS Euro IV	0
МТО	48
ATF	600
SKO	52
Euro III Diesel	1810
Euro IV Diesel	776
LDO	88
RPO	70
FO 180 cst	567
Sulphur	37
150 N Gr-I	81
500 N Gr-I	206
Bright Stock	61
IO-100	9
VG-10 Bitumen	229
VG-30 Bitumen	478

The proposed expansion of products

Units	Design Capacity	Expansion Case
	(KTPA)	(KTPA)
FRAPS/VPS	4000 (Kuwait)	6000
FREAPS/VPS	3500 (BH)	3500
NAPHTHA SPILTTER UNIT	1222	1222
Naphtha Hydro Treater (NHT) /Isomerisation	250	300
NHT/Continous Catalytic Reformer	545	654
PRIME G+	475	570
New Fludised Catalytic Cracking Unit (FCCU)	1227	1227
Old FCCU	950	950
Diesel Hydro Desulphurisation Unit	2270	2270
Diesel Hydro Treater Unit	2200	2200
PDA	755	755
Hydrogen Generation Unit (HGU)	14.5	14.5
New HGU	-	36
Visbreaker (VBU)-New Residue upgradation unit	-	565
Propylene Recovery Unit (PRU)	-	100
New GTG		81 MW

Additionally, PP informed that ambient air quality monitoring was carried out at 8 locations during March, 2015 – May, 2015 and submitted baseline data indicates that ranges of concentrations of PM_{10} (70 - 106 µg/m³), $PM_{2.5}$ (24 - 65 µg/m³), SO_2 (10.9 – 25.2 ug/m3) and NOx (19.5 – 33.5 µg/m³) and CO (0.96 - 1.27 mg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 25.2 µg/m³, 20.04 µg/m³ and 21.43 µg/m³ with respect to PM_{10} , SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS) except PM_{10} . Total SOx emission from the refinery post expansion is expected to be 8.62 TPD which will be well within the existing permissible limit of 12.6 TPD as stipulated by MOEF/SPCB. Fresh water requirement from BMC will be increased from 426 m³/hr to 538m³/hr after expansion. The additional power required for MREP shall be 13 MW, for PRU 600 KW (415 V LT) + 622 KW (6.6 KV HT). Recovery efficiency of existing two SRU trains will be increased from 99% to 99.9%. Low NOx burners will be installed to reduce NOx emission from all furnaces.

Effluent generation will be increased from 130 m³/hr to 178 m³/hr after expansion. PP confirmed that as the existing IETP can handle the above flow of 178 m³/hr, no new ETP is proposed for treatment. It is proposed that ETP treated water from Reverse Osmosis system will be routed to DM Plant for reuse. Spent catalyst will be sent to the authorized recycler/reprocessors.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 13th May, 2016. The concerns were raised regarding employment, pollution problem, traffic problem, plant used BMC water and CSR fund allocation etc. The Committee suggested them to furnish details of issues raised during public hearing and commitments made by the them in the form of tabular chart with financial budget for complying with the commitments made.

The committee also discussed the response given in EIA report to the representation from the Conservation Action Trust.

After deliberation, the Committee sought following additional information:

- i. Variation has been observed in products list reflected in EIA report vis a vis presentation. Comparison of product in tabular form w.r.t. existing and proposed expansion to be given properly.
- ii. Reasons for high baseline value of PM_{10} to be given.
- iii. 1 Month VOC data to be submitted
- iv. Water balance chart of the existing and proposed unit to be furnished properly.
- v. Issues raised during public hearing and commitments made by the project proponent in the form of tabular chart with financial budget for complying with the commitments made.
- vi. Year wise detailed plan to be redrawn upto 2.5% of project cost out of the issues emerged from public consultation.
- vii. Detailed traffic management plan to be drawn.
- viii. Commitment alongwith timeline for installing mechanical scrapper in oil and grease trap/tank.

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

12.3.4 Setting up of molasses based distillery (45KLPD) at Village Gopalapuram, Post Alapuram, Taluka Pappireddipatti, District Dharmapuri, TamilNadu by M/s Subramaniya Siva Cooperative- reg EC

The project proponent and their consultant (M/s 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 Terms of References (TORs) awarded in the 46th Meeting of the Expert Appraisal Committee (Industry -2) held during 20th-21st August, 2015 for preparation of EIA-EMP report. All molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level.

M/s Subramaniya Siva Cooperative Sugar Mills Ltd (SSCSML) has proposed for setting up of Molasses based Distillery (45KLPD) at Village Gopalapuram, Post Alapuram, Taluka Pappireddipatti, District Dharmapuri, Tamil Nadu. The plant is proposed within existing sugar mill having total area about 96.14 acres. The proposed 45KLPD Molasses based distillery project is planned to be established over an area of 14.86 acres, of which 4.9 Acres will be used for green belt development. There are no National Parks/ Wild Life Sanctuaries/ Biosphere Reserves within 10 km radius area of project site. Reserve Forests namely Kavaramalai Reserve Forest – 2.46km [NW], Palippatti Reserve Forest -7.04km [SE] and Harur Reserve Forest – 9.17km[NE] are located within 10 km distance. Cost of project is Rs. 101.75 crores. Out of which, Rs. 1036 lakhs and Rs 149 lakhs are earmarked towards capital cost and recurring cost per annum for implementation of environmental management plan. Distillery will be operated for 270 days per annum. Following products will be manufactured:

S.N.	Products	Quantity
1	Fuel Ethanol (99.8% v/v)	45KLPD

	OR Extra Neutral Alcohol (96% v/v) /Rectified Spirit	
2	Impure Spirit	2.25KLPD
By Produ	icts	
1	Bio compost	41.93MTD
2	Biogas	14040m ³ /day

Additionally, PP informed that ambient air quality monitoring was carried out at 8 locations during 15th August 2015 to 09th Nov 2015 and submitted baseline data indicates that ranges of concentrations of PM10 ($36.21 - 56.53 \mu g/m3$), PM2.5 ($10.26 - 16.62 \mu g/m3$), SO2 (9.14 - 15.64 ug/m3) and NO2 ($15.46 - 21.96 \mu g/m3$) and CO (less than 1 mg/m3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be $1.4 \mu g/m3$, $20.9 \mu g/m3$ and $9.7 \mu g/m3$ with respect to PM10, SO2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Stack of 48 m height will be provided to Furnace oil fired boiler to disperse pollutants. However, the Committee suggested them to use LDO instead of furnace oil.

Fresh water requirement for distillery unit will be 463 m³/day and to be drawn from the River Vaniyaru. On water requirement, the Committee worked out the fresh water requirement upto 290 m³/day. PP agreed to reduce the fresh water demand upto 290 m³/day. After deliberation, Committee suggested that spent wash should be treated through bio-methanation unit followed by concentration in MEE. Concentrated MEE will be bio-composted with press mud. Condensate of MEE and Spent lees will be treated in the ETP. No effluent will be discharge outside the plant premises. Bio Digester slurry will be used for bio Compost (Molasses). Used oil will be sold to authorized recyclers.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra Pollution Control Board on 15th February, 2016. The concerns were raised regarding employment, increase plantation, establishment of soil testing lab, and CSR fund allocation etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

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

- i) Distillery unit shall be based on molasses based only and no grain based distillery unit shall be operated.
- ii) Stack of 48 m height shall be provided to LDO fired boiler. The gaseous emissions should be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- iii) Company shall follow good management practices viz. collection of waste yeast sludge from fermentation section in a closed system and proper disposal, reduced volume of effluent by adopting strategic approaches, closed drains carrying spent wash to the treatment units; minimization of fugitive emissions from anaerobic treatment; proper collection & handling of excess sludge generated from the anaerobic & aerobic treatment units; minimum retention of

treated & untreated spent wash in the lagoons; effective composting of the spent wash by controlled effluent spraying through mechanical system to avoid spillages & over application, blending of sludge in correct proportion with press mud; and properly finished compost and green belt development with suitable plantation in and around the treatment units to mitigate odour from the distillery unit.

- iv) Pucca approach road to project site shall be constructed prior to commencing construction activity of the main distillery so as to avoid fugitive emissions.
- v) The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB guidelines. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- vi) Total fresh water requirement shall meet from River Vaniyaru for distillery unit and shall not exceed 290 m3/day.
- vii) Spent wash generation from molasses based distillery shall not exceed 8 Kl/Kl of alcohol. The spent wash from molasses based distillery shall be treated in biomethanation process and evaporated in MEE. Concentrated spent wash shall be shall be mixed with pressmud for bio-composting to achieve 'Zero' discharge. Evaporator Condensate, spentlees and utilities effluent shall be treated and recycled/reused in process. No effluent shall be discharged outside the premises and 'Zero' discharge shall be maintained.
- viii) Automatic /online monitoring system (24 x 7 monitoring devices) for flow measurement and relevant pollutants in the treatment system to be installed. The data to be made available to the respective SPCB and in the Company's website.
- ix) As proposed, no effluent from distillery shall be discharged outside the premises and Zero discharge shall be adopted. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.
- x) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xi) Spent wash shall be stored in impervious RCC lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 30 days capacity.
- xii) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Chennai and SPCB.
- xiii) Fire fighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting shall be made to control fire from the alcohol storage tank.
- xiv) Risk Assessment shall be carried to assess the fire and explosion risk due to storage of alcohol and report submitted to the Ministry and its Regional Office at Chennai within six months.

- xv) Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.
- xvi) Dedicated parking facility for loading and unloading of materials shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- xvii) As proposed, green belt over 33% of the land 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.
- xviii) All the commitments made during the Public Hearing / Public Consultation meeting held on 18th February, 2016 should be satisfactorily implemented and adequate budget provision should be made accordingly.
- xix) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Chennai. Implementation of such program shall be ensured accordingly in a time bound manner.

12.3.5 On shore Oil & Gas exploration drilling (3 wells) in Deomali PEL area in Tirap and Changlang Districts in the state of Arunachal Pradesh by M/s Oil India Limited –reg EC

The project proponent and their consultant (M/s 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 Terms of References (TORs) awarded in the 9th Meeting of the Reconstituted Expert Appraisal Committee (Industry) held during 10th- 11th June, 2013 respectively 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 Limited has planned for on-shore Oil & Gas exploration drilling for five wells in Deomali PEL area in Tirap and Changlang Districts in the state of Arunachal Pradesh. During presentation PP informed that out of 5 wells two are dropped due to non productive. Proposal is being requested for 3 wells only in Tirap District. The Deomali PEL Block of OIL covers approximately 113.5 sq km. It is located in the southern part of OIL's operational area in Arunachal Pradesh, in two districts namely Tirap and Changlang.

It is reported that location A and location C are located in the forests of Tirap District and Loc D is located in forest land of Changlang district. Loc B and Loc E would be drilled from the plinths of Loc A and Loc D respectively. Location Loc A & Loc C is located within 10 km of Dehing Patkai Wildlife Sanctuary. A single well will be drilled from Loc C. OIL has already applied for diversion of the reserve forest areas for non –forestry purpose for drilling wells under the provision of the Forest Conservation Act, 1980 to the Office of the Chief Conservator of Forests (Cons) & Nodal Officer (FC), Itanagar, Arunachal Pradesh. OIL is in the process of submission of documents for Wildlife Clearance to the Principal Chief Conservator of Forest (PCCF) Wildlife of Assam and National Board (NBWL) of Wildlife of Ministry of Environment, Forest and Climate Change (MoEFCC) of India. The estimated land required per drill site is approximately 3 ha including site required for construction of approach road. Namdang River flows at about 0.5 km south of the site. Following are the coordinates of three proposed wells:

S.No	Location Name	Latitude		Longitude			Remarks	
		Deg	Min	Sec	Deg	Min	Sec	
1	Loc.A (DML-1)	27	07	37.0	95	28	47.5	Locations are in
2	Loc.B (DML-3)	27	07	16	95	28	28	Reserved Forest
3	Loc.C(DML-4)	27	05	40.2	95	26	43.0	area in Deomali Division of Tirap District ,AP. Loc. A&B will be from same plinth.

Additionally, PP informed that ambient air quality monitoring was carried out at 7 locations during May 2014 to June 2014 and submitted baseline data indicates that ranges of concentrations of PM₁₀ (39 – 81 µg/m³), PM_{2.5} (23 – 42 µg/m³), SO₂ (4 – 6.80 ug/m3) and NO₂ (17.4 – 39.66 µg/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.042 µg/m³ and 1.38 µg/m³ with respect to PM and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). Stack of adequate height will be provided to DG sets (2 x 1000 KVA + 1 x 63 KVA). Fresh water requirement from ground water source will be 40 m³/day. Water based mud will be used in drilling operation. Drilling wastewater generation will be 9.2 m3/day. Drilling wash water treated in an ETP to ensure conformance to the CPCB onshore oil and gas extraction industry effluent standards.

Drill cuttings generation will be 300 m3/well and it is reported that drill cuttings are likely to be non-hazardous due to water based mud drilling. However, as per the requirement of HWMH Rules, the cuttings will be washed and contained in cuttings disposal area (HDPE lined collection pit) provided.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meetings conducted by the Arunachal Pradesh State Pollution Control Board on 30/07/2015 in Changlang District and 28/7/2015 in Deomali, Tirap District respectively. The issues were raised regarding Safety and pollution aspects, local employment, CSR activity; forest and wildlife protection, 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 based on the documents furnished and presentation made 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 present EC is for Exploratory Drilling only. In case Development drilling is to be done in future, prior environmental clearance must be obtained from the Ministry.
- ii. Stage-1 forest clearance should be obtained.
- iii. Clearance from NBWL should be taken.
- 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 16th November, 2009 for PM₁₀, PM_{2.5}, SO₂, NO_X, CO, methane & Non-methane HC etc.

- v. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- vi. Approach road shall be made pucca to minimize generation of suspended dust.
- vii. 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.
- viii. Total water requirement shall not exceed 40 m³/day from ground water and prior permission shall be obtained from the concerned agency.
- ix. 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.
- x. Drilling wastewater including drill cuttings wash water shall be collected in disposal pit lined with HDPE lining evaporated or treated and shall comply with the notified standards for on-shore disposal. 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.
- xi. Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.
- xii. 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.
- xiii. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30th August, 2005.
- xiv. 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.
- xv. The company shall develop a contingency plan for H₂S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H₂S detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xvi. On completion of drilling, the company have to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.
- xvii. 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.
- xviii. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xix. 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.
- xx. Abandoned well inventory and remediation plan shall be submitted within six months from the date of issue of letter.
- xxi. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xxii. Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office.

- xxiii. Under Enterprise Social Commitment (ESC), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project.
- 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.

2nd Session: Time: 2.00 PM

Reconsideration of EC

12.3.6 Exploratory / Appraisal Drilling in KG-OSN-2009/3 Block in Offshore KG Basin, Prakasam & Guntur Districts, Andhra Pradesh by M/s Cairn India Limited.-reg EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 6th meeting held during 30th to 2nd April 2016 and the Committee was deferred till the recommendation of SCZMA is submitted.

APSCZMA vide letter no. 6552/ENV/CZMA/2016 dated 28/04/2016 has recommended the project proposal. The proposed project is located only in CRZ-IV areas.

The project proponent and their consultant (M/s AECOM Pvt. Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of References (TORs) awarded in the the 30th Reconstituted Expert Appraisal Committee (Industry) held during 22nd–23rd December, 2014 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 Cairn India Limited has proposed for drilling of 55 exploratory and 11 appraisal 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 km². 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 out 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 km2 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. Geographical coordinates of the Block area are as follows:

Blck Reference Point	Latitude	Longitude	Distance from Shore (KM)
А	15 ⁰ 40'03.25"	80 ⁰ 16'59.93"	1.05
В	15 ⁰ 50'00.89"	80 ⁰ 34'59.08"	3.3
С	15 ⁰ 50'59.30"	80 ⁰ 42'55.33"	3.17
D	15 ⁰ 44'02.10"	80 ⁰ 47'00.91"	0
E	15 ⁰ 40'00.20"	80 ⁰ 47'25.16"	6.0
F	15 ⁰ 39'00.09"	80 ⁰ 44'57.69"	10.3
G	15º33'05.28"	80 ⁰ 49'22.12"	17.44
Н	15 ⁰ 24'12.51"	80 ⁰ 46'33.83"	34.27
1	15 ⁰ 23'07.52"	80 ⁰ 40'42.17"	39.27
J	15 ⁰ 21'03.12"	80 ⁰ 40'23.89"	43.06
k	15 ⁰ 19'03.56"	80 ⁰ 37'19.74"	48.01

Additionally, PP informed that ambient air quality monitoring was carried out at 4 locations during January 2015 to February2015 and submitted baseline data indicates that ranges of concentrations of PM_{10} (45.2 – 54.1µg/m³), $PM_{2.5}$ (13.1 – 15.3 µg/m³), SO_2 (6.2–8.2ug/m3) and NO_2 (12.3 – 15.6 µg/m³) respectively. DG sets (4 MW) will be installed on the MODU for power supply. Fuel will be transported from shore to rig through supply vessels. Fuel storage capacities of jack up units are approx. 480 – 640 KL while semi subs can store about 3200 - 4800 KL and drill ships, about 3200 – 8000 KL of fuel. Approx. 20-30 m³/ day of water will be used for domestic consumption. Water requirement for preparation of WBM will be max. 441 m³ per well, while for SBM, max. requirement will be 87.1 m³ per well. Mainly seawater will be used for drilling purposes, remaining water will be supplied from the nearest port. No ground water will be withdrawn for any project related activities.

PP has submitted the copy CRZ clearance given by Andhra Pradesh Coastal Zone Management Authority.

After deliberations, the Committee sought the following additional information:

- (i) Coordinates of proposed well locations to be provided.
- (ii) Distance of each well from Krishna Wildlife sanctuary along with location map.
- (iii) Whether wildlife clearance is being sought w.r.t. location of drill within 10 km distance. If so provide the copy of letter submitted to NBWL clearance.
- (iv) Type of drilling mud will be used and its disposal plan.
- (v) Action plan to reduce the impact on nearby protected areas.

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

12.3.7 Expansion of molasses based distillery (from 20 KLD to 60 KLD) at Block no. 459/1, Garg, district Dharwad, Karnataka by M/s Sri Lakshmi Narshima Distilleries Pvt. Ltd. – reg EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 38th meeting held during 20th to 21st April 2015 and the Committee sought following additional information:

- (i) Reasons for late submission of revised EIA report after conducting public hearing.
- (ii) Certification of Accreditation of consultant
- (iii) Ambient air quality data to be collected for one month.
- (iv) Water requirement is in higher side. Plan to reduce water requirement upto 8 KL per KL of alcohol produced.
- (v) Details of Spent wash, spent lees generation, wastewater generation from Utilities etc.
- (vi) Treatment scheme for spent wash, spent lees generation, wastewater generation from Utilities.

Now PP has submitted the above mentioned addl. Information. Delay was explained due to start of online system. Validation of EIA was by done by M/s MITCON Consultancy, accredidated consultant. Ambient air quality has been found in order. PP agreed to reduce the fresh water requirement upto 8 kL/KL of alcohol production i.e 480 m3/day. The committee review the documents submitted by the PP and found adequate.

After detailed deliberations, the Committee, on the basis of the 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) Multicyclone followed by Bag filter will be used in 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) Total fresh water requirement for distillery from underground shall no exceed 480 m3/day and prior permission should be obtained from the CGWA/SGWA.
- iii) Spent wash generation from molasses based distillery shall not exceed 8 Kl/Kl of alcohol. The spent wash from molasses based distillery shall be treated in biomethanation process and evaporated in MEE. Concentrated spent wash shall be shall be mixed with press mud for bio composting to achieve 'Zero' discharge. Evaporator Condensate, spentlees and utilities effluent shall be treated and recycled/reused in process. No effluent shall be discharged outside the premises and 'Zero' discharge shall be maintained.
- iv) Spent wash shall be stored in impervious RCC lagoons with proper lining with HDPE and shall be kept in proper condition to prevent ground water pollution. The storage of spent wash shall not exceed 30 days capacity.
- As proposed, no effluent from distillery shall be discharged outside the plant premises and Zero discharge shall be adopted. Water consumption shall be reduced by adopting 3 R's (reduce, reuse and recycle) concept in the process.

- vi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- vii) Continuous online (24 x7) monitoring to be installed for flow measurement and measurement of pollutants within the treatment unit. Data to be uploaded on company's website and provided to the respective RO of MEF&CC, CPCB and SPCB.
- viii) Adequate numbers of ground water quality monitoring stations by providing piezometers around the project area and compost yard shall be set up. Sampling and trend analysis monitoring must be made on monthly a basis and report submitted to SPCB and this Ministry. The ground water quality monitoring for pH, BOD, COD, Chloride, Sulphate and total dissolved solids shall be monitored. Sampling and trend analysis monitoring must be made on monthly basis and report submitted to the Ministry's Regional Office at Bhopal and SPCB.
- ix) Bagasse storage shall be done in such a way that it does not get air borne or fly around due to wind.
- x) Boiler ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided. Bagasse ash and coal ash shall be stored separately.
- xi) Fire fighting system shall be as per the norms and cover all areas where alcohol is produced, handled and stored. Provision of foam system for fire fighting shall be made to control fire from the alcohol storage tank. DMP shall be implemented.
- xii) Occupational health surveillance programme shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre shall be strengthened and the regular medical test records of each employee shall be maintained separately.
- xiii) Dedicated parking facility for loading and unloading of materials shall be provided in the factory premises. Unit shall develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
- 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.
- xv) All the commitments made during the Public Hearing/Public Consultation meeting held on 20.02.2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xvi) At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner. Besides, one rain water harvesting pond shall be created in nearby villages.

12.4 <u>Terms of Reference (TOR)</u>

12.4.1 Expansion of Ketonic Resins (20 MTPM to 100 MTPM) at Plot No. C-1/46, 100 shed area, GIDC, Vapi, District Valsad, Gujarat by M/s Resins & Allied Chemicals Industries (Bombay) 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 Synthetic organic chemicals located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised at State Level. However, due to applicability of general condition (Interstate boundary) and CPA, the project is treated as 'A' category and appraised by Expert Appraisal Committee (I).

M/s Resins & Allied Chemicals Industries (Bombay) Pvt. Ltd has proposed for expansion of Ketonic Resins (20 MTPM to 100 MTPM) at Plot No. C-1/46, 100 shed area, GIDC, Vapi, District Valsad, Gujarat. PP has submitted a letter dated 02.01.1980 from GIDC, Gujarat which shows that unit has established prior EIA Notification, 1994. Total plot area is 855 m2, of which 215 m2 (25%) has been earmarked for greenbelt. Cost of project is Rs 10 lakh and Rs. 2.75 lakh has earmarked towards recurring cost per month for Environmental Protection Measure respectively. The proposed project has an employment potential of 20 during operational phase. Followings products will be manufactured:

S. No.	Name of the product	Production capacity MT per month				
		Existing	Additional	Total after expansion		
1	Ketonic resin	20	80	100		
	By Product					
1	Resin cake	0	21.5	21.5		

Existing power requirement is 60 HP sourced by Dakshin Gujarat Vij Co. Ltd. The existing power will be sufficient for proposed expansion. Existing unit has one LDO fired boiler having 600 kg/hr capacity. It has been proposed to switch over the fuel from LDO to Natural gas with consumption of 100 kg/day. Existing unit has One DG set of capacity 82.5 KVA and attached with 11m stack height. Total Fresh water requirement will be increased from 19.60 m3/day to 32.97 m3/day which will be met through GIDC water supply. Total wastewater generation will increase from 10 m3/day to 27.02 m3/day after proposed expansion. Domestic wastewater will be sent to Septic tank followed by Soak pit. Industrial wastewater will be segregated into High COD and Low COD streams. High COD stream will be sent to primary unit of ETP and further sent Common MEE of Vapi Green Enviro Ltd. The condensate from MEE will be recycled for industrial purposes. Low COD generated from process stream, boiler blow down and cooling tower blow down will be sent to ETP and after treatment will be discharge to CETP. The Committee noted that PP has quoted low project cost and advised to firm the cost with all equipments including green belt development plan.

ETP waste will be sent to TSDF Site. Discarded container will be sold to the the authorized vendor. Used oil will be sent to registered refiners.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (refer Ministry's web site) for preparation of EIA-EMP report:

A. Specific TOR:

- 1. Details on solvents to be used, measures for solvent recovery and for emissions control.
- 2. Details of process emissions from the proposed unit and its arrangement to control.
- 3. Ambient air quality data should include VOC, other process-specific pollutants* like NH3*, chlorine*, HCI*, HBr*, H2S*, HF*, *etc.*, (* as applicable)
- 4. Work zone monitoring arrangements for hazardous chemicals.
- 5. Detailed effluent treatment scheme including ssegregation of effluent streams for units adopting 'Zero' liquid discharge.
- 6. Action plan for odour control to be submitted.
- 7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
- 8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
- 9. Action plan for utilization of MEE/dryers salts.
- 10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
- 11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
- 12. Details of incinerator if to be installed.
- 13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
- 14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

B. Additional TOR

- i. Public hearing is exempted as per para 7(i) III Stage (3)(i)(b) of EIA Notification, 2006 for preparation of EIA/EMP Report, being site is located in the Notified industrial area.
- ii. Recommendation of SPCB to be obtained for proposed expansion.
- iii. Greenbelt plant to be prepared and EIA-EMP to be prepared with firm cost.

It was recommended that 'TOR' 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.

12.4.2 Laying of pipeline (12 "dia) from BPCL Kochi Refinery to Kerala Tamil Nadu border including connectivity to IOCL Udayamperoor LPG plant in the state of Kerala terminating at Alathur in Palakkad District by M/s Kochi Salem Pipeline Pvt. Ltd., a Joint venture of M/s BPCL and M/s IOCL –reg TOR

The project proponent 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) for preparation of EIA-EMP report. All Oil & Gas Transportation Pipeline (crude and refinery/petrochemical products) passing through national parks/sanctuaries/coral reefs/ecologically sensitive areas are listed at S.N. 6 (a) under category 'A' and appraised at Central level.

Ministry has issued EC vide letter no. J-11011/396/2012-IA II (I) dated 30th September, 2015 for laying 12" dia pipeline from BPCL Kochi Refinery Kerala to Tamilnadu border (199 Km). Due non acquisition of land, now PP wants to reroute a portion of the pipeline for a length of 28.87 km from Pattikkad in Thrissur District to Alathur in Palakkad District. As per the existing EC, the pipeline is passing at distance of 5.3 km distance of Peechi-Vazhani Wildlife Sanctuary. Now as per rerouting proposal, the pipeline will pass through Peechi Wildlife sanctuary along the ROU of Petronet without any additional diversion of forest land. Forest diversion considered in earlier proposal was 1.441 ha, which will remain same. PP is yet to obtain the complete the forest clearance

M/s Kochi Salem Pipeline Pvt. Ltd., a Joint venture of M/s BPCL and M/s IOCL has proposed for Laying of pipeline (12 "dia) from BPCL Kochi Refinery to Kerala Tamilnadu border including connectivity to IOCL Udayamperoor LPG plant in the state of Kerala (Approximately 199 Kms) terminating at Alathur in Palakkad District. As per Form-1, The Paravattanimala Reserved Forest is situated at a distance of 241 m. Peechi Vazhani Wildlife Sanctuary is situated at a distance of 792 m and Vellaparakkunnu Malvaram (Notified vested forest) is situated at a distance of 230 m. Proposed project cost is Rs. 997.88 crores.

PP informed that the process facilities take into account transportation of LPG of 1.28 MMTPA. Two product sources are identified namely IOCL Import Terminal at PuthuVypeen and Kochi refinery.

The following pipeline facilities shall be considered for telemetry purposes and hook-up to Centralised SCADA through Remote Terminal Units (RTUs) located at these locations for Kochi – Coimbatore – Erode – Salem LPG Pipeline

- i. Despatch Terminal facilities 2 Nos
- ii. Intermediate Pigging Station 2 Nos.
- iii. Receipt terminals 5 Nos.
- iv. Sectionalizing valve stations / CP stations 44 Nos.

Transformer with double pole structure of 11kV/415V, 25kVA shall be provided at each SV stations. 400 KVA DG Set shall be provided for despatch terminal at IOCL Import facility. A 300kVA DG Set each shall be provided for RT at BPCL Coimbatore and IOCL, Coimbatore. Further, for RTs at IOCL Erode, Salem and for each SVs station a 25kVA DG Set shall be provided.

The committee noted that it is a proposal of rerouting and public hearing was already conducted by PP while taking EC on 18.04.2014 for Thrissur district, 21.05.2014 for Palakkad district and 22.05.2014 for Kakkanad, Kochi district. At the request of PP, the Committee exempted the public hearing as per para 7 (ii) of EIA, Notification, 2006.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

A. Specific TOR:

- 1. Justification of the project
- 2. Route map indicating project location
- 3. Details of land to be acquired. Details of projects vis-à-vis ESAs and approvals thereof.
- 4. Project location along with map of 1 km area (500 meters on either side of the pipeline from centerline) and site details providing various industries, surface water bodies, forests etc.
- 5. Analysis of alternative sites and Technology.
- 6. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
- 7. Recommendation of SCZMA /CRZ clearance for the proposed pipeline.
- 8. Present land use based on satellite imagery for the study area of 10 km radius.
- 9. Details of applications filed for forest clearance to be obtained for the project for the forest land involved in the projectalong with details of the compensatory afforestation.
- 10. Process Description along with Process Flow Diagram.
- 11. Details of water consumption and source of water supply, waste water generation, treatment and effluent disposal.
- 12. Detailed solid & Hazardous waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
- 13. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
- 14. Site-specific micro-meteorological data for temperature, relative humidity, hourly wind speed and direction and rainfall forone season at one location.
- 15. At total of 30 locations, ambient air quality monitoring within the study area of 500 m along the pipeline route and around the pumping station and delivery station for PM10, SO2, NOx, CO, HC, VOC for one season(Non Monsoon) taking into account the pre-dominant wind direction at the representative locations covering population zone and sensitive receptors including reserved forests.
- 16. Determination of atmospheric inversion level and assessment of ground level concentration of pollutants. Air quality modelling for proposed project.
- 17. At about 10 locations, water monitoring will be conducted including surface & ground water for one season (Non Monsoon)
- 18. At 15 locations, Soil sample analysis within the study area for one season (Non Monsoon).
- 19. At 30 locations, noise Monitoring will be taken up for one season (Non Monsoon)
- 20. Demography & socio-economics of the study area.
- 21. Ecological features (terrestrial& Aquatic) of the study area for one season (Non Monsoon)
- 22. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
- 23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
- 24. Details of proposed preventive measures for leakages and accident.
- 25. Risk assessment including Hazard identification, Consequence Analysis, Risk Assessment and preparation of Disaster Management Plan as per Regulations.
- 26. Corrosion Management of Pipeline
- 27. Details of proper restoration of land after laying the pipelines.
- 28. Details of proposed Occupational Health Surveillance program for the employees and other labor
- 29. Detailed Environment management Plan (EMP) with specific reference to Energy conservation and natural resource conservation, details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure will be provided.

30. Public hearing to be conducted in 4 districts through which the pipeline passes. Point wise comments/reply to the issues raised during Public Hearing / Public Consultation.

B. Additional TOR

- I. Public hearing is exempted as per para 7(ii) of EIA, Notification, 2006.
- II. A copy of letter to be submitted for seeking Wildlife Clearance.
- III. Forest clearance to be obtained.
- IV. Monitoring data to be obtained on rerouting pipeline.

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

12.4.3 Expansion of resins unit at Plot .No: 136/E-Phase II, GIDC Estate, Vapi, Tahsil Pardi, District Valsad, Gujarat by M/s Tridev Resins 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 Synthetic organic chemicals located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' but due to applicability of general condition (Critically polluted areas as notified by the Central Pollution Control Board(CPCB) and also falling project location within 5 km of Inter-State boundaries), it is treated as 'A' and appraised by Expert Appraisal Committee (I).

M/s Tridev Resins Pvt Ltd has proposed for expansion of resins unit in existing plant at Plot .No: 136/E-Phase II, GIDC Estate, Vapi, Tahsil Pardi, District Valsad, Gujarat. Gujarat Pollution Control Board vide letter no. PC/NOC/VSD-2470/31125 dated 27th September 2004 has issued CTE to the unit.

It is reported that no national parks, Reserve/ protected forest and Wildlife Sanctuaries lies within 10 km radius around project site.

Total plot area is 1394 m² of which greenbelt will be developed in the area of 276.76 m². Cost of the proposed expansion project is Rs.80 lacs, out of which cost earmarked toward capital cost and recurring cost/ annum for EMP will be Rs. 34.0 lacs and Rs. 35.12 Lacs respectively. The proposed expansion has an employment potential of 25. Followings products will be manufactured:

S. No.	Name of the product	Production capacity in MT per month				
		Existing Additional Total a				
				expansion		
1.	Ketonic resin	110	190	300		
2.	MF resin	10	0	10		
3.	Water base Adhesive	50	0	50		
4.	PVB(Poly Vinyl Butryl Resin	10	90	100		
5.	Adhesion Promoter TA-10	0	50	50		
6.	Ketone free formaldehyde Resin	0	100	100		
7.	Acrylic Resin & Acrylic Emulsion	0	200	200		
	Total	180	630	810		

The existing unit has 1 Natural gas/LDO fired steam Boiler of capacity 800 Kg/hr connected with 11 m stack height. One Thermic fluid heater of capacity 2 lakh kcal/hr with 11 m stack height and One additional Natural Gas fired Steam boiler of 1000 Kg/hr capacity with 18 m stack height will be installed under proposed expansion and attached to wet scrubber. DG set of capacity 125 KVA will be used as stand by.

Fresh water requirement will be increased from $30.8 \text{ m}^3/\text{day}$ to $140.5 \text{ m}^3/\text{day}$ and will be met through the GIDC Bore well under proposed expansion. Against which wastewater generation will be increased from $27 \text{ m}^3/\text{day}$ to $128.4 \text{ m}^3/\text{day}$. After the treatment in ETP, the effluent will be discharged to CETP for final treatment. Domestic wastewater will be sent to Septic tank followed by soak pit while industrial waste water will be sent to ETP and treated water will be sent to CETP.

ETP Sludge so generated will be sent to TSDF site. Process waste will be sent to CHWIF. Used oil will be sold to authorize recycler. Discarded containers will be used for packing of ETP waste or return back to raw material supplier.

PP requested to use the data monitored in respect of M/s Ganesh Polychem which is at 300 m distance from project site. It was noted that the proposal of Ganesh polychem was applied one year back through online no. IA/GJ/28180/2015 dated 9th July, 2015, which at EC stage was questioned on monitoring data. Therefore, the Committee did not agree to use their data and advised to use fresh data, being CPA location.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

A. Specific TOR:

- 1. Details on solvents to be used, measures for solvent recovery and for emissions control.
- 2. Details of process emissions from the proposed unit and its arrangement to control.
- 3. Ambient air quality data should include VOC, other process-specific pollutants* like NH3*, chlorine*, HCI*, HBr*, H2S*, HF*, *etc.*, (* as applicable)
- 4. Work zone monitoring arrangements for hazardous chemicals.
- 5. Detailed effluent treatment scheme including ssegregation of effluent streams for units adopting 'Zero' liquid discharge.
- 6. Action plan for odour control to be submitted.
- 7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
- 8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
- 9. Action plan for utilization of MEE/dryers salts.
- 10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
- 11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
- 12. Details of incinerator if to be installed.
- 13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.

14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

B. Additional TOR

- I. Public hearing is exempted as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006 as project is located in the notified industrial area.
- II. Recommendation of SPCB is required.
- III. Monitoring data to be obtained after filing the application.

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

12.4.4 Expansion of synthetic organic products Plot No. 285,286/1,A-1-322/23, Phase II, GIDC Estate, Pardi, Valsad, Gujarat by M/s. Aarti Industries Ltd. (Amine Division)-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 Synthetic organic chemicals located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' but due to applicability of general condition (Critically polluted areas as notified by the Central Pollution Control Board(CPCB) and also falling project location within 5 km of Inter-State boundaries), it is treated as 'A' and appraised by Expert Appraisal Committee (I).

M/s Aarti Industries Ltd. has proposed for Expansion of synthetic organic products Plot No. 285,286/1,A-1-322/23, Phase II, GIDC Estate, Pardi, Valsad, Gujarat. It is reported that no national parks, Protected Forests (PF) and Biosphere Reserves etc. lies within 10 km distance. Daman ganga river is flowing at 5 km distance from project site. The company has CTE vide letter no. PC/NOC/VSD-1844/22268 dated 25.06.1998.

Cost of proposed expansion project will be Rs 15.00 Crores Out of which cost earmarked for environment protection & safety will be Rs 2.95 crores. The Plot area of unit is 15,078 m². The existing green belt area is 1315 m². Proposed expansion project will be provided employment to 330 peoples. Following products will be manufactured:

No.	Name of Broducts	Quantity (MT/Month)			
	Name of Froducts	Existing	Proposed	Total	
Ι	Amination Product				
1	4-Nitro Aniline (PNA) and/or	50			
2	2-Nitro Aniline(ONA) and/or	270			
3	2-Chloro 4 Nitro Aniline (OCPNA) and/or	20			
4	Para Chloro Ortho Nitro Aniline (PCONA) and /or	130			
5	Di Chloro Ortho Nitro Aniline	10			

	(DCONA) and /or			
6	6-Chloro Ortho Nitro Aniline	0		
7	4,4-Diamino Diphenyl Sulfone(DADPS)	0.0		
	Total.	555	945	1500
8.	Co-product- Calcium chloride solution	767	806	1573
9.	Co-product -Ammonia solution		152	152
10.	Co-product-Ammonium sulphate Solution/Ammonium Sulphate Solid		114/40	114/40
11.	Co Product-Sodium Chloride		709	709
	Co Product-Copper Hydroxide/Copper oxide		77	77
	Total	767	1858	2625

The existing power requirement is 1225 KVA.The proposed power requirement will be 300 KVA. Power will be met through Daxin Gujarat Vij Company Ltd. Existing Unit has One coal fired boiler of 1.5 MT/Hr capacity and One DG Set of 120 Litter/Hr capacity. Under Proposed expansion the unit will install one boiler of 25 TPH capacity and one D.G set of 625 KVA connected to 30 m and 11 m Stack height respectively.

Existing fresh water requirement is 340 m³/day, after expansion fresh water requirement will be 704 m³/day. Fresh water will be sourced from GIDC. Against which wastewater will be increased from 50 m³/day to 133 m³/day. Wastewater will be treated in ETP followed by RO and MEE. Treated effluent will be sent CETP for final disposal. The Committee suggested to have full ZLD system and water requirement to be reduced.

ETP waste, MEE Salt and Calcium Sludge will be sent to TSDF. Process waste containing organics complex will be sent to CHWIF. Used Oil will be sent to the authorized re-processor and Discarded Container/Bags will be sold to authorize recyclers. Fly ash will be sold to Fly ash handlers.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

A. Specific TOR:

- 1. Details on solvents to be used, measures for solvent recovery and for emissions control.
- 2. Details of process emissions from the proposed unit and its arrangement to control.
- 3. Ambient air quality data should include VOC, etc.,
- 4. Work zone monitoring arrangements for hazardous chemicals.
- 5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting 'Zero' liquid discharge.
- 6. Action plan for odour control to be submitted.
- 7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
- 8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
- 9. Action plan for utilization of MEE/dryers salts.

- 10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
- 11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF are being used/will be used.
- 12. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
- 13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.
- 14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.

B. Additional TOR

- i. Public hearing is exempted as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006 as project is located in the notified industrial area.
- ii. Recommendation of SPCB is required.
- iii. Fresh water requirement to be reduced by measures adopting recycle and reuse.
- iv. Zero liquid discharge should be adopted.
- v. Products wise details should be given in EIA report.

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

12.4.5 Expansion of storage capacity by adding 2 x 900MT capacity LPG Plant at Gata No: 17,18,19,36,37,38,42,43,44,53,54,59,61, village Jamalpur, Tehsil & District Haridwar, Uttarakhand by M/s IOCL –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 the projects related to Isolated storage & handling of hazardous chemicals are listed in at S.N. 6(b) of schedule of EIA Notification, 2006 covered under category 'B' but due to general conditions applicability i.e (Rajaji National park is 4.75 Km away from project site), it is listed in category 'A' and appraised at central level.

M/s IOCL has proposed for Expansion of storage capacity by adding 2 x 900MT capacity LPG Plant at Gata No: 17,18,19,36,37,38,42,43,44,53,54,59,61, village Jamalpur, Tehsil & District Haridwar, Uttarakhand . PP has submitted the transfer of land documents from BHEL to IOCL and indicated that the plant was commissioned in 1989 i.e. prior to 2006. . However, the documents related to Notified industrial zone by the State Govt. has not been submitted.

It is reported that no Reserve/ protected forest and Wildlife Sanctuaries lies within 10 km distance. Ganga river is at a distance of 9.65 Km from the project site and Haridwar rorkee canal is at 533.18 m from project site.

Total cost of project is 28.54 Crores. Plant will be installed within the occupied area of IOCL. Total area is 13 Acre out of which green belt area is 5.447 acre. Existing direct & indirect employees are 105 nos., which will be sufficient in proposed expansion also. The details of capacity of storage tanks are as follows:

Type Of	Existing	Additional	
			Total

vessel	No.	Capacity	No.	Capacity	Capacity (After demolition of 150 MT bullet)
Mounded Bullets	2	110 MT (each)	2	900 MT (each)	2020 MT
	1	150 MT			
Total		370 MT		1800	

(Note:- 150 MT moulded bullet will be demolished)

The total Power requirement will be 1000KVA and will be supplied by Uttarakhand Power Corporation Limited. Existing unit has two DG set of 125 KVA and 500 KVA capacities respectively. No additional DG set will be installed. HSD will be used as Fuel for DG set.

Total fresh water requirement during construction will be 3 m3/day for domestic and during operation phase fresh water requirement will be 2 m3/day, which shall be met by bore well within plant premises.

Spent oil will be disposed to authorized recyclers. Plastic drums and bags will be sold to SPCB authorized agencies. Sewage from administrative building will be routed to septic tank followed by soak pits. sludge generated from septic tank will be used as manure. The committee noted that PP is approaching first time for EC.

A. Specific TOR:

- 1. Details on list of hazardous chemicals to be stored alongwith storage quantities at the facility, their category (as per MSIHC Rules), MSDS.
- 2. Mode of receiving hazardous chemicals in isolated storages and mode of their dispatch.
- 3. Layout plan of the storage tanks and other associated facilities.
- 4. Details on types and specifications of the storage facilities including tanks, pumps, piping, valves, flanges, pumps, monitoring equipments, systems for emissions control safety controls including relief systems.
- 5. Arrangements to control loss/leakage of chemicals and management system in case of leakage.
- 6. Risk Assessment & Disaster Management Plan
 - Identification of hazards
 - Consequence Analysis
 - Details of domino effect of the storage tanks and respective preventive measures including distance between storage units in an isolated storage facility.
 - Onsite and offsite emergency preparedness plan.

B. Additional TOR

- i. 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.
- ii. Permission to be obtained from wildlife Board w.r.t. Rajaji National Park/sanctuary

iii. Impact to be assessed adequately towards Rajaji National Park

It was recommended that 'TOR along with Public Hearing prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report 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.

12.4.6 Change in product mix of pesticide manufacturing unit at village Nathupur, district Sonepat, Haryana by M/s Crystal Crop Protection Pvt. Ltd.-reg amendment in TOR

Ministry has issued EC vide letter No. J-11011/120/2011-IA-II (I) dated 23.05.2012 to M/s Crystal Phosphates Ltd. for Pesticide manufacturing unit (21 MTPD) alongwith expansion of formulation plant.

Existing plant manufactures 15 products with capacity of 21MTPD. Now PP has requested to add more products to its existing EC but with reduced capacity. PP intends to add 31 new products with capacity reduction from 21 MTPD to 17.75 MTPD. Further it was informed that there will be no additional investment for this project and with no increase in pollution load. PP has summed up the followings to seek amendment;

- There is reduction in total production whereas products are proposed to be changed in view of plant economics and market demand.
- There is no change in energy requirement, water requirement including fuel requirement, solid waste generation and its treatment. There is no change in water balance post proposed amendment.
- The unit shall remain ZLD as per existing EC and no change in other discharge and emissions is envisaged

Class	Existing Product as per existing EC		Proposed Product	
	Product	MTPD	Product	MTPD
	Thiamethoxam/Acetamipri d/ Imidacloprid	1.0	Thiamethoxam/Acetamiprid/ Imidacloprid/Clothianidin*	1.0
Insecticide	Cypermethrin	0.067	Cypermethrin/Lambda	0.8
	Synthetic Pyrathroids i.e. Lambda Cyhalothrin	2.0	Cyhalothrin /Alphamethrin*/ Bifenthrin*	
	Acephate Technical	1.5	Acephate Technical	1.0
			Diafenthiuron technical *	0.8
			Fenpyroximate*/Fipronil*	0.5

The following are the existing and proposed products:

			Pyriproxifen*/Pyridaben*	0.5	
		4.567		4.6	
	Sulfosulfuron	0.067	Sulfosulfuron/Pyrazosulfuro n*/ Chlorimuron*	0.3	
	Pretilachlor/Butachlor Technical	3.4	Pretilachlor/Butachlor Technical/Propanil*	1.0	
	Metribuzin	0.134	Metribuzin	0.5	
	Glyphosate Technical	5.0	Glyphosate Technical	0.5	
	Clodinafop Propargyl	1.5	Propaquizafop*/Quizalofop- Ethyl*/ Clodinafop-Propargyl	1.5	
Herbicide	2,4-D Ethyl Ester	2.0	2,4-D Ethyl Ester	0.8	
			Bispyribac-Sodium*	0.5	
			Imazethapyr*	0.5	
			Mesotrione*	0.5	
			Pendimethalin*	1.0	
			Penoxsulam*	0.6	
			Oxadiazon*	0.5	
		12.10 1		8.2	
	Tricyclazole	0.5	Tricyclazole	1.0	
Fungicide	Propiconazole	2.0	Hexaconazole*/Propiconazo le/ Cyproconazole* /Difenaconazole*/ Epoxiconazole*/Myclobutani l*/ Prothiaconazole*/ Tetraconazole*/ Tebuconazole*	1.5	
	Metalaxyl	0.5	Metalaxyl/Boscalid*	0.5	
	Copper Oxychloride	1.0	Copper Oxychloride	0.0	
			Dimethomorph*	0.5	
			Thiaphanate Methyl*/ Mancozeb*	1.5	
PGR	Ethephone Technical	0.7	Ethephone Technical	0.0	
		4.700		5.0	
Herbicide Safner			Cloquintocet Mexyl	0.5	
	Total Before Amendment	21.37	Total After Amendment	17.75	

*new product

During presentation the committee concluded that by adding new products within the total capacity on which EC was issued, there will no increase in pollution load, fresh water requirement, power requirement and no additional investment is involved. Hence, it is a case of amendment in place of TOR.

After detailed deliberation the committee recommended the above said amendment in the Existing EC. All conditions given of existing EC will remain unchanged. However, PP needs to apply for amendment through online after uploading the minutes.

12.5 Any Other

12.5.1 BS V/VI Auto fuel Quality Compliance & Associated projects at Tehsil Mangalore, district Dakshina Kannada, Karnataka by M/s Mangalore Refinery And Petrochemicals Ltd.- amendment in TOR.

MoEF&CC has issued TOR vide letter No. J-11011/47/2016-IA II(I) dated: 19/04/2016 to M/s Mangalore Refinery And Petrochemicals Ltd. for BS V/VI Auto fuel Quality Compliance & Associated projects at Tehsil Mangalore, district Dakshina Kannada, Karnataka. Now, PP is seeking amendment in existing TOR for the following:

S. No.	Items granted in existing TOR	Capacity	Amendment sought
1.	Feed Preparation unit	2.0 MMTPA	Dropped
2.	PFCCU gasoline hydrotreating	0.4 MMTPA	0.8 MMTPA
3.	High RON Alkyate unit	0.6 MMTPA	Dropped
4.	CCR1,CCR2, RSU, HGU revamp	-	CCR2: 536 KPTA RSU: 1020 KPTA CCR1 & HGU Revamp dropped
5.	DHDT revamp	3.85 MMTPA	3.85 MMTPA
6.	SRU	185 TPD	185 TPD
7.	SWS unit revamp	-	216 & 360 KTPA
8.	Utilities, offsite facility & other associated facilities	_	Matching capacity to be installed

S. No	Additional items		Amendment Sought for units as per revised PFR
9	Tankages(in tank Farm)		8 Nos.
10	Pipeline to New Mangalore Port	Inadvertently no	! No.
11	ETP Revamp	reflected in the approved TOR	Matching capacity ,if needed
12	Nitrogen/Inst Air/Plant Air		Matchinfg capacity to be installed
13	Naptha Splitter Unit(New)		1000 KTPA
14	Power Import]	150 MW

	Infrastructure	
15	Phase-III Refinery Complex's Flare Gas Recovery/ Diversion to va new flare	Flare gas recovery @ 1500 Nm ³ /hr & Required relocation

After deliberation the committee agreed with the aforesaid amendments. However due to additional tankage and other features and also in the background of last EC where no public hearing was done, the committee, therefore, retain on the condition of public hearing. The Committee noted that due to laying Pipeline to New Mangalore Port, the CRZ clearance to be obtained as applicable and prior SCZMA recommendation may be required.

12.5.2 Expansion of Synthetic Organic Chemicals Manufacturing Unit at Block No. 82/B, Sy. No. 106, 107, 114, 1677/1 & 1677/2 ECP Road, Post Karakhadi, Taluka Padra, District Vadodara, Gujarat by M/s Ami Life Sciences Pvt. Ltdamendment in EC.

MoEF&CC has issued Environmental Clearance vide letter No. JJ-11011/10/2013-IA II(I) dated: 11/02/2016 to M/s Ami Life Sciences Pvt. Ltd for expansion of Synthetic Organic Chemicals Manufacturing Unit (65.77 TPM to 131.60 TPM) at district Vadodara, Gujarat. Now, PP is seeking amendment in existing EC for the following:

- i. At Para 2.0 s. No. 37 (Product List) production capacity of Olopatadine hydrochloride is 0.5 TPM in place of 0.05 TPM.
- At Para 3.0; Total fresh water requirement from the ground water source will increase from 34.53 m3/day to 85 m3/day. But as per Annexure-2, Total fresh water requirement form the ground water source will increase from 34.53 m3 /day to 145 m3 /d.
- At Para 3.0; (Industrial effluent generation) Industrial effluent will increase from 9.35 m 3/day to 79.5 m3/day in place of Industrial effluent will increase from 9.35 m3/day to 79.7 m3 /day.
- iv. At Para A xiii (Hazardous waste disposal) Process organic residue and spent carbon shall be sent to cement industries in place of Process organic residue and spent carbon shall be incinerated within premises or sent to cement industries.
- v. Few hazardous waste categories are not mentioned i.e. Poly Aluminium Chloride, Spent Sulphuric acid, Spent/Mixed solvent, used oil and discarded containers/barrels shall be handled and disposed as per the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.

After deliberation, the committee recommended the aforesaid amendment indicated at para (i), (iii) (iv) and (v) after verifying with EIA report.

However, regarding point (ii) wherein PP requested for water requirement upto 145 m3/day against the existing condition of 85 m3.day. The committee noted that industry can reduce the fresh water requirement by taking extra measures such

as by increasing number of cooling water cycles, by installing STP & using its treated wastewater in green belt, providing dual piping system and providing heat exchanger. PP agreed with this suggestion, finally the committee recommended the fresh water requirement upto 100 m3/day in place of 85 m3/day.

12.5.3 Greenfield Soda Ash Plant (1500 TPD) alongwith Captive Power Plant (50 MW) at Village Kuranga, Taluka Dwarka, District Devbhumi Dwarka (earlier Jamnagar District), Gujarat by M/s. RSPL Limited- reg. amendment/corrigendum.

Subsequent to discussions to include the additional land to existing plant as requested for amendment to existing EC, the PP has withdrawn the application and confirmed to apply as and when land is acquired by PP.

12.5.4 Expansion of the system capacity of MDPL from existing 5.0 MMTPA to 6.9 MMTPA by installation of additional pump facilities at Bachau and Pindwara and laying 280 Kms. extension spur pipeline from Palanpur station to HPCL proposed Marketing terminal Near Vadodara in Districts of Sirohi and Gandinagar in Rajasthan and Gujarat by M/s HPCL -reg. Reconsideration of TOR

The proposal was considered in 4th Expert Appraisal Committee (Industry-2) meeting held during 11th-12th February,2016. The Committee deferred the proposal for want of additional information w.r.t. full configuration of pumping station that include designed capacity, DG set, location of PS etc.

Now PP has submitted the additional information vide letter No. HPCL/PVPL/MOEF/MKM dated 20.06.2005. Accordingly the proposed project facilities are as follows:

- i. A Laying of 18" spur pipeline of approx 280 km from HPCL's marketing terminal at palanpur to the proposed marketing terminal at Vadodara.
- ii. A Storage and distribution facility will be installed at Vadodara for 2,10,000 KL of petroleum products.
- iii. 6 nos. of Sectionalizing Valve (SV) station will be installed with 25 KVA capacity DG set in proposed Palanpur-Vadodara spur pipeline.
- iv. 1 nos. of Intermediate Pumping (IP) station will be installed with 25 KVA capacity DG set in proposed Palanpur-Vadodara spur pipeline.
- v. 2 main pumps with 1 standby pump will be installed with 1 no. 400 KVA capacity DG set at Bhachau station at existing MDPL SV station.
- vi. 2 main pumps with 1 standby pump will be installed with 1 no. 400 KVA capacity DG set at Pindwara station at existing MDPL SV station.

In addition PP confirmed that proposed alignment does not pass through Eco-sensitive zone or wildlife sanctuary. At the request of PP, the Committee exempted the project from conducting public hearing as per 7 (ii) of EIA, Notification, 2006.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

A. Specific TOR:

- 1. Justification of the project
- 2. Route map indicating project location
- 3. Details of land to be acquired. Details of projects vis-à-vis ESAs and approvals thereof.
- 4. Project location along with map of 1 km area (500 meters on either side of the pipeline from centerline) and site details providing various industries, surface water bodies, forests etc.
- 5. Analysis of alternative sites and Technology.
- 6. Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
- 7. Recommendation of SCZMA /CRZ clearance for the proposed pipeline.
- 8. Present land use based on satellite imagery for the study area of 10 km radius.
- 9. Details of applications filed for forest clearance to be obtained for the project for the forest land involved in the projectalong with details of the compensatory afforestation.
- 10. Process Description along with Process Flow Diagram.
- 11. Details of water consumption and source of water supply, waste water generation, treatment and effluent disposal.
- 12. Detailed solid & Hazardous waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
- 13. Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
- 14. Site-specific micro-meteorological data for temperature, relative humidity, hourly wind speed and direction and rainfall forone season at one location.
- 15. At total of 30 locations, ambient air quality monitoring within the study area of 500 m along the pipeline route and around the pumping station and delivery station for PM10, SO2, NOx, CO, HC, VOC for one season(Non Monsoon) taking into account the pre-dominant wind direction at the representative locations covering population zone and sensitive receptors including reserved forests.
- 16. Determination of atmospheric inversion level and assessment of ground level concentration of pollutants. Air quality modelling for proposed project.
- 17. At about 10 locations, water monitoring will be conducted including surface & ground water for one season (Non Monsoon)
- 18. At 15 locations, Soil sample analysis within the study area for one season (Non Monsoon).
- 19. At 30 locations, noise Monitoring will be taken up for one season (Non Monsoon)
- 20. Demography & socio-economics of the study area.
- 21. Ecological features (terrestrial& Aquatic) of the study area for one season (Non Monsoon)
- 22. Assessment of impact on air, water, soil, solid/hazardous waste and noise levels.
- 23. Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
- 24. Details of proposed preventive measures for leakages and accident.
- 25. Risk assessment including Hazard identification, Consequence Analysis, Risk Assessment and preparation of Disaster Management Plan as per Regulations.
- 26. Corrosion Management of Pipeline
- 27. Details of proper restoration of land after laying the pipelines.

- 28. Details of proposed Occupational Health Surveillance program for the employees and other labour
- 29. Detailed Environment management Plan (EMP) with specific reference to Energy conservation and natural resource conservation, details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure will be provided.
- 30. Public hearing to be conducted in 4 districts through which the pipeline passes. Point wise comments/reply to the issues raised during Public Hearing / Public Consultation.

B. Additional TOR

i. Public hearing is exempted as per para 7 (ii) of EIA, Notification, 2006. .

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

24th August , 2016 (Day 2)

1st Session: Time: 10:00 AM

12.6 Environmental Clearance

12.6.1 Expansion of Specialty Chemicals Unit at Plot No.E-7 & E-8, MIDC Chincholi, Taluka Mohol, District Solapur, Maharashtra by M/s Balaji Amines Ltd.-reg EC

The project proponent and their consultant (Equinox Environments (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 in the 46th Meeting of the Expert Appraisal Committee (Industry -2) held during 20th -21st August 2015 for preparation of EIA-EMP report. All Synthetic Organic Chemicals Industry located inside the notified industrial area/estate are listed at S.N. 5(f) under category 'B' and appraised by SEIAA. However, due to applicability of the general condition i.e. location of project fall within 5 km of the boundary of 'Great India Bustard Sanctuary', proposal is treated as category 'A' and appraised by Central Government.

M/s Balaji Amines Ltd. has proposed for Expansion of Specialty Chemicals Unit at Plot No.E-7 & E-8, MIDC Chincholi, Taluka Mohol, District Solapur, Maharashtra. Total plot area is 16 ha, of which green-belt will be developed in 5.28 Ha. Cost of expansion project is Rs. 49 crores. It is reported that GIB Sanctuary is located at a distance of 1.8 Km from project site and river Sina is flowing at a distance of 6.4 Km from project site. Following products will be manufactured:

S. No	Product	Existing Products MT/Month	Proposed Products MT/Month	Total Capacity MT/Month

1.	Mono Methyl Amine (MMA)	928.8		928.8
2.	Di Methyl Amine (DMA)	2066.4		2066.4
3.	Tri Methyl Amine (TMA)	144	432	576
4.	Di Methyl Amine Hydrochloride (DMA HCl)	1092	1092	2184
5.	N-Methyl-2-Pyrrolidone (NMP)	1005	1008	2013
6.	2-Pyrrolidone (2P)	1005		1005
7.	N-Ethyl Pyrrolidone (NEP)	1005		1005
8.	Di Methyl Formide (DMF)	2160	840	3000
9.	Gama Butyro Lactone (GBL)	1005	1008	2013
10.	Methyl Di Ethanol amine (MDEA)	1035		1035
11.	Poly Vinyl Pyrrolidone/ PVP lodine (PVP/PVP lodine)	201		201
12.	Mono Ethyl Amine (MEA)	100.8		100.8
13.	Di Ethyl Amine (DEA)	298.8		298.8
14.	Tri Ethyl Amine (TEA)	601.2		601.2
15.	Sulphur Hexafluoride	102		102
16.	Morpholine (MOR)		1080	1080
17.	Aceto Nitrile (ACN)		1440	1440

18.	Di Methyl Carbonate (DMC)	 1656	1656
19.	Budesonide (BD)	 1.5	1.5
20.	Betamethasone & Its Salts (BM)	 1.5	1.5
21.	Ciclesonide (CN)	 1.5	1.5
22.	Flumethasone &Its Salts (FM)	 0.525	0.525
23.	Fluticasone & Its Salts (FC	 0.5	0.5
24.	Beclamethasone Dipropionate (BMD)	 0.5	0.5
25.	16-Alpha Hydroxy Prednesolone (16-AHP)	 0.5	0.5
26.	Mometasone Furuote (MF)	 0.5	0.5
27.	Propylene Glycol (PG)	 1656	1656
28.	Mono IsoPropyl Amine (MIPA)	 504	504
29.	Propylene Carbonate (PC)	 432	432

S.No	By products	Existing Products MT/Month	Proposed Products MT/Month	Total Capacity MT/Month
1.	Higher Amines	111.9	117.12	229.02
2.	Methyl Tri Ethanol Amine	57.6		57.6
3.	Calcium Hydroxide	262.8		262.8
4.	Tetra Hydro Furan		172.8	172.8
5.	Hydrogen		103.6	103.6
6.	Spent Caustic Solution (20%)		576	576
7.	Sulphur		5.76	5.76

Additionally, PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during October 2015 to December 2015 and submitted baseline data which indicates that ranges of concentrations of PM_{10} (36.9 µg/m³ to 84.5 µg/m³), $PM_{2.5}$ (7.1 µg/m³ to 54.7 µg/m³), SO_2 (9.0 µg/m³ to 27.9 µg/m³) and NOx (6.7 µg/m³ to 24.9 µg/m³), respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.73 µg/m³ and 2.81 µg/m³ with respect to PM_{10} and $PM_{2.5}$. The resultant concentrations are within the NAAQS.

Bagfilter will be provided to additional 1Coal fired boilers (20 TPH) and 2 Thermal fluid heaters with capacity 6 Lakh K cal/Hr and 20 Lakh K cal/Hr respectively to control particulate emissions. After expansion of project, total fresh water requirement will be increased from 643 m3/day to 1470 m3/day which will be sourced from MIDC. Industrial wastewater will be segregated into High TDS/COD and Low TDS/COD effluent streams. High TDS/COD effluent stream will be treated through multiple effect evaporator (MEE) and RO. Low TDS/COD effluent stream will be treated in effluent treatment plant (ETP) comprising primary, secondary and tertiary treatment. No effluent will be discharged outside the premises and 'Zero' effluent discharge concept will be adopted. Spent carbon, Spent catalyst, Filter and Filter material, ETP sludge and distillation residue will be sent to common disposal site. PP proposed to incinerate the distillate residue which is suggested to use the common incinerator.

Public hearing exempted as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006.

After deliberation, the Committee sought following additional information:

- i. Commitment to be provided for use of natural gas fired boiler in place of coal fired boiler.
- ii. Point wise Action taken report on non- compliance points w.r.t. existing EC alongwith documents.
- iii. To conduct indoor monitoring w.r.t. amines for one month
- iv. Option to be explored for use of common incinerator facility for management of distillate residue in place of isolated incineration.

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

12.6.2 Expansion of Fertilizer plant at Plot NO. 96, Sector A, Sirgitti Industrial Area, Tehsil Bilha, District Bilaspur, Chhattisgarh by M/s BEC Fertilizers.-reg EC.

The project proponent and their consultant (M/S Asian Consulting Engineers Pvt. Ltd) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Draft Terms of References (TORs) awarded in the 42nd Meeting of the Reconstituted Expert Appraisal Committee (Industry -2) held during 16th- 17th June 2015 for preparation of EIA-EMP report.

All Chemicals Fertilizer Industry are listed at S.N. 5(a) under category 'A' and appraised by Expert Appraisal Committee (I).
M/s BEC Fertilizers Ltd. has proposed for Expansion of Fertilizer plant at Plot NO. 96, Sector A, Sirgitti Industrial Area, Tehsil Bilha, District Bilaspur, Chhattisgarh. Total BEC plant area is 47.66 Acres of which greenbelt area is 18.35 Acres. Area allotted for proposed expansion will be 11.40 Acres. Cost of expansion project is Rs. 75 crores. Project is located in notified industrial estate. As reported there is no wildlife/ eco sensitive/ reserve forest located within 10 km radius from the project site Following products will be manufactured:

Products	Existing Capacity	Proposed Capacity
	(TPA)	(TPA)
Sulphuric acid	40,000 TPA	1,40,000
Single Super Phosphate	1,40,000 TPA	4,40,000
Triple Super Phosphate	-	1,00,000
Boronated Single Super Phosphate	-	40,000
Granulated Fertilizer (SSP/TSP/.NPK/Customized Fertilizer)	45000(NPK)	4,40,000

Additionally, PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during October 2015 to December 2015 and submitted baseline data which indicates that ranges of concentrations of PM₁₀ (40.9 µg/m³ to 67.7 µg/m³), PM_{2.5} (15.6 µg/m³ to 36.8 µg/m³), SO₂ (8.8 µg/m³ to 16.6 µg/m³) and NOx (15.9 µg/m³ to 29.1 µg/m³), respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.944 µg/m³, 0.389 µg/m³ 6.77 µg/m³ and 0.204 µg/m³ with respect to PM₁₀ , PM_{2.5}, So₂ and NO₂. The resultant concentrations are within the NAAQS.

The power requirement will be increasing from 0.7 MW to 3.2 MW , which will be sourced from Chattisgarh State Electricity Board. 2 DG Set having capacity 1070 KVA are provided as stand by arrangement. Additionally 1 Turbine gas set of 2500 KVA shall be installed to generate power with available surplus steam from sulphuric acid plant. Fresh water requirement will increase from 350 m3/day to 1550 m3/day which will be sourced from CSIDC water supply system. The committee noted that there is lack of clarity with respect to waste water generation and its treatment in existing as well as proposed ETP system.

Public hearing exempted as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006.

After deliberation, the Committee sought following additional information:

- i. Wastewater treatment scheme needs to be assessed and rework
- ii. Water conservation measures to be adopted such as rain water harvesting, recycle and reuse of waste water. Accordingly, revised water balance to be submitted
- iii. Solid/hazardous waste generation and its management to be elaborated.

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

12.6.3 Setting up of Resin Manufacturing Unit located at Survey No.: 432, Village Amodara (Rampura), Taluka Prantij, District Sabarkantha, Gujarat by M/s Axi Lam Pvt. Ltd.-reg EC.

The project proponent and their consultant (M/S T.R Associates) 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 in the 46th Meeting of the Reconstituted Expert Appraisal Committee (Industry -2) held during 20th–21th August 2015 for preparation of EIA-EMP report.

All Synthetic Organic Chemicals Industry located outside the notified industrial area/estate are listed at S.N. 5(f) under category 'A' and appraised by Expert Appraisal Committee (I).

M/s Axi Lam Pvt. Ltd has proposed for setting up of Resin Manufacturing Unit located at Survey No.:432,Village Amodara (Rampura), Taluka Prantij, District Sabarkantha, Gujarat. The total land area of proposed company is 11,613 Sq. Mt. out of which 3400 Sq. mt. land will be used for greenbelt area development. The estimated cost of the Resin project is 100 lakh . Out of total, budget allocation towards Environmental Management Facilities will be Rs. 36.55 lakh and recurring cost will be 32.6 Lakh per Annum. Employment Generation opportunities would be 120 persons. As reported there is no wildlife/ eco sensitive/ reserve forest located within 10 km radius from the project site. Following products will be manufactured:

Products	Capacity
Phenol Formaldehyde Resin	800 MT/Month
Melamine Formaldehyde Resin	700 MT/Month
Urea Formaldehyde Resin	700 MT/Month
Laminated Sheets	3,00,000 Nos. /Month

Additionally, PP informed the Committee that ambient air quality monitoring was carried out at 9 locations during October 2015 to December 2015 and submitted baseline data which indicates that ranges of concentrations of PM₁₀ (60 $\,\mu g/m^3$ to 81 $\mu g/m^3$), PM_{2.5} (21.6 $\mu g/m^3$ to 37.0 $\mu g/m^3$), SO₂ (5.3 $\mu g/m^3$ to 16.6 $\mu g/m^3$) and NOx (5.88 $\mu g/m^3$ to 10.58 $\mu g/m^3$), respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 10.0 $\mu g/m^3$, 0.4 $\mu g/m^3$ and 2.04 $\mu g/m^3$ with respect to PM₁₀ ,So₂ and NO₂. The resultant concentrations are within the NAAQS.

Bagfilter will be provided to coal/briquette fired boilers (4 TPH) and Thermal fluid heater (20 Lac K cal/Hr) to control particulate emissions. The Committee suggested to go for briquette only as fuel.

Fresh water requirement will be 54 m3/day will be sourced from own borewell. Total generated wastewater from resin process, cooling and Boiler blow- down and washing will be 18.1 m3/day, which will be treated in the ETP. Treated effluent will be evaporated & reused for cooling. The Domestic Effluent will be generated 7 m3/day and it will be treated in STP and treated sewage will be used for Gardening purpose. No effluent will be discharged outside the plant premises and zero discharge concept will be followed. ETP sludge will be sent to treatment storage disposal facility for hazardous waste (TSDF). Spent oil will be sent to THE authorized recyclers/re-processor.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Gujarat Pollution Control Board on 31st May 2016. The issues were raised regarding local employment and local development, environmental damage, 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 briquettes fired Thermic fluid heater and steam boiler 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 54 m³/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. Process plant should be interlocked with ETP. In case of shut down of ETP, the plant should be stopped automatically.
- 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 3400 m² 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 31st May 2016 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.
- xi) At least 5 % of the total cost of the project should be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. As committed, implementation of such program should be ensured for Sadulka village in a time bound manner.

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

The project proponent and their consultant (M/s. Equinox Environments (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 in the 34th Reconstituted Expert Appraisal Committee (Industry -2) held during 17th-19th February, 2015 respectively for preparation of EIA-EMP report.

M/s Gangamai Industries and Constructions Ltd. has Proposed for enhancement of existing molasses based distillery unit from 30 KLPD to 60 KLPD at Najik Babhulgaon, Post: Rakshi, Tal.: Shevgaon, Dist.: Ahmednagar, Maharashtra. As per Form 1the following Environmental sensitivity has been involved:

- i. Jaykwadi Bird Sanctuary 5.51km.
- ii. Irrigation scheme on jaykwadi dam -7.25km

Total plot area available is 2, 70,611 m², out of which area earmarked for green belt will be 61,350 m². Total Cost of expansion project is Rs. 41.00 Crores. Out of which, Rs. 27.82 Crore are earmarked for Environment management plan. Following products will be manufactured:

Sr	Product	Quantity		
No.		Existing	Expansion	Total
		(30 KLPD)	(30 KLPD)	(60 KLPD)
1	Ethanol	900 KL/M	900 KL/M	1800 KL/M
2	Rectified Spirit	900 KL/M	900 KL/M	1800 KL/M
	Extra Neutral Alcohol	900 KL/M	900 KL/M	1800 KL/M
By P	By Product			
1	Fusel Oil	1.8 KL/M	1.8 KL/M	3.7 KL/M
2	Co ₂ gas	690 MT/M	690 MT/M	1,380
				MT/M
	Compost (From Spent wash treatment)	16700		20,935
		MT/Season		MT/Season

Additionally, PP informed the Committee that ambient air quality monitoring was carried out at 6 locations during March 2015 to May 2015 and submitted baseline data which indicates that ranges of concentrations of PM_{10} (49.70 µg/m³ to 65.50 µg/m³), $PM_{2.5}$

(13.63 μ g/m³ to 20.17 μ g/m³), SO₂ (6.63 μ g/m³ to 13.63 μ g/m³) and NOx (11.07 μ g/m³ to 21.63 μ g/m³) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.80 μ g/m³ with respect to SO₂. The resultant concentrations are within the NAAQS.

Existing unit has biogas fired boiler of 8 TPH capacities, no additional boiler will be installed. Total power requirement will be met from 32 MW its own Co-gen plant. As per Existing EC fresh water requirement is 310 m3/day. No additional water will be required under proposed expansion. Spent wash will be treated through bio-methanation unit followed by concentration in MEE. Concentrated MEE will be bio-composted with press mud. Condensate of MEE and Spent lees will be treated in the ETP.

The Committee deliberated upon the issues raised during the Public Hearing / Public Consultation meeting conducted by the Maharashtra State Pollution Control Board on 16th January, 2016. The concerns were raised on local employment, air Pollution, water requirement in proposed project, Quantity of spent wash generated, air pollution control equipment and Type of solid waste would be generated etc. The Committee noted that issues have satisfactorily been responded by the project proponent and incorporated in the final EIA-EMP report.

The Ministry has issued EC vide letter no F. No J-11011/598/2010-IA-II(I) dated 2nd September, 2014 for molasses based distillery (30 KLPD). The Committee discussed the certified compliance report dated 11th May, 2015 of the RO (WCZ), Nagpur and found there are 6 major Non complied points and 12 partly complied points;

After detailed deliberations, the project is deferred for want of following information;

- 1. Detailed action taken report with documentary proof on the non complied points as reported by Regional office report w.r.t. existing EC.
- 2. Detailed action plan under ESR activity to be drawn to tune of 5% of project cost on the items arising from public hearing. Projected physical and financial plan to be drawn on social and developmental activity for nearby area.

12.6.5 Development Drilling Of 22 Wells in East Godavari district (Godavari Onland PML Block), A.P. by M/s ONGC Ltd.-reg EC.

The project proponent and their consultant (M/s ONGC Ltd.) gave a detailed presentation on the salient features of the project and proposed environmental protection measures to be undertaken as per Terms of References (TORs) awarded in the 5th Meeting of the Expert Appraisal Committee (Industry-2) held during 25th-26th February 2016 respectively for preparation of EIA-EMP report.

M/s ONGC. has proposed for Drilling Of 22 Wells in East Godavari district (Godavari Onland PML Block), A.P. Project cost will be Rs 242 crores for drilling of 22 wells. Depth of the wells will be 2000-4000 m. The total area of this block is 2176 Km². It is reported that no national park/wildlife sanctuary/tiger reserve / elephant reserve/ turtle nesting ground around 10 km radius of the project site. The Latitude and Longitude of the blocks involved are as follows:

S.N.	Field/	No.	Of	Wells/	Latitude	Longitude
	(Anticip	ated	loc	ations/		

	Name / Target Depth(m)		
1	Mandapeta/8/3100	16 [°] 48′ 5″	81° 54′ 15″
2	Kesavadasupalem/1/1800	16 [°] 20′ 2.66″	81 [°] 46′ 9.81″
3	Kesanapalli/5/1500	16 [°] 23′ 31.45″	81 [°] 54′ 37.78″
4	Kammapalem /7/2700	16 [°] 28′ 26.87″	81 [°] 49′ 8.38″
5	Vyagresvaram/1/4000	16 [°] 37′ 49.54″	81 [°] 56′ 16.96″

Additionally, the PP informed the Committee that ambient air quality monitoring was carried out at 7 locations during October, 2012 - December, 2012 and submitted baseline data indicates that ranges of concentrations of PM_{10} (33 µg/m³ to 67 µg/m³), SO₂ (4 µg/m³ to 8.40 ug/m³), $PM_{2.5}(11 µg/m³$ to 23 µg/m³), NOx (5 µg/m³ to 12 µg/m³) respectively. The resultant concentrations are within the NAAQS.

Total water requirement for drilling phase will be 25 m3/day which will be sourced from borewell. Total wastewater generation will be around 15 m³/day. Water Based drilling mud will be used. Drill cuttings separated from drilling fluid will be adequately washed and temporarily stored and disposed in an impervious pit lined by HDPE. Disposal of drilling wash water will be achieved through necessary treatment through onsite Effluent Treatment Plant (ETP). Waste oil/spent oil/waste batteries will be sold to registered recyclers/reprocessors. Public hearing was conducted by APPCB on 06.01.2015.

During presentation the committee noted that PP did not provide the coordinates of drilling locations

After deliberation, the Committee sought following additional information:

- i. Coordinate of wells to be given with nearby village locations/habitats
- ii. Detailed development plan to drawn w.r.t existing and proposed wells alongwith group gathering station.

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

Reconsideration of EC

12.6.6 Proposed Expansion of Active Pharmaceutical Ingredient & Intermediates (47 MTA to 300 MTA) in Existing Unit at Survey No 137, 144P & 145P, village Panelav, Tehsil Halol, District Panchmahal, Gujarat by M/s Alembic Pharmaceuticals Limited (API Unit-II). – reg EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 7th meeting held during 27th to 28th April 2016 and the Committee sought following additional information:

- (i) Action taken points on non complied conditions of existing EC.
- (ii) Item-wise detailed plan with time schedule w.r.t. ESR activities for 2.5% of project cost.
- (iii) Status of national park/wildlife sanctuary within 10 km distance.

(iv) Latest status of court cases.

The committee discussed the compliance status of existing EC and found that major environmental conditions have been complied. However, minor non compliance points related to uploading the monitoring data, submission of EC copy to town panchyat have been reported to be complied at later stage. The Committee found satisfactory response. PP has also submitted the expenditure details made so far on CSR activities. The Committee agreed to ESR proposed by PP under this project which is upto 5.41 crore and invested on various local development and social activities. The Committee suggested it would be part of EC. PP confirmed that there is no national park within 10 km of project site. With regard to court case the NGT held the process of granting EC by MoEF in 2003. The industry has got stay against the closure order, without preventing the industry to take EC for future expansion. In this proposal PP is seeking EC for expansion. The Committee also suggested to install online system to monitor the air emission and same should be displayed at main gate of the company.

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. Bagfilter and the stack of adequate height shall be provided to additional coal fired boiler. Online monitoring system to be installed to stack and emission level to be uploaded to company's website and displayed to the main gate for public.
- ii. Scrubber shall be provided to control process emissions viz. HCl and SO₂. 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 50 m³/day and prior permission shall be obtained from the CGWA/SGWA.
- v. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.
- vi. All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- vii. As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.
- viii. The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from SPCB shall be obtained for disposal of

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

- ix. Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- x. Solvent management shall be as follows :
 - Reactor shall be connected to chilled brine condenser system
 - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents shall be stored in a separate space specified with all safety measures.
 - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xii. All the issues raised during the Public Hearing/consultation meeting held on 12th June 2015 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiii. As proposed, an amount of Rs. 5.41 core should be earmarked towards the Enterprise Social Commitment on the activities proposed by PP for local and social development and based on Public Hearing issues. The physical and financial progress achieved to be submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiv. As proposed, green belt of 20194 m² 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.
- 12.6.7 Expansion of Active Pharmaceutical Ingredient (APIs) in Existing Unit at Survey No. 119, 120 & 121, At & Post village Panelav, Tehsil Halol, district Panchmahal, Gujarat by M/s Alembic Pharmaceuticals Limited (API Unit – I) – reg EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 7th meeting held during 27th to 28th April 2016 and the Committee sought following additional information:

- (i) List of existing utilities and additional utilities to be provided.
- (ii) Action taken points on non complied conditions of existing EC.

- (iii) Item-wise detailed plan with time schedule w.r.t. ESR activities for 2.5% of project cost.
- (iv) Latest status of court cases.

The committee discussed the compliance status of existing EC and found that major environmental conditions have been complied. PP has also submitted the expenditure details made so far on CSR activities. The Committee agreed to ESR proposed by PP under this project which is up to 5.42 crore and invested on various local development and social activities. The Committee suggested it would be part of EC. With regard to court case the NGT held the process of granting EC by MoEF in 2003. The industry has got stay against the closure order, without preventing the industry to take EC for future expansion. In this proposal PP is seeking EC for expansion. The Committee also suggested to install online system to monitor the air emission and same should be displayed at main gate of the company.

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. Bagfilter and the stack of adequate height shall be provided to additional coal fired boiler. Online monitoring system to be installed to stack and emission level to be uploaded to company's website and displayed to the main gate for public.
- ii. Scrubber shall be provided to control process emissions viz. NH3, HCl and Cl2. 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 160 m3/day and prior permission shall be obtained from the CGWA/SGWA.
- v. Trade effluent shall be segregated into High COD/TDS and Low COD/TDS effluent streams. High TDS/COD shall be passed through stripper followed by MEE and ATFD (agitated thin film drier). Low TDS effluent stream shall be treated in ETP and then passed through RO system. Condensate and recover water will be recycled/reused within factory premises. 'Zero' effluent discharge shall be adopted and no effluent will be discharged outside the premises.
- vi. All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- vii. As proposed, process organic residue and spent carbon shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.

- viii. The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from SPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for fire-fighting facilities in case of emergency.
- ix. Fly ash shall be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
- x. Solvent management shall be as follows :
 - Reactor shall be connected to chilled brine condenser system
 - Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery
 - Solvents shall be stored in a separate space specified with all safety measures.
 - Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - Entire plant where solvents are used shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- xi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xii. All the issues raised during the Public Hearing/consultation meeting held on 12th June 2015 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
- xiii. As proposed, an amount of Rs. 5.42 core should be earmarked towards the Enterprise Social Commitment on the activities proposed by PP for local and social development and based on Public Hearing issues. Annual physical and financial progress achieved to be submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- xiv. As proposed, green belt of 24000 m2 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.

12.6.8 Proposed Bulk Drug and Its Intermediate Manufacturing Units (2800 TPA) at Plot no. SPA 503- RIICO Industrial Area, Bhiwadi, Rajasthan by M/s Dalas Biotech Ltd.- reg. EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 7th meeting held during 27th to 28th April 2016 and the Committee sought additional information. PP has submitted the following additional information:

- (i) Detailed water balance with plan to recycle and reuse.
- (ii) Reanalyzing/monitoring of ambient air for one month including VOC.
- (iii) Measures to control SO2 emission from PET coke fired boiler.

During presentation the committee noted that PP has not taken any initiative to reduce the water requirement and come up with the same water requirement i.e. 140 m3/day. After deliberation, PP agreed to reduce fresh water requirement from 140 m3/day to 100 m3/day.

With regards to monitoring VOC value, the Committee found values given for VOC is not rational. The Committee suggested them to reanalyze the VOC. Regarding point no.3, the committee noted satisfactory response.

The proposal was, therefore, deferred for want of submission of VOC results. The above information shall be provided with the uploading of minutes on the website.

The Committee underrated the performance of the Environmental Consultant (M/s N. K. Enviro) for casual monitoring approach

12.6.9 MS quality up-gradation & HSD quality up-gradation at Tehsil Baruni, district Begusarai, Bihar by M/s IOCL Barauni refinery. – reg EC.

The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 7th meeting held during 27th to 28th April 2016 and the Committee sought additional information. PP has submitted the following additional information:

- (i) Total Plot area of the refinery. Area earmarked for greenbelt. A layout plan may be submitted.
- (ii) Point wise TOR compliance statement.
- (iii) Details of Sulphur balance in the existing and proposed Refinery.
- (iv) GLC for post project SO₂ emission is estimated to be 66.9 μ g/m³, which seems to be in higher side. Recheck the prediction modeling or clarify with reasons. In this context, air pollution Control measures to be given appropriately to reduce the GLC for SO₂ emissions.
- (v) Proposed unit wise air pollution control devices.
- (vi) Complete water balance chart indicating total water requirement, water losses, wastewater generation and water recycled.
- (vii)Whether unit is a zero discharge unit or plan to be dawn for complete ZLD of existing and proposed expansion.
- (viii) Oily sludge management plan.

The Committee discussed the point-wise respose, which are as under;

- (ii) Total plot area is noted to be 887.83 acres, out of which area earmarked for green belt is 148.39 acres. PP has submitted the layout plan.
- (iii) TOR Compliance statement submitted..
- (iv) As informed, existing SO2 emission is maintained at the rate of 700 kg/hr. With the proposed BS-IV project, there will be an additional load of 33.32 MMKCal/hr due to installation & revamp of process unit furnaces.
- (v) The absolute maximum of the predicted GLC for SO2 was calculated to be 66.9 μg/m3. During this modeling SO2 emission for the IOCL Barauni Refinery was taken as 1034.59 kg/hr. However, presently IOCL Barauni Refinery total SO2 stack emission is in the range of 690 to 720 kg/hr and post project scenario SO2 stack emission will be 815 kg/hr. Hence, actual GLC is expected to be considerably lower than 66.9 μg/m3. With response, the committee advised to rework on GLC calculation.
- (vi) Following air pollution control measures/devices are being installed in the proposed project:
 - Low NOx/Ultra low NOx burners will be installed in all new furnaces.
 - Coker A will be operated in Single furnace mode operation.
 - Installation of additional amine absorption column and regenerator.
 - Off gases from Biturox Unit will be routed to CO incinerator in RFCCU ensuring total oxidation.
 - BenSat (Benzene Saturation) Unit will be installed as part of the proposed project in line with benzene specification in BS-IV MS.
- (vii) Total fresh water requirement is 651 m3/hr, out of which 497 m3/hr wastewater will be generated. A total 466 m3/hr water will be recycled and Evaporations loss in Cooling Towers will be 311 m3/hr. Committee observed there is lack of water balance which is to be rework with ZLD plan.
- (viii) As of now, conventional ZLD plant is not envisaged for IOCL Barauni Refinery. However, after proposed expansion there will be no discharge to outside except during heavy rainfall. The Committee advised to rework and prepare ZLD plan with revised values of water requirements.
- (ix) PP informed that Oily sludge is generated mainly during cleaning of storage tanks and from ETP. It is processed by "Mechanized Skid Process" for recovery of 90-95% oil from oily sludge and generation of minimum quantity of residual oily sludge. Mechanical extraction method uses solvent & steam heating and then oily sludge is processed in a plant equipped with centrifuge in order to recover maximum possible oil and water. The sludge is broken down into water, oil and base sediments.

After deliberation the committee deferred the proposal for want of following information;

- i) Certification w.r.t. Validation of EIA-EMP report by accredited consultant.
- ii) To rework on GLC calculation.
- iii) ZLD plan with recycle and reuse of wastewater. Accordingly revised value of fresh water to be drawn.

iv) Action taken to Compliance of condition existing EC duly inspected by RO of MEF&CC.

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

12.7 Terms of Reference (TOR)

12.7.1 Expansion of LPG Storage Capacity (from 300 MT to 900 MT) by Installing 2x300 MT Mounded Storage Unit at LPG Indane Bottling Plant, Odiyampet, Villianur, Pondicherry by M/s IOCL -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 the projects related to Isolated storage & handling of hazardous chemicals are listed in at S.N. 6(b) of schedule of EIA Notification, 2006 covered under category 'B' but due to general conditions applicability i.e (Protected areas notified under the wildlife (Protection) Act, 1972 and Inter-State boundary), it is listed in category 'A' and appraised at central level.

M/s IOCL has proposed for expansion of LPG Storage Capacity (from 300 MT to 900 MT) by Installing 2x300 MT Mounded Storage Unit at LPG Indane Bottling Plant, Odiyampet, Villianur, Pondicherry. Existing plant was established prior to EIA, Notification, 2006 and has obtained consent vide letter dated 23.06.1995. It is reported that no national parks and Reserve/ protected forest lies within 10 km distance. Sangarabarani river is flowing at a distance of 0.147 Km from the project site. The oussudu lake (as a bird's sanctuary) is a protected area is situated at distance of 5 Km from the project site.

Total cost of the project is Rs. 15 Crores. Plant will be installed within the occupied area of IOCL. Total area is 17 Acre out of which is earmarked for green belt is 31,260 m². The proposed project has an employment potential of 70 people.

Type of Storage tanks	Existing/Proposed	Nos.	Capacity	Total Capacity
Mounded Bullets	Existing	3	100 MT	300 MT
Mounded Bullets	Proposed	2	300 MT	600 MT
			Total	900 MT

The details of capacity of storage tanks are as follows:

Water requirement during construction phase will be 25 m3/day. Water for the project will be supplied by IOCL Pond. Power requirement of 130 KWh will be met from state Electricity board. DG set of 250 KVA will be used for emergency purpose only.

Sludge will be used as organic manure in garden. Hazardous waste will be disposed to authorized recyclers.

A. Specific TOR:

1. Details on list of hazardous chemicals to be stored alongwith storage quantities at

the facility, their category (as per MSIHC Rules), MSDS.

- 2. Mode of receiving hazardous chemicals in isolated storages and mode of their dispatch.
- 3. Layout plan of the storage tanks and other associated facilities.
- 4. Details on types and specifications of the storage facilities including tanks, pumps, piping, valves, flanges, pumps, monitoring equipments, systems for emissions control safety controls including relief systems.
- 5. Arrangements to control loss/leakage of chemicals and management system in case of leakage.
- 6. Risk Assessment & Disaster Management Plan
 - a. Identification of hazards
 - b. Consequence Analysis
 - c. Details of domino effect of the storage tanks and respective preventive measures including distance between storage units in an isolated storage facility.
 - d. Onsite and offsite emergency preparedness plan.

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 from NBWL to be obtained w.r.t. oussudu bird sanctuary

It was recommended that 'TOR along with Public Hearing prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report 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.

12.7.2 Drilling of 75 onshore wells, 4 Nos. of production installations and laying of approximately 390 km of pipelines (50 to 300 mm dia) in Borhat-Titlagarh area, Districts Dibrugarh ,Sibsagar and Charaideo, Assam by M/s Oil India 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 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.

Ministry has issued EC vide letter no. J-11011/423/2008- IA II (I) dated 6th July, 2011 to M/s Oil India Ltd., for Exploratory Drilling for Oil and Gas (2 wells) at BORHAT PEL, Titlagarh area in District Sivsagar, Assam.

M/s Oil India Ltd has proposed for Drilling of 75 onshore wells , 4 Nos. of production installations and laying of approximately 390 km of pipelines(50 to 300 mm dia) in Borhat-Titlagarh area , Districts Dibrugarh ,Sibsagar and Charaideo, Assam . It is reported that no national parks, Reserve/ protected forest and Wildlife Sanctuaries lies within 10 km distance. Following are the locations of four corners of Borhat-Titlagarh area:-

S. No.	No. Co-ordinates	
	Latitude	Longitude
1	27 ⁰ 15'24.047"	95 ⁰ 10'31.234"
2	27 ⁰ 14'57.795"	95 ⁰ 22'38.489"
3	27 ⁰ 01'5.849"	95 ⁰ 22'0.247"
4	27 ⁰ 1'32.052"	95 ⁰ 9'54.425"

Total project cost is Rs. 3500 crore. The area required for drilling location would be 3 Ha and for production installation would be around 4.0 to 7.0 hectares of land.

Power required during drilling operation will be 1200 KW and power required during production installation will be 216 KW met from DG sets. DG sets will be connected with stacks of appropriate heights. Fuel required during drilling operation will be HSD of capacity 3.5 KLD and during production installation will be natural gas of capacity 1500 SCUM per day.

The daily water consumption will be 50 m³/day for drilling wells and 20 m³/d for production installation. Fresh water will be sourced from underground. Wastewater coming from drilling operation will be treated in ETP. Formation water will be disposed into underground structures within a depth of below 1000 to 1500 metres and overlain with cap rock. Drill cuttings generated will be stored in impervious pits within the drill site. Solid waste generated in production installations will be disposed/ treated.

Drill cuttings of underground rocks and solids in water based mud used for drilling will be stored in impervious pits within the drilling site

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure (Refer Ministry's web site) for preparation of EIA-EMP report:

A. Standard TOR

- 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. Cost of project and period of completion.
- 5. Employment to be generated.
- 6. Distance from coast line.
- 7. Details of sensitive areas such as coral reef, marine water park, sanctuary and any other eco-sensitive area.
- 8. Recommendation of SCZMA/CRZ clearance as per CRZ Notification dated 6th January, 2011 (if applicable).
- 9. Details on support infrastructure and vessel in the study area.

10. Climatology and meteorology including wind speed, wave and currents, rainfall etc.

- 11. Details on establishment of baseline on the air quality of the areas immediately affected by the exploratory drilling and also particularly with reference to hydrogen sulphide, sulphur dioxide, NOx and background levels of hydrocarbons and VOCs.
- 12. Details on estimation and computation of air emissions (such as nitrogen oxides*, sulphur oxides*, carbon monoxide*, hydrocarbons*, VOCs*, *etc.*) resulting from flaring, DG sets, combustion, *etc.* during all project phases
- 13. 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.
- 14. Fisheries study w.r.t. benthos and marine organic material and coastal fisheries.
- 15. Source of fresh water. Detailed water balance, waste water generation and discharge.
- 16. Noise abatement measures and measures to minimize disturbance due to light and visual intrusions in case of project site closed to the coast.
- 17. Procedure for handling oily water discharges from deck washing, drainage systems, bilges etc.
- 18. Procedure for preventing spills and spill contingency plans.
- 19. Procedure for treatment and disposal of produced water.
- 20. Procedure for sewage treatment and disposal and also for kitchen waste disposal.
- 21. Details on solid waste management for drill cuttings, drilling mud and oil sludge, produced sand, radioactive materials, other hazardous materials, *etc.* including its handling and disposal options during all project phases.
- 22. Storage of chemicals on site.
- 23. Commitment for the use of water based mud (WBM) and synthetic oil based mud in special case.
- 24. Details of blowout preventer Installation.
- 25. Risk assessment and mitigation measures including whether any independent reviews of well design, construction and proper cementing and casing practices will be followe
- 26. Handling of spent oils and oil from well test operations.
- 27. H₂S emissions control plans, if required.
- 28. 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.
- 29. Restoration plans and measures to be taken for decommissioning of the rig and restoration of on-shore support facilities on land.
- 30. Documentary proof for membership of common disposal facilities, if required.
- 31. Any litigation pending against the project or any directions/order passed by any Court of Law against the project. If so, details thereof.
- 32. Total capital and recurring cost for environmental pollution control measures.

B. Additional TOR

i. 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.

- **ii.** A Copy of certified compliance report to the environmental conditions prescribed in the existing EC. Action taken report/ detailed action plan on the partly/non-compliance conditions reported by the MoEF&CC Regional Office.
- iii. Coordinates of each well alongwith development plan to be submitted in EIA-EMP report.

It was recommended that 'TOR along with Public Hearing prescribed by the Expert Appraisal Committee (Industry) should be considered for preparation of EIA / EMP report for the above mentioned project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. The draft EIA/EMP report 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.

12.7.3 Expansion of grain based distillery (22 KLPD to 60 KLPD) at Village Karora Tehsil Behror District Alwar Rajasthan by M/s Pernod Ricard India Pvt Ltd.-reg TOR.

M/s Pernod Ricard India Pvt Ltd has proposed for Expansion of grain based distillery (22 KLPD to 60 KLPD) at Village Karora Tehsil Behror District Alwar As per Form I, no National Parks, Wildlife Sanctuaries, Tiger/ Elephant Reserves, Wildlife Corridors etc. falls within 10 km radius from the plant site. Sahibi River is flowing at a distance of 100 m and Baraud Reserve forest is situated at a distance of 6.3 Km.

Ministry has issued EC vide letter no. J-11012/24/1996- IA II (I) dated 28th June, 1996 to M/s Alwar Breweries and Distilleries Ltd., for Manufacturing of 7,500 KLPA. of IMFL at Behror, Alwar. PP informed that existing distillation plant has been closed down since August 2014 with prior intimation to Rajasthan Pollution Control Board. During presentation committee noted that PP did not change the name from M/s Alwar Brewaries and Distilleries Ltd. to M/s Pernod Ricard India Pvt Ltd. It is reported the proposed site is at about 100 mts from the Sahibi river.

On examination of topo-sheet, the committee observed that proposed site is just on the bank of Sahibi river almost within the flood plain. Therefore, Committee found that site is not suitable for distillery operation. Hence, the Committee did not agree with the existing proposal and suggested to choose alternate site.

12.7.4 Setting up of molasses based distillery 60 KLPD (RS/ENA/AA) capacity and Cogen Power Plant – 2.5 MW at Village Unn, Tehsil & District Shamli, Uttar Pradesh by M/s Superior Food Grains Pvt Limited.-reg TOR.

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

M/s Superior Food Grains Pvt is Setting up 60 KLPD Molasses Based Distillery along with 2.5 MW Co-generation Power Plant at village Unn, Tehsil & District Shamli Uttar Pradesh. As per Form I, no National Parks, Reserved Forests/ Protected Forests, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. falls within 10 km radius from the plant site.

Total plot area is 25 Acres, out of which 9 Acres area will be earmarked for greenbelt. The plant is located adjacent to existing sugar mill having 5000TCD capcity. Capital Cost of project is Rs. 70 Crores. Cost earmarked for Environmental Protection Measure is Rs 6.5 crores. The proposed project has an employment potential of 150-200. Followings products will be manufactured:

S. No.	Unit	Capacity
1	Distillery (ENA/RS/AA)	60 KLPD
2	Power	2.5 MW

Total Power requirement will be 2.5 MW, sourced from own Co-generation Power plant of sugar mill or own turbine of 2.5 MW. Steam requirement will be 20 TPH and will be sourced from own sugar mill or existing boiler. ESP with 40 m stack height will be provided to the boiler to control air pollution. CO_2 generated from fermentation will be passed through scrubbing system and will be sold to authorized vendors

Fresh water requirement will be 625 m3/day and will be sourced from own sugar mill/Storage/GW/Surface water. Spent wash and spent lees will be sent to MEE and concentrate from evaporator will be used for composting and then used as fuel in the boiler. Process condensate from MEE will be treated and recycled back in the process. Complete spent wash will be concentrated and incinerated. Plant will be based on "Zero Liquid Discharge".

Used oil will be sold to the authorized recycler. ETP sludge will be sent to biocomposting. Fly ash from the Co-generation plant will be utilized in nearby brick manufacturers/ as per CPCB guidelines. The committee suggested to using surface water for distillery and no ground water to be used. A dedicated separate line to be laid for the purpose.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (refer Ministry's website) for preparation of EIA-EMP report:

A. Specific TOR

- 1. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
- 2. Number of working days of the distillery unit.
- 3. Details of raw materials such as molasses and their source with availability.
- 4. Details of the use of steam from the boiler.
- 5. Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.
- 6. Commitment for spent wash generation within 6-8 KL/KL of alcohol produced.
- 7. Proposed effluent treatment system for molasses distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
- 8. Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.

- 9. Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank and composting yard.
- 10. Action plan to control ground water pollution.
- 11. Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.
- 12. Details of bio-composting yard.
- 13. Action plan to control odour pollution.
- 14. Arrangements for installation of continuous online monitoring system (24x7 monitoring device).

B. Additional TOR

- i. 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.
- ii. No ground water to be used for distillery. A dedicated surface water pipe line to be laid for distillery.

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.

12.7.5 Proposed 51 MW Combined Cycle Power Plant inside ONGC Hazira Plant at Tehsil Chorasi, district Surat by M/s ONGC 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 Gas based Power plant are listed at S.N. 1(d) of schedule of EIA Notification, 2006 covered under category 'B' but due to its integration with Gas processing facilities on which EC was issued , it is listed in category 'A' and appraised at central level.

Ministry has issued EC vide letter no. J-11012/677/2008- IA II (I) dated 12th November, 2008 to M/s ONGC., for Expansion of additional processing of Gas plant at Dist. Hazira, Gujarat.

M/s ONGC has Proposed 51 MW Combined Cycle Power Plant inside ONGC Hazira Plant at Tehsil Chorasi, district Surat . As per Form I, No National Parks, Reserved Forests/ Protected Forests, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. falls within 10 km radius from the plant site. Tapti creek river is flowing at a distance of 2 km and Arabian sea is at 2 Km.

Total available land for proposed combined cycle power plant is 19600 m². The plant is located inside ONGC Hazira plant premises. Capital Cost of project is Rs. 360 Crores. Followings products will be manufactured:

S. No.	Unit	Capacity (MW)
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1	Combined Cycle Power Plant	51

The combined cycle power plant (CCPP) will consist the following facilities:

- 1. Gas Turbine Generator (GTG): 1 No. (33 MW Power)
- 2. Heat Recovery Steam Generator(HRSG): 1 No. (For Steam Turbine)
- 3. Steam Turbine Generator (STG): 1 No. (18 MW Power)

Fuel required during operational phase will be natural gas with capacity 0.27 MMSCMD sourced from existing plant. Total water requirement will be 2433 m3/day and to be met internally from existing water allocation from Irrigation department. Effluent so generated will be treated in ETP.

PP requested for exemption of public hearing. However, due to absence of documents showing the plant location is in notified industrial area, the committee suggested for public hearing.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I (as referred on Ministry's web site) for preparation of EIA-EMP report.

A. Specific TOR:

- 1. List of product along with product capacities within existing plant.
- 2. Detailed list of raw material required and source, mode of storage and transportation.
- 3. Manufacturing process details along with the chemical reactions and process flow chart.
- 4. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall is necessary.
- 5. Ambient air quality monitoring at 6 locations within the study area of 5 Km, areal coverage from project site as per NAAQES notified on 16th September, 2009. Location of one AAQMS in downwind direction.
- Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall and AAQ data (except monsoon) for PM2.5, PM10, SO2, NOx including hydrocarbon and VOCs should be collected.
- 7. Data for water and noise monitoring should also be collected.
- 8. Details of existing air pollution control measures and proposed for the effective control of gaseous emissions within permissible limits.
- 9. Design details of ETP, incinerator, if any along with control of Dioxins and Furans, boiler, scrubber/bag filters etc.
- 10. Details of water and air pollution and its mitigation plan.
- 11. 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.
- 12. An action plan to control and monitor secendory fugitive emissions from all the sources.
- 13. Action plan for odour assessment and control to be submitted.
- 14. Risk assessment for storage for chemicals/solvents. Risk assessment for Cyanide.

- 15. Material safety data sheet to be submitted. CAS NO./RTECS No./DOT/UN etc to be mentioned against each chemicals.
- 16. An action plan to develop green belt in 33% area. Layout map indicating greenbelt to be submitted.
- 17. Action plan for rain water harvesting measures at plant site should be included to harvest rainwater from the roof tops and storm water drains to recharge the ground water.
- 18. Details of occupational health surveillance programme

B. Additional TOR

- i. 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.
- A separate chapter on status of compliance of Environmental conditions granted by State/Centre to be provided. As per circular dated 30th May ,2012 issued by MOEF on status of compliance of conditions on existing unit to be provided in EIA-EMP report.

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.

12.7.6 Addition of 3 KLPD (10 %) Cellulosic non food biomass (Agri waste) based modular Demo Pilot Plant" for R&D purpose within premises of existing 30 KLPD Molasses Distillery at Patethan Post- Rahu, TahsilDaund, District Pune, Maharashtra by Shreenath Mhaskoba Sakhar Karkhana Ltd. – regTOR

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 molasses based distillery are listed at S.N. 5(g) (i) under category 'A' and appraised at Central level. The proposed R&D project is attached to exiting molasses based distillery. Therefore, it is treated as A category.

Ministry has issued EC vide letter no. J-11012/19/2012- IA II (I) dated 15th December, 2014 to M/s Shreenath Mhaskoba Sakhar Karkhana Ltd., for Molasses based distillery (30 KLPD) at village Shreenatnagar Patethan, Tehsil Dauand, District Pune, Maharashtra.

M/s Shreenath Mhaskoba Sakhar Karkhana Ltd., has proposed setting up 3 KLPD Cellulosic non food biomass (Agri waste) based modular Demo Pilot Plant" for R&D purpose within premises of existing 30 KLPD Molasses Distillery at Patethan Post- Rahu, Tahsil Daund, District Pune, Maharashtra. Following configuration is proposed.

		Existing	Proposed
1	Ethanol	30	3

Existing plot are is 80937 m2, no additional land is require for this proposed activity.10 MW Cogen power plant already installed as source of power to existing plant and proposed R&D plant. Total fresh water demand for new R&D plant will be fulfilled from its existing (300 m3/day) water source. PP informed that no change in existing ETP which is designed for 240 m3/day. It is estimated about 8 m3/day waste water will be generated from the proposed R&D plant and will be treat in existing facility. The lignin rich wet cake from 3 KLPD R&D demo plant shall be used as supplementary fuel for the existing boiler. It shall be mix with the primary fuel to generate steam and power. RO reject will be sent to existing compost yard, whereas sludge produce from existing distillery will be used as fertilizer after composting.

During presentation the committee noted that the proposed activity is for R&D purposes to produce Ethanol for meeting the long term requirement of the country for blending in the fuel. Therefore the committee exempted the public hearing as per Para 2 and propose to prepare a report.

After detailed deliberations, the Committee prescribed the following Specific and Additional TOR for preparation of EIA-EMP report:

A. Specific TOR

- 1. List of existing distillery units in the study area along with their capacity and sourcing of raw material.
- 2. Number of working days of the distillery unit.
- 3. Details of raw materials, their source with availability.
- 4. Details of the use of steam from the boiler.
- 5. Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.
- 6. Plan to reduce spent wash generation within 6-8 KL/KL of alcohol produced.
- 7. Proposed effluent treatment system for molasses/grain based distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
- 8. Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
- 9. Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank.
- 10. Action plan to control ground water pollution.
- 11. Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.
- 12. Details of bio-composting yard (if applicable).
- 13. Action plan to control odor pollution.
- 14. Arrangements for installation of continuous online monitoring system (24x7 monitoring device)

B. Additional TOR

1. Public hearing is exempted as per para 7 (ii) of EIA, Notification, 2006.

- 2. Compliance of condition given in existing EC.
- 3. One month monitoring data

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.

12.8 Any Other

12.8.1 Expansion of Bulk Drug Manufacturing Unit at Village KeshwanaRajpoot, Tehsil Kotputli, District Jaipur, Rajasthan by M/s Otsuka Chemicals (India) Pvt. Ltd.– Amendment in Environmental Clearance

MoEF&CC vide letter no. J-11011/241/2012-IA.II(I) dated 10.12.2015 has granted EC to M/s Otsuka Chemicals (India) Pvt. Ltd. Expansion of Bulk Drug Manufacturing Unit at Village Keshwana Rajpoot, Tehsil Kotputli, District Jaipur, Rajasthan.

Now PP has applied for amendment for the following:

1. In table of point no.2, on page no.1, under GCLE production capacity of phase II, there is a typographical error as 350 to 700MTPA has been typed instead of 450 to 700MTPA.

The committee accepts proposed correction/amendment in existing EC. .

- 2. Part of Specific condition, point no. xv, "As proposed, process organic residue and spent carbon shall be sent to cement industries", to be omitted due to the following reasons :
 - (i) Process organic residue/distillation residue is being incinerated in a in-house liquid incinerator.
 - (ii) There is no generation of spent carbon in the factory.

The committee accepts recommended the above said amendment.

 Under point no.3 & Specific condition xi, it has been mentioned that low TDS effluent after treatment through ETP, will be passed through RO. PP proposed MVRE (Mechanical Vapour Recompression Evaporator) in place of RO. So RO technology to be replaced with MVRE in existing EC.

The committee discussed on merits of new treatment process in place of RO. PP explained that this process has been tried in other industries and gave results to meet the standards as prescribed by SPCB. In response to cost-benefit analysis, PP has submitted life cycle cost of the new system for the period of 10 years' according to which, the committee noted that MVRE maintain least operational cost in comparison RO i.e. Rs. 336 Lacs for MVRE and Rs. 456 Lacs for RO respectively.

After detailed deliberation the committee agreed to aforesaid amendment for installing MVRE in place of RO .

4. Installing one 18TPH boiler instead of existing 10TPH and an additional 8TPH as mentioned in EC.

The Committee agreed to the said amendment with installation multicyclone followed by bagfilter.

12.8.2 Product Mix Change at existing Epichlorihydrin Plant, Manali, Chennai, Tamil Nadu by M/s Tamil Nadu Petroproducts Ltd.- reg. Amendment in EC.

The Proposal was considered in 7th Expert Appraisal Committee (industry-2) meeting held during 27th to 28th April 2016. The Committee sought following additional information:

(i) Give details of role and responsibility of individual unit contributing to the effluent pipeline

PP has submitted documents relating to the agreement for usage of treated effluent pipeline between M/s Manali Petrochemical Ltd and M/s TamilNadu Petroproducts Ltd. As per agreement there will be shared responsibility for the purpose of maintenance of pipeline and also as committed by PP, M/s Manali Petrochemical will take all necessary consent/permission from SPCB for final combined discharge of effluent into the sea after conforming the norms.

After deliberation, the Committee agreed with the proposal and recommended to amend the existing discharge condition with following condition;

"the Unit shall discharge the treated effluent through the existing pipeline which is connected to M/s Manali Petro Chemical LTd.'s marine disposal effluent pipeline into the Bay of Bengal after satisfying the Standards prescribed by the TNPCB"

12.8.3 Laying of Natural Gas Pipeline (1800 km) Network from Mehsana to bhatinda including various associated facilities such as SV/TApoff/Metering/Receiving/Dispatch/Intermediate pigging station by M/s GSPL India Gasnet Ltd. – amendment / clarification.

PP has requested to seek the amendment w.r.t. clarification issued by this Ministry vide letter no. J-11011/231/2012 IA II(I) dated 23.04.2016. During discussion it was noted , PP further require clarification with respect to requirement of EC under EIA, Notification 2006 for Pipeline passing through Environmental Sensitive areas. The Committee noted that this clarification has already been communicated vide this Ministry letter dated 23.04.2016, which is applicable for laying and or extending the pipelines.

12.8.4 Molasses based Distillery (30 KLPD) at Village Bamani (Pare), Taluka Khanapur, District Sangli, Maharashtra by M/s Udagiri Sugar and Power Ltd.– reg. Amendment in Environmental Clearance.

MoEF&CC vide letter no J-11011/135/2014 – IA II (I) dated 15^{th} May, 2015 has granted environmental clearance to M/s Udagiri Sugar and Power Ltd. for the above mentioned project with following condition:

"The storage of spent wash shall not exceed 5 days capacity."

Now, PP has requested for the following amendment:

"The storage of spent wash shall not exceed 30 days in place of 5 days capacity."

The proposal was discussed in 2nd EAC (industry-2) meeting held during 16-17th December 2015. The Committee did not agree with the proposal due to ground water quality of the project area is not satisfactory and increase in storage capacity may likely increase the chances of mismanagement.

PP has now again requesting for amendment of this condition referring CPCB guidelines wherein for storage of spent wash is allowed for 30 days. It was informed that composting of spent wash with press mud is done in 45 days and it requires flexibility of operation for utilization of spent wash. Composting being biological process is dependent on climatic conditions and spent wash utilization in summer is more as compared to winter months. Further, breakdown of pumps & evaporator in MEE may take long time for repair and thus sufficient storage provision is required.

After deliberation particularly on safety measures to be adopted for ground water protection due to composting, the Committee agreed to 30 days storage of spent wash subject to following additional measures;

- i) Spent wash shall be stored in impervious RCC lagoon with HDPE lining as per CPCB guidelines and should be kept in proper condition to prevent ground water pollution.
- ii) Groundwater monitoring should be carried out at least three different locations on monthly basis in and around project site including biocomposting area. Monitoring should be done for drinking water parameters and data to be uploaded to company's website alongwith other results wastewater and air emission and also provided to Regional Office of Ministry. These data should also be displayed electronic board to main gate of company for pubic.

12.8.5 Construction of 1.5 MT storage of crude oil facility in underground rock carven at Manglore district, Karnataka by M/s Indian Strategic Petroleum Reserve Ltd. (ISPRL)- amendment in EC.

MoE&F issued Environmental Clearance vide letter no. J-11011/1/2008-1A II (1) dated 11th March 2008 regarding Construction of 1.5 MMT Strategic Crude Oil Facility in Underground Rock cavern at Mangalore District in Karnataka by M/s Indian

Strategic Petroleum Reserves Limited (ISPRL). PP vide letter dated 14th July 2016 has requested for the following change against the EC;

	Capacity Details mentioned in EC dated 11/03/2008	Physically Erected Capacity at Site	Reasons for Change
Steam Boiler	1 no. of 10 TPH boiler	2 no. of 12 TPH boilers (For intermittent use only)	During crude oil receipt the pressure in the cavern compartment increases. Beyond a pre-determined pressure, the vapours in the cavern are routed to the flare and burnt. To make the flare smokeless steam in required. To increase the reliability of the steam source during flaring and during the de-waxing operation it was decided to have two boilers. Based on the design considerations the capacity required to be installed was 12 TPH.
Diesel Generator Capacity	1 no. of 250 KVA DG	1 no. of 1250 KVA DG (To be used during power failures)	During the detail engineering it was observed that in case of Power failure critical equipments such as seepage water pumps, motor operated valves, lube oil pumps of crude oil submersible pumps, Fire water pumps has to run for the safety of the plant. In view of the aforesaid the capacity of the DG has increased.

After Deliberation, the Committee recommended on aforesaid amendments subject to following conditions;

(i) Ventury scrubber to be provided to the oil fired boiler connected with Stack of adequate height.

(ii) CPCB guideline to be followed for installation of DG set .

12.8.6 Drilling of 19 wells of Exploratory/Appraisal/Development and Setting up of Production Facilities of M/s GSPC Ltd. in CB-ONN-2000/1 Block at Gandhinagar, Gujarat by M/s GSPC Ltd. - amendment in TOR

Ministry has granted the TOR to M/s GSPC Ltd. vide letter no J-11011/96/2014-IA II(I) dated 17th January 2015 for Drilling of 19 wells of Exploratory/Appraisal/Development and Setting up of Production Facilities of M/s GSPC Ltd. in CB-ONN-2000/1 Block at Gandhinagar, Gujarat. PP vide online proposal no. IA/GJ/IND2/53032/2014 dated

22.04.2016 requested for change in coordinate of 7 wells within the same district. The amendment sought in coordinates are as below;

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After deliberation, the Committee recommended for aforesaid amendment subject to the condition that nearby village locations of all the revised wells to be given in EIA-EMP. All conditions stipulated in ToR issued on 17.01.2016 will remain unchanged.

12.8.7 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 Site Visit Report

As per recommendations of the Expert Appraisal Committee (Industry-2) in its 8th meeting held during 26-27th May, 2016, a Sub-committee comprising of Dr. J P Gupta, Chairman, Shri LK Bokolia, Additional Director and Shri A. N. Singh, Jt. Director, MoEF was to visit the project site to assess the to assess the pollution control measures being adopted in the existing plant and to suggest additional pollution control measures to be adopted in the proposed expansion.

Site visit was conducted by the Sub-committee on 26.07.2016 and the following officials were present:

(A) From GPCB:

1. Shri. R.R.Vyas, RO, GPCB, Bhavnagar

(B) From Nirma Limited

- 1. Mr. D. G. Jakhade, GM-Process & Factory Manager
- 2. Mr. A. K. Desai, Head Regulatory Affairs
- 3. Mr. R. A. Joshi, AGM, Caustic Soda
- 4. Dr. K. C. Pathak, AGM, QA/QC & Environment
- 5. Mr. M. S. Sadariya, Environment Consultant
- 6. Ms. T. K. Patel, Sr. Manager, Environment

At the outset, M/s Nirma Ltd. briefed the Sub-Committee about the production facilities at Nirma Chemical Complex which consist existing plant of Soda Ash, Pure Water Plant, Caustic Soda Plant, Captive Power Plant, Toilet Soap Plant, Bromine Plant and Derivative Plant. Expansion has been made in the same premises in Soda Ash, Caustic Soda, CPP and Derivative Plant After presentation the Sub-Committee visited the following plant area.

- (i) Greenbelt area in plant
- (ii) Existing and under construction Caustic Soda Plant and Chlorine storage area
- (iii) Clear liquor Pond of Soda Ash Effluent
- (iv) Sea Water Intake point at Gundala Pump House
- (v) Mangroves Plantation area
- (vi) Coal handling system and boiler area

After visit to these area, following observations are accordingly made:

(i) Status of commissioning of the existing EC issued in 2014 and proposed date of commencement of production is as given below:

S.N	Products/By -products	Unit s	Existing Capacit y	EC, 2014 Capacit y	Capacity Commissione d	Balance Quantit y	Proposed date of commencemen t of production
1	Soda Ash Plant						
A	Light Soda Ash	TPD	1800	200	2000		
В	Dense Soda Ash	TPD	600	600	1200		
С	Vacuum Salt	TPD	1600		1600		
2	Caustic Soda Plant						
A	Caustic Soda (100%)	TPD	240	240	300	180	Dec'16
В	Hydrochloric Acid (100%)	TPD	20	20	25	15	Dec'16
By-P	By-Products						
	Chlorine Gas (100%)	TPD	202	223.2	257.8	167.4	Dec'16
	Hydrogen (100%)	TPD	6	6	7.5	4.5	Dec'16
	Sodium Hypo Chlorite (100%)	TPD	1	5	2.25	3.75	Dec'16
3	Captive Power Plant						
A	Power	MW	62.18	35	82.18	15	Dec'16

2. Greenbelt Development Plan.

Company has carried out greenbelt in area of about 80 acres and planted around 114749 trees out of which 61225 trees have survived. Due to saline nature of land and harsh climatic conditions in the region, survival rate of plant species is low. The list of species planted in last 10 years and action plan of next five years are as given below:

S.N.	Year	No. of trees planted	Species to be planted	
1	2000-2013	94,509	Pilu, Peltophorum, Gorus Ambali, Neem Tree (Limbado), Siris, Khati Ambli, Gulmohar, Saru, Khajoori, Nilgiri, Jambu, Coconut Tree, Baniyan	
2	2013-2016	20,240	Tree (Vad), Kasood, Gundi, Ram Bavad, Ratanjot, Yellow Karen	
Action Plan		No. of trees to be planted		
3	2016-2017	7,500	Peltophorum, Neem Tree (Limbado), Pilu,	
4	2017-2018	10,000	Ambali , Yellow Karen, Ram Bavad, Sar	
5	2018-2019	8,000	- eic	
6	2019-2020	8,000		
7	2020-2021	7,500		

3. Coal Handling System implementation

Presently, covered coal storage yard with storage capacity of 15,000 MT of coal exists at site. Garland drain and proper approach road is provided around the coal handling area. PP informed that boiler of 200 TPH is presently under construction and will be completed up to December, 2016. Accordingly the new covered coal storage area will be commissioned with proper garland drain around coal handling area and pucca road will be provided.

4. General housekeeping needs to be improved.

5. PP informed that one continuous online AAQM and it's display unit have been purchased and will be commissioned by October, 2016. However, the Sub Committee suggested to add one more online continuous machine.

6. Rain water harvesting of Roof Top and surrounding village:

In present scenario, storm water and rooftop water in the plant area is connected with rain water harvesting pond. The major roof top area covered in the plant premises by guest house, bachelors hostel area and administration building which is already connected with the nearest rain water harvesting pond.

Company has 4 nos. rainwater harvesting ponds in and around the plant. Total capacity of rainwater harvesting ponds is @ 22.7 Lac-cubic meters.

7. It was noticed that few safety and environment awareness boards/signage were observed in surrounding area.

8. PP informed that under CSR programme, spent amount is Rs 514.77 Lakhs against Rs. 345 Lakhs in the year 2013-2015 and Rs. 238 Crore against Rs. 450 Crore in the year 2015-2017.

Based on the observations at the project site, Sub-committee recommends the following specific conditions to be stipulated in the EC:

- (i) ESP alongwith stack of adequate height shall be provided to additional coal fired boilers to control particulate emissions within 50 mg/Nm³. 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. Efficiency of pollution control device shall be monitored regularly. Stack monitoring report shall be submitted to the Ministry's Regional Office at Bhopal.
- (ii) Company shall provide cover shed alongwith garland drain for additional coal storage.
- (iii) General housekeeping needs to be improved and fencing to scrap yard to be erected.
- (iv) Total sea water requirement from sea intake facility i.e. from Sonarai Creek, near village: Gundala shall not exceed 1399.6 MLD and prior permission shall be obtained from the Competent Authority. No groundwater to be used for industrial operation and domestic purpose.
- (v) Effluent generation shall not exceed 581.92 MLD after expansion. Effluent of Soda Ash Plant shall be treated in the effluent treatment plant followed by utilization in salt works for recovery of additional salt and gypsum. Treated effluent shall be discharged in the Malcolm Channel after getting approval from GPCB. The effluent from proposed Caustic Soda plant expansion shall be treated in the ETP and treated effluent shall be utilized for green belt development &/or dust suppression. Effluent from ECH plant after giving adequate treatment will be sent to salt works for salt recovery.
- (vi) Treated effluent shall be passed through guard pond. Online continuous pH meter, TOC analyzer and flow meter shall be installed to monitor the treated water quality.
- (vii) Two continuous online AAQM alongwith display unit to be installed.

- (viii) Greenbelt action plan shall be implemented in a time bound manner.
- (ix) Sufficient number of Safety and Environment awareness boards/signage need to be installed in the project area.
- (x) To have effective traffic movements of truck to carry raw material and finished products, traffic management plan to be drawn. Pucca Parking area should be constructed and efforts to be done to control dust emission from traffic movement within plant.
- (xi) MoU should be made with the cement plant to utilized flyash generated from CPP. Annual status report to be submitted to SPCB & RO.

The above recommendations discussed in EAC(Industry-2) meeting. After detailed deliberations, the Committee found the final EIA/EMP report adequate and suggested to stipulate following specific conditions along with other environmental conditions while considering for accord of environmental clearance:

- i. ESP alongwith stack of adequate height shall be provided to additional coal fired boilers to control particulate emissions within 50 mg/Nm³. 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. Efficiency of pollution control device shall be monitored regularly. Stack monitoring report shall be submitted to the Ministry's Regional Office at Bhopal.
- ii. Scrubber will be provided to control process emissions viz. HCl, Cl2, Ammonia and SO₂. The scrubbed water should be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubbers vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipments so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped.
- iii. Continuous (24x7) monitoring system for chlorine, HCl and ammonia shall be installed at all important places/areas. All necessary steps should be taken for monitoring of VOCs in the plant. Effective measures shall be taken immediately, when monitoring results indicate above the permissible limits.

- iv. All the recommendations made in the risk assessment report shall be satisfactorily implemented.
- v. At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise social responsibility based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program shall be ensured accordingly in a time bound manner.
- vi. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 11989 *as* amended in October, 1994 and January, 2000. All Transportation of Hazardous Chemicals shall be *as per* the Motor Vehicle Act (MVA), 1989.
- vii. Company shall provide cover shed alongwith garland drain for additional coal storage.
- viii. General housekeeping needs to be maintained properly as a good practice and fencing should be provided around scrap yard .
- ix. Total sea water requirement from sea intake facility i.e. from Sonarai Creek, near village: Gundala shall not exceed 1399.6 MLD and prior permission shall be obtained from the Competent Authority. No groundwater to be used for industrial operation and domestic purpose.
- x. Effluent generation shall not exceed 581.92 MLD after expansion. Effluent of Soda Ash Plant shall be treated in the effluent treatment plant followed by utilization in salt works for recovery of additional salt and gypsum. Treated effluent shall be discharged in the Malcolm Channel after getting approval from GPCB. The effluent from proposed Caustic Soda plant expansion shall be treated in the ETP and treated effluent shall be utilized for green belt development &/or dust suppression. Effluent from ECH plant after giving adequate treatment will be sent to salt works for salt recovery.
- xi. Treated effluent shall be passed through guard pond. Online continuous pH meter, TOC analyzer and flow meter shall be installed to monitor the treated water quality.
- xii. Two continuous online AAQM alongwith their display at company's main gate should be provided.
- xiii. As proposed, Greenbelt action plan shall be implemented in a time bound manner.
- xiv. Sufficient number of Safety and Environment awareness boards/signage need to be installed in the project area.

- xv. To have effective traffic movements of truck to carry raw material and finished products, traffic management plan to be drawn. Pucca Parking area should be constructed and efforts to be done to control dust emission from traffic movement within plant.
- xvi. MoU should be made with the cement plant to utilized flyash generated from CPP. Annual status report to be submitted to SPCB & RO.

12.8.8 Expansion & Debottlenecking of Petrochemical Plant of Dahej Manufacturing Division (DMD) at Tehsil vagra district Bahuruch, Gujarat by M/s Reliance Industries Limited –Site Visit regarding.

As per recommendations of the Expert Appraisal Committee (Industry-2) in its 8th meeting held during 26-27th May, 2016, a Sub-committee comprising of Dr. J P Gupta, Chairman, Shri LK Bokolia, Additional Director and Shri A. N. Singh, Jt. Director, MoEF was to visit the project site to assess the existing environmental scenario and to suggest additional TORs for EIA studies.

Site visit was made by the Sub-Committee on 26.07.2016 and following officials were present:

(A) From GPCB:

- Mr. D.M. Thakar: Unit Head Bharuch, Ghandinagar
- Mr. H. C. Solanki: RO, Bharuch
- Mr. S. M. Modi: Deputy Env. Engineer, Bharuch

(B) From RIL :

- Mr. Pawan Jain, President, DMD
- > Mr. G. Udayabhaskar, Sr. VP & Head- Environment, RIL
- > Mr. Hemant Desai, Mentor- Corporate Affairs, RIL
- > Mr. Ajaykumar Gupta, Head- Health, Safety, Environment & Fire, DMD
- > Mr. Kantilal Ghandi, Head- Central Technical Services, DMD
- Mr. Vijay Surti, *Head- Operations, DMD*
- > Mr. Shashank Goel, Sector Chief- PTA, PET, ETP
- > Mr. Vijay Kumar Menon, Sector Chief-PVC/VCM

At the outset, M/s Reliance Industries Ltd. briefed the Sub-Committee about the existing industrial facility and proposed project proposal of Dahej Manufacturing Division (DMD) of Reliance Industries Ltd (RIL). The existing facility is spread in an area of ~700 Ha comprises of ethane/propane gas cracker and various downstream products are manufactured such as EO/EG, HDPE, VCM, PVC etc. The power and steam required for the process plants are met from captive power plants. To support this manufacturing facility an integrated utility system is in place which includes plants for the treatment and distribution of raw water, steam/condensate, cooling water, DM water, fire water, compressed air, nitrogen, oxygen & hydrogen plant. Other offsite facilities includes the storage, receipt & transfer, loading & unloading of chemicals, products.

The project proponent is proposing to debottleneck the existing plants which includes Gas Cracker (GC), Chlor Alkali (CA), Vinyl Chloride Monomer (VCM), Poly Vinyl Chloride (PVC), Ethylene Oxide/Ethylene Glycol (EO/EG), HDPE, Ethylene Vinyl Acetate (EVA). This proposal also includes setting up of new plant including Chlorinated Poly Vinyl Chloride (CPVC), Vinyl Chloride Monomer (VCM), Poly Vinyl Chloride (PVC) and Ethane Storage Tank. These plants will be located within the existing RIL DMD spread over 700 hectares. No additional land is required for the proposed project.

The sub-committee visited the following facilities:

- i. Central Lab
- ii. Purified Terephthalic Acid (PTA)
- iii. Effluent Treatment Plant (ETP): Guard pond, effluent on-line monitoring facility, tertiary treatment facility consisting of UF & RO systems
- iv. Product Transport Department: Vapour Recovery System
- v. Polyvinyl Chloride (PVC)/Vinyl Chloride Monomer (VCM) plants
- vi. Gas Cracker Unit (GCU)
- vii. Dahej Health & Welfare Society Hospital, Dahej (A CSR initiative by RIL

Following Observations are accordingly made:

- > The committee observed that the DMD facility has already put a dedicated environment management system including health & safety Div.
- It was informed that online analyzers are in place in 12 stacks and likely to be in all stacks shortly.
- Continuous Emissions Monitoring System (CEMS) are in place for stack emission monitoring & connected to CPCB server for monitoring real time status of environment parameters
- Vapor Recovery System has been in operation at the product dispatch facility Industry has installed the Plant effluent & sewage treatment plant consisting of primary secondary treatment with UASB. An advanced tertiary treatment system (UF, IE, RO) is established for increased recycle/reuse
- Treated effluent from ETP is discharged in the Gulf of Khambhat at a location 2.9 km deep inside the sea recommended by NIO.
- > On-line effluent monitoring through CEMS.
- It was informed that LDAR schedule in place where, LEVEL 1 is carried out daily, LEVEL 2 is carried out weekly, LEVEL 3 is carried out Monthly.

Following were also informed;

• Use of clean fuel i.e Natural Gas at CPP at DMD , which is a Low Sulfur Fuel, hence negligible SOx emissions

- NOx Emission Control System such as low NOx burner, Water & Steam injection in GT are in place.
- Scrubbers for HCL & Cl2 at PVC/VCM plants.
- Incinerators at the VCM plants working at a temperatures greater than 1200°C.
- Bag filters installed at polymers plants to control PM emissions.
- Advance Bagging System to avoid spillage of PVC powder
- All plants have ISBL Effluent Treatment for Neutralization of Effluent
- In-house Hazardous Waste Disposal Site
- The Caustic Alkali plant has Membrane Cell Technology with 5th generation membrane with energy saving to a tune of ~ 10 MW when compared to the earlier 2nd generation membrane
- During the visit the subcommittee has also seen the Dahej Health & Welfare Society (DHWS) Hospital at Dahej. This is a hospital operated by a Trust formed jointly by RIL & Gujarat Industrial Development Corporation (GIDC). This hospital is 50 Bed Secondary Care Hospital with facilities such as operation theatre, 8 bed ICU, delivery room, fulltime physician, surgeon, gynecologist, pediatrician, anesthetist etc. However, the hospital was yet to be inaugurated for service.

Recommendations

The committee was of the opinion that although the DMD facility has adequate environment management system in place the following shall be implemented to further strengthen the system.

- ➤ A detailed water audit shall be carried out and its recommendations shall be implemented.
- Increasing reuse, recycle of treated effluents shall be carried out & a detailed plan shall be prepared for zero water discharge in a phased manner.
- A ETP efficiency study shall be carried out & its recommendations shall be implemented
- Noise monitoring shall be carried out on a weekly basis all around the periphery of the DMD facility & records maintained
- VCM & VOCs shall be monitored in the ambient air along with the other AAQ parameters & records maintained
- > The green belt shall be enhanced with proper development plan

The above recommendation was discussed in the EAC (Industry-2) and the Committee prescribed the following Specific and Additional TOR in addition to Generic TOR provided at Annexure-I for preparation of EIA-EMP report:

A. Specific TOR

- 1 Details on requirement of raw material (naphtha/gas feed stock), its source of supply and storage at the plant.
- 2 Complete process flow diagram for all products with material balance.
- 3 Brief description of equipments for various process (cracker, separation,
polymerization etc.)

- 4 Details of proposed source-specific pollution control schemes and equipments to meet the national standards.
- 5 Details on VOC emission control system from vents, stacks, fugitive emissions and flare management, *etc*.
- 6 Details on proposed LDAR protocol.
- 7 Ambient air quality should include hydrocarbon (methane and non methane), VOC and VCM (if applicable).
- 8 Action plan to meet the standard prescribed under EPA for petrochemical complex.
- 9 Risk Assessment & Disaster Management Plan
 - Identification of hazards
 - Consequence Analysis
 - Measures for mitigation of risk.

B. Additional TOR

- i A detailed water audit shall be carried out and its recommendations shall be implemented.
- ii Increasing reuse, recycle of treated effluents shall be carried out & a detailed plan shall be prepared for zero water discharge in a phased manner.
- iii A ETP efficiency study shall be carried out & its recommendations shall be implemented
- iv Noise monitoring shall be carried out on a weekly basis all around the periphery of the DMD facility & records maintained
- v VCM & VOCs shall be monitored in the ambient air along with the other AAQ parameters & records maintained
- vi The green belt needs to be enhanced with proper development plan.
- vii The Committee exempted the public hearing as per Section 7 (i), III Stage (3), Para (i) (b) of EIA Notification 2006 after submission of authenticated documents w.r.t. notified industrial area.
- viii A Copy of certified compliance report to the environmental conditions prescribed in the existing EC. Action taken report/ detailed action plan on the partly/non-compliance conditions reported by the MoEF&CC Regional Office.

Annexure-I

GENERIC TERMS OF REFERENCE (TOR) IN RESPECT OF INDUSTRY SECTOR

1. **Executive Summary**

2. Introduction

- i. Details of the EIA Consultant including NABET accreditation
- ii. Information about the project proponent
- iii. Importance and benefits of the project

3. **Project Description**

i. Cost of project and time of completion.

- ii. Products with capacities for the proposed project.
- iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
- iv. List of raw materials required and their source along with mode of transportation.
- v. Other chemicals and materials required with quantities and storage capacities
- vi. Details of Emission, effluents, hazardous waste generation and their management.
- vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
- viii. Process description along with major equipments and machineries, process flow sheet (quantities) from raw material to products to be provided
- ix. Hazard identification and details of proposed safety systems.
- x. Expansion/modernization proposals:
 - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in <u>all</u> the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing *l*existing operation of the project from SPCB shall be attached with the EIA-EMP report.
 - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4. Site Details

- i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
- ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
- iii. Details w.r.t. option analysis for selection of site
- iv. Co-ordinates (lat-long) of all four corners of the site.
- v. Google map-Earth downloaded of the project site.
- vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
- vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
- viii. Landuse break-up of total land of the project site (identified and acquired), government/private agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
- ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
- x. Geological features and Geo-hydrological status of the study area shall be included.
- xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
- xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- xiii. R&R details in respect of land in line with state Government policy

5. **Forest and wildlife related issues (if applicable):**

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)
- ii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*)
- iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
- iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon
- v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6. Environmental Status

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- X. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

7. Impact and Environment Management Plan

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling in case of discharge in water body

- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
- v. Details of stack emission and action plan for control of emissions to meet standards.
- vi. Measures for fugitive emission control
- vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- X. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
- xii. Action plan for post-project environmental monitoring shall be submitted.
- xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. Occupational health

- i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers
- ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.
- iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
- iv. Annual report of heath status of workers with special reference to Occupational Health and Safety.

9. **Corporate Environment Policy**

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

- iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
- iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
- 10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
- 11. Enterprise Social Commitment (ESC)
 - i. Adequate funds (at least 2.5 % of the project cost) 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 included. Socio-economic development activities need to be elaborated upon.
- 12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. 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, details thereof and compliance/ATR to the notice(s) and present status of the case.
- 13. 'A tabular chart with index for point wise compliance of above TORs.
- 14. The TORs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports.

The following general points shall be noted:

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

TORs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation

for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

LIST OF PARTICIPANTS OF EAC (Industry-2) IN 12th MEETING OF EAC (INDUSTRY-2) HELD ON 23-24th AUGUST, 2016

	Name	Designation	Attendance
S.N		_	
1	Dr. I. P. Gunta	Chairman	P
1	D1. J. F. Gupta	Chaiman	F
2	Sh. R. K. Singh	Member	A
3	Dr. Ahmed Kamal	Member	A
4	Drof I.D. Mudakovi	Mambar	P
4	PIOL J.R. MUUAKAVI	Member	P
5	Dr. Ajay Gairola	Member	-
6	Dr. N. Nandini	Member	P
7	Prof. (Dr.) H.R. V	Member	P
	Reddy		
8	Dr Shashank	Member	A-lst day
0	Shekhar	Wentber	Aristiday
			P- 2 nd day
9	Ms. Saloni Goel	Member	Р
10.	Shri Suhas	Member	Р
	RamchandraPharand		
	<u> </u>		
11.	<u>Shri G. C. Pati</u>	Member	A
12	<u>Dr. Sanjay Bist</u>	Member	Р
13	Sh. Paritosh Kumar.	Member	Р
	CPCB		
14	<u>Sh. Y.V. Rami Reddy</u>	Member	Р
MOEF &CC Representatives			
15	Shri Lalit Bokolia	Additional	P
		Director &	
		MS	
16	Dr. Saurabh	maustry-(∠)	Р
10.	Upadhyay, Sc-		•
	В		