Minutes of 27th meeting of Expert Appraisal Committee held on 28-29 August, 2017 for appraisal of projects related to Industry-II at Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi

Day 1: 28th August, 2017

1. Opening remarks of the Chairman

2. Confirmation of the minutes of the 26th meeting held on 27-28 July, 2017 at N Delhi

The EAC, having taken note that no comments were offered on the minutes of its 26th meeting held on 27-28 July, 2017 at New Delhi, confirmed the same.

3. Consideration of proposal

27.3 (Environmental Clearance)

27.3.1	**Setting up Pesticide Intermediates, Fungicide, Herbicide and Insecticide manufacturing unit (890 TPM) at Plot. No.C-195 & 196, Sayakha Industrial Estate, Tahsil Vagra, District Bharuch (Gujarat) by M/s Heranba Industries Limited - For EC** **[IA/GJ/IND2/35427/2015, J-11011/14/2016-IA II (I)]**
27.3.1.1	The project proponent and the accredited Consultant M/s Eco Chem Sales & Services - Surat, made a detailed presentation on the salient features of the project and informed that: i. The proposal is for agro-chemical manufacturing plant of production capacity 890 TPM at Plot No. C-195 and 196, Sayakha Industrial estate, Village Sayakha, Taluka Vagra, District Bharuch (Gujarat) by Heranba Industries Limited. ii. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 4thmeeting held during 11-12February, 2016 and recommended Terms of References (ToRs) for the Project. The ToR was issued by Ministry vide letter dated 31st March 2016. iii. All proposed products are listed at S. N. 5(b) of schedule of Environmental Impact Assessment (EIA) Notification under category 'A" and are appraised at Central Level by Expert Appraisal Committee (EAC). iv. Land area of 33,635 m^2 will be utilized for the proposed project. v. Industry will develop greenbelt in an area of 33% i.e. 11,100 m^2 area out of the total land of 33,635 m^2 of area of the project. vi. Total estimated project cost is Rs.169.75 Crore. The total capital cost will be Rs.10.00 Crore for EMP and the recurring cost will be Rs.2290 Lakhs/annum. vii. Total Employment will be 170 Nos. persons. Industry proposes to allocate Rs. 400 Lakhs towards Corporate Social Responsibility. viii. No National Parks, Wildlife corridors, Biosphere reserve, Tiger/Elephant reserves, Wildlife corridors etc. lies within 10 km distance. Bhadar - Bhukhi River is flowing at a distance of 3.0 km in SSW direction.

ix. Ambient air quality monitoring was carried out at 9 locations during 1st March 2016 to 31st May 2016 and the baseline data indicates the ranges of concentrations as: PM_{10} (67.5-93.4 µg/m^3), $PM_{2.5}$ (36-53.2 µg/m^3), SO_2 (11.7 -15.7 µg/m^3) and NO_x (18-23.8 µg/m^3). AAQ modeling study for point source emissions indicates that the maximum GLCs after the project would be 92.805 µg/m^3, 15.406 µg/m^3, 23.305 µg/m^3. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

x. Total fresh water requirement is 517.4 KLD which will be met from GIDC Water Supply.

xi. Total industrial effluent generation will be 411.7 KLD out of which 9 KLD will be incinerated, 282.7 KLD will be treated in solvent stripper followed by MEE and ATFD and balance 120 KLD will be treated in RO plant. 100 KLD of RO permeate and 256.6 KLD of condensate from MEE/AFD (Total 356.6 KLD) will be recycled. It will be based on Zero Liquid Discharge system.

xii. Power requirement will be 2300 KVA and it will be met from Dakshin Gujarat Vij Co. Ltd. 3 DG set of 1000 KVA each to be used as standby during power failure. Stack (height 11 meters) will be provided as per CPCB norms to the proposed DG set.

xiii. Multi Cyclone Dust Collector (MDC) and Electrostatic Precipitator (ESP) with a stack of height of 55 m will be installed for controlling the particulate emissions (within statutory limit of 115 mg/Nm^3) for proposed 2 Nos. of 15 TPH Coal fired boilers respectively.

xiv. Details of Process emissions generation and its management:

S. No	Stack Details			Pollutant	Air Pollution Control Device
	attached to	Height (m)	Dia. (mm)		
Process Gas Emission					
1.	Incinerator	30	500	PM, SOx, NOx, HCl, NH_3 and Cl_2	Provided ventury scrubber along with adequate stack height and monitoring facility. Incinerator will be installed as per CPCB guideline to incinerate high COD & high ammonical nitrogen content in the effluent..
2.	Reaction vessel	11	2700	SO_2 , NOx, HCl, NH_3, Br_2	Four numbers of two stage water followed by alkali scrubbers to scrub pollutants.

xv. Details of Solid waste/Hazardous waste generation and its management.

S. No	Type of waste	Category	Qty. MT/ Annum	Treatment	Disposal
1.	ETP waste	35.3	13644	Dried, packed in bags	To TSDF site of Bharuch Enviro Infrastructure Ltd. (BEIL) at Ankleshwar.
2.	Salt from MEE	37.3	14400	Dried, packed in bags	Dispose off into TSDF, BEIL, Ankleshwar& TSDF, Detox, Sayakha

3.	Used Oil	5.1	0.2	Packed in carboys	Incinerated into own Incineration system
4.	Discarded containers	33.1	5.0	De-contaminated, stored	Sell to authorized recycler
5.	Incineration ash	37.2	300	Packed in bags	Sell to brick manufacturer
6.	Process waste & residue	29.1	670	Packed in drums/bags	Send for co-processing
7.	Used rubber hand gloves/pipes etc	X-08	1	Packed in drums/bags	Incinerated into own Incineration system
8.	Hydro Chloric Acid solution (30%)	B – 15	1376.4	Storage tank	Sell to actual recycler
9.	Hydro Bromic Acid solution (20%)	B – 6	1168.8	Storage tank	Sell to actual recycler
10.	Spent sulphuric acid (40 – 60%)	B – 15	15552	Storage tank	Sell to actual recycler
11.	Aluminium Chloride soln (20%)	B – 10	5132.4	Storage tank	Sell to actual recycler
12.	Fly Ash	Solid Waste	11520	Stored in silo	Sell to brick manufacturer

xvi. Public Hearing for the proposed project has been conducted by the state Pollution Control Board on 02/06/2017. Issues raised were related to GIDC, which were replied by GIDC representative. Other project related questions were satisfactorily replied.

xvii. No litigation is pending against the unit.

xviii. Following are the existing and proposed products:

Group. No.	S. No.	Product	Capacity, TPA
1	**Pesticide Intermediates**		
	1.	Cypermethric Acid Chloride	600
	Or		
	2.	M-Phenoxy Benzaldehyde	900
2	**Insecticides**		
	3.	Acephate Technical	600
	4.	Deltamethrin Technical	120
	5.	Alpha Cypermethrin Technical	360
	6.	Permethrin Technical	300
	7.	Chlorpyriphos Technical	960
3	**Fungicides**		
	8.	Tri cyclazole Technical	120
	9.	Hexaconazole Technical	180
	10.	Propiconazole Technical	180
	11.	Mancozeb Technical	4800
4	**Herbicides**		
	12.	Glyphosate Technical	300

	Or		
	13.	Dicamba Technical	1800
	14.	Pendimethlin Technical	3600
	Total		**10680**

By-Products and their Capacities:

S. No.	By- Product	Capacity TPA
1.	Ammonium Chloride Powder (85%)	358.8
2.	Sodium Sulphite Powder (80%)	1530
3.	Sodium Sulphate powder (80%)	1033.2
4.	Cypermethrin (2nd crop)	144
5.	Bromo benzene	528
6.	SS-CMAC (Cypermethric Acid Chloride)	330
7.	KCl powder (Potassium chloride)	518.4
	Total	**4442.4**

27.3.1.2 During deliberations, the EAC noted the following:-

The proposal is for setting up agro-chemical manufacturing unit of production capacity 890 TPM in a total area of 33635 sqm at Plot No.C-195 and 196, Sayakha Industrial estate, Village Sayakha, TalukaVagra, DistrctBharuch (Gujarat) by M/s Heranba Industries Limited.

The project and/or the activities are covered under category A of item 5(b) 'Pesticide Industry and pesticide specific Intermediates' of the Schedule to Environmental Impact Assessment Notification, 2006 and require appraisal at Central Level by the sectoral Expert Appraisal Committee in the Ministry.

The ToR for the project was granted on 31st March, 2016 and the public hearing was conducted by the State Pollution Control Board on 2nd June, 2017.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.

27.3.1.3 *The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of specific/additional conditions as under:-*

- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the standards prescribed under the Environment (Protection) Rules, 1986.*

	• *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.* • *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.* • *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler (Coal content not to exceed 0.5% of Sulphur) to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.* • *Solvent management shall be carried out as follows :* a. *Reactor shall be connected to chilled brine condenser system.* b. *Reactor and solvent handling pump shall have mechanical seals to prevent leakages.* c. *The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.* d. *Solvents shall be stored in a separate space specified with all safety measures.* e. *Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* f. *Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.* g. *All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.* • *Total fresh water requirement shall not exceed 417.4 cum/day to be met from GIDC water supply. No ground water shall be used without prior permission from concerned regulatory authority/CGWA.* • *Industrial/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.* • *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.* • *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.* • *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.* • *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.* • *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.* • *The company shall undertake waste minimization measures as below:-* *(a) Metering and control of quantities of active ingredients to minimize waste.*

	(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. *(c) Use of automated filling to minimize spillage.* *(d) Use of Close Feed system into batch reactors.* *(e) Venting equipment through vapour recovery system.* *(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.* • *The green belt of at least 10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.* • *All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 2nd June, 2017 shall be satisfactorily implemented.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.* • *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.* • *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.* • *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.* • *There should be a minimum production of 10% of bio-pesticides of the total production capacity of pesticides/herbicides/insecticides.* • *Raw material storage should not exceed 3 days at any point of time* • *Potable water (treated with activated carbon and chlorination to the prescribed standards) shall be supplied to 10-15 villages.*
27.3.2	**Setting up 60 KLPD Molasses based Distillery (Rectified Spirit/ Extra Neutral Alcohol/Absolute Alcohol) at Village Khamaria Pandit, Aira Estate, Tehsil Dhaurahara, District kheri (UP) by M/s Gobind Sugar Mills Ltd - For EC** **[IA/UP/IND2/29566/2015, J-11011/199/2015-IA II (I)]**
27.3.2.1	The project proponent and the accredited Consultant M/s Ascenso Enviro Pvt Ltd made a detailed presentation on the salient features of the project and informed that: i. The proposal is for establishment of new 60 KLD distillery (RS/ENA/AA) and power generation 2.0 MW at village Khamaria Pandit, Aira Estate, Lakhimpur Kheri(UP) by M/s Gobind sugar Mills ltd (Distillery unit). ii. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 1st meeting held during 30th Nov -1st December 2015 and recommended Terms of References (TORs) for the Project. The TOR has been issued by Ministry vide dated 28th December, 2015. iii. Distilleries are listed at S.N. 5 (g) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). iv. Total land area for the proposed project will be 5.07 hectares (12.5 Acres).

	Industry will be developing greenbelt in an area of 33 % i.e., 1.72 hectare out of 5.07 hectares of total area of the project. v. The estimated project cost is Rs.10738.11 Lakhs. vi. Total capital cost earmarked towards environmental pollution control measures is Rs. 815.00 Lakhs and the Recurring cost (operation and maintenance) will be about Rs. 73.00 Lakhs per annum. vii. Total Employment will be 30 persons as direct & 50 persons indirect for proposed project. viii. Industry proposes to allocate Rs 5 crores @ of 2.5 % towards Corporate Social Responsibility. ix. No National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. lies within 10 km distance. River Sharda and Baha River is flowing at a distance of 4.8 kms in West direction and 1.5 kms in North East in direction, respectively. x. Ambient air quality monitoring was carried out at 8 locations during Dec 2015 to Feb 2016 and the baseline data indicates the ranges of concentrations as: PM_{10} (31.5-84.3 μg/m^3), $PM_{2.5}$ (20.1-58.0 μg/m^3), SO_2 (7.2-14.9 μg/m^3) and NO_x (8.1-17.8 μg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum GLCs after the proposed project would be 84.45 μg/m^3 &17.3 μg/m^3. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). xi. Total water requirement is 1904 m^3/day out of which the daily fresh water requirement of 560 m^3/day and will be met from ground water. xii. Treated effluent of 580 KLD will be treated through condensate treatment unit. Plant will be based on Zero Liquid discharge system. xiii. Power requirement will be 2.15 MW. During power failure the backup will be sourced from adjacent sugar mill. xiv. Unit will install 20 TPH bagasse/slop fired boiler. Bag filter with a stack of height of 55 m will be installed for controlling the Particulate emissions (within statutory limit of 150 mg/Nm^3) for the proposed 20 TPH bagasse/slop fired boilers. xv. Details of Process emissions generation and its management: Bag filters will be installed with 20.0 TPH boiler (particulate emission from the stack will be within the permissible limit 150.0 mg/Nm^3.) xvi. Details of Solid waste/ Hazardous waste generation and its management. • Total Ash (bottom ash + fly ash) Generation: 37.0 T /Day (will be use in making organic granules) • Fermenter sludge: 50.0 T/Day (fermenter sludge will be utilise as manure by farmer) xvii. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 16.11.2016. xviii. No any Litigation Pending against the proposed proposal. xix. Following are the list of proposed products: • 60 KLPD (Rectified Spirit/Extra Neutral alcohol / Absolute Alcohol) • Power Generation -2.2 MW •
27.3.2.2	During deliberations on the proposal, the EAC noted the following:- The proposal is for setting up 60 KLPD Molasses based Distillery (Rectified Spirit/ Extra Neutral Alcohol/Absolute Alcohol) in a total area of 5.07 ha at Village Khamaria Pandit, Aira Estate, Tehsil Dhaurahara, District Kheri (UP) by M/s Gobind Sugar Mills.

	The project and/or the activity is covered under category A of item 5(g) 'Distillery' of the Schedule to Environmental Impact Assessment Notification, 2006 and require appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry. The ToR for the project was granted on 28th December, 2015 and the public hearing was conducted by the State Pollution Control Board on 16th November, 2016. The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.
27.3.2.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of specific/additional conditions as under:-* • *The final product shall not be used for human consumption but for industrial purposes, including bio-fuel.* • *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.* • *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the standards prescribed for the 'Distillery' under the Environment (Protection) Rules, 1986.* • *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.* • *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.* • *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler (Coal content not to exceed 0.5% of Sulphur) to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.* • *Solvent management shall be carried out as follows :* *(a) Reactor shall be connected to chilled brine condenser system.* *(b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.* *(c) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.* *(d) Solvents shall be stored in a separate space specified with all safety measures.* *(e) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* *(f) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.*

	(g) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation. • *Total fresh/ground water requirement shall not exceed 560 cum/day. Prior permission shall be obtained from the concerned regulatory authority/CGWA.* • *Industrial/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.* • *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.* • *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.* • *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.* • *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.* • *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.* • *The company shall undertake waste minimization measures as below:-* *(a) Metering and control of quantities of active ingredients to minimize waste.* *(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* *(c) Use of automated filling to minimize spillage.* *(d) Use of Close Feed system into batch reactors.* *(e) Venting equipment through vapour recovery system.* *(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.* • *The green belt of at least 10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.* • *All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 16th November, 2016 shall be satisfactorily implemented.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.* • *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.* • *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.* • *Occupational health surveillance of the workers shall be done on a regular basis*

	and records maintained as per the Factories Act. • *Potable water (treated with activated carbon and chlorination to the prescribed standards) shall be supplied to 10-15 villages.* • *Continuous online (24X7) monitoring system, both for emissions and the effluent, shall be installed within the plant site for measurement of discharge and pollutants concentration. Data shall be uploaded on the company's website and provided to the respective ROs of MoEF&CC, CPCB and SPCB.*
27.3.3	**Expansion of Polyester Filament/Partially Oriented Yarn at Survey No. 394/P, Industrial Zone, Village Saily, Silvassa, UT of Dadra & Nagar Haveli by M/s AYM Syntex Limited - For EC** **[J-11011/102/2016- IA II(I), IA/DN/IND2/51548/2016]**
27.3.3.1	The project proponent and the accredited Consultant M/s Unistar Environment and Research Labs Pvt Ltd made a detailed presentation on the salient features of the project and informed that: i. The proposal is for expansion of existing Manmade Fiber (i.e. Polyester Filament Yarn and Polyester Oriented Yarn) manufacturing unit @ 20000 TPA by adding Synthetic Filament Yarns @150000 TPA and POY Master batch (colour) @600 TPA by M/s AYM Syntex Ltd. located at) Survey No. 394, 393/2, 374/1/1, 374/1/2, Industrial Zone, Village Saily, Silvassa, UT of Dadra and Nagar Haveli-396230. ii. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 8th EAC (Industry-2) meeting held during 26-27 May, 2016 and recommended Terms of Reference (ToRs) for the project. The TOR was issued by Ministry vide letter dated 15th July, 2016 with public hearing. iii. Subsequently, the project proponent requested for amendment in the TOR's for exemption of public hearing. The project proposal for amendment in TOR's was considered by the Expert Appraisal Committee (Industry-2) in its 18th EAC (Industry-2) meeting held during 23-25 January, 2017 and recommended the amended Terms of References (ToRs) for the project by exempting public hearing. The amendment in TOR was issued by Ministry on 2nd May, 2017. iv. All activities are listed at S.N. 5(d) – Manmade Fiber- Other than rayon of Schedule of Environmental Impact Assessment (EIA) Notification Under category 'B' but are appraised as Category A at Central Level by Expert Appraisal Committee (EAC) due to applicability of General conditions. v. Existing land area is 31400 sqm, additional requirement is 24000 sqm. Adjoining land will be used for the proposed expansion. vi. Industry has already developed Greenbelt in area of 33% i.e., 18282 sqm out of 55400 sqm of area of the project. vii. The estimated project cost is Rs.407.31 Crores including existing investment of Rs.262.11crores. Total capital cost earmarked towards environmental pollution control measures is Rs.1.50 Crores and the Recurring cost (operation and maintenance) will be about Rs. 52.45 Lakhs/Annum. viii. Total Employment will be 475 persons as direct & considerable number of persons indirect after expansion. Industry proposes to allocate Rs. 2.90 crores @ of 2 % towards Corporate Social Responsibility. ix. D&NH Wild Life Sanctuary (3 km W), Vasona Lion safari (7 km W) and Satmaliya Deer Park (6.2 Km NE) lies within 10 km distance. Damanganga River is flowing at a distance of 1.4 Km in W Direction. x. Ambient air quality monitoring was carried out at 8 Locations during March,

2016 to May 2016 and the baseline data indicates the ranges of concentrations as: PM10 (59.63 to 86.13µg/m^3), PM2.5 (19.75 to 29.08µg/m^3), SO2 (10.46 to 13.86 µg/m3), NO2 (23.5 to 20.91 µg/m3) and CO (0.18-0.68 mg/M3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.81ug/m^3, 3.94 ug/m^3 and 22.91ug/m^3 with respect to PM_{10}, SO_x and NO_X. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

xi. The present water requirement is 151 KL/day, which would be increased to 383 KL/day after the proposed expansion to be met from Damanganga Right Bank Main Canal. The concerned regulatory authority Damanganga Canal Distry Dn.NO.3 has accorded permission to withdraw 600 KL/day from the canal.

xii. Total generated effluent of 100 KL/day will be treated through adequate ETP. The Industrial waste water in the form of washing & cooling tower blow down (during manufacturing POY/FDY) is treated in the Effluent Treatment Plant with Primary, Secondary & Tertiary units and the treated waste water is/will be recycled/reused in cooling and/or in gardening within the premises. Hence, there is no discharge of treated effluent outside the premises and thus achieving ZLD.

xiii. Power requirement after expansion will be 13.9 MW including existing 10.9MW and will be met from DNH Power distribution corporation Ltd. Existing unit has two DG sets of 2875 KVA each capacity and additionally two DG sets of 2200 KVA each is proposed which will be used as standby during power failure. Stack (height 20 m) will be provided as per CPCB norms to the proposed DG sets of 2200 KVA in addition to the existing DG sets of 2875 KVA each.

xiv. Existing unit has no boilers. The unit has proposed 3 nos. of steam boiler, two of capacity 300 Kgs/hr each & one of capacity 600 Kgs/hr running on HSD. Stack height of 20 m will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm^3).

xv. ETP waste (35.3) generated from ETP @ 15 MT/Month will be collected and stored at designated place and disposal through TSDF. Used Oil generated from process @ 10 KL/Year will be disposed by sale to registered recyclers. Empty drums/Bags/Liners generated from raw materials @ 280000 Nos./Year minimum or as generated will be collected, stored, decontaminated and Disposal by sale to authorized scrap dealers.

xvi. Yarn waste from process @ 2500 MT/Year will be recycled back/sale to actual uses.

xvii. Public Hearing for the project is exempted as per paragraph 7(i) (III) (i) (b) of the EIA Notification, 2006 since the project site is located in the Notified Industrial Zone.

xviii. There is no litigation pending against the proposal.

xix. Following are the existing and proposed products:

Existing Product list (In case of expansion proposals):

S. No.	Products	Quantity (MT/Year)
1	Polyester Filament Yarn and Partially Oriented Yarn (Consent to operate is obtained and plant is in operation)	20000.00

Proposed Products and their Capacities for Expansion

S. No.	Products	Quantity (MT/Year)

1	Synthetic filament Yarn (i.e. Partially Oriented Yarn, Fully Drawn Yarn, Nylon Filaments yarn, Bulk Continuous Filament, Text and Air text Yarn, Twisted Yarn, Monofilament Yarn, Splitting Yarn, Intermingled Yarn)	150000.00
2	POY Master Batch (color)	600.00

27.3.3.2 During deliberations, the EAC noted the following:-

The proposal is for expansion of Manmade Fiber (Polyester Filament Yarn and Polyester Oriented Yarn) manufacturing unit (present capacity 20000 TPA) by adding Synthetic Filament Yarns @150000 TPA and POY Master batch (colour) @ 600 TPA, promoted by M/s AYM Syntex Ltd in a total area of 55400 sqm at Survey No.394, 393/2, 374/1/1, 374/1/2, Industrial Zone, Village Saily, Silvassa, UT of Dadra and Nagar Haveli.

The project/activity is covered under category B of item 5(d) 'Manmade Fibres Manufacturing (other than Rayon)' of the Schedule to Environmental Impact Assessment Notification, 2006. However, due to applicability of general conditions (within 5 km of interstate boundary), the project was appraised at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The ToR for the project was granted on 15th July, 2016 which was amended on 2nd May, 2017 providing exemption from public hearing due to the project site being in notified industrial area as per the provisions of the EIA Notification, 2006.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components.

Present water requirement is 151 KL/day, which would be increased to 383 KL/day after the proposed expansion to be met from Damanganga Right Bank Main Canal. The concerned regulatory authority Damanganga Canal Distry Dn.NO.3 has accorded permission to withdraw 600 KL/day from the canal.

Consent to Operate for the presently manufactured product (Polyester Filament Yarn and Partially Oriented Yarn) from the Pollution Control Committee of Daman & Diu and Dadra Nagar Haveli is presently valid up to 31st March, 2017. The unit has applied for the renewal of the same.

Earlier, the Ministry had issued environmental clearance for expansion of POY/PFY through continuous polymerization process at the same premises vide letter dated 24th June, 2009 in the name of M/s Welspun Syntex Ltd. The project was, however, not taken forward. The said EC has since been expired by now, there is no rationale of change of name from M/s Welspun Syntex Ltd to M/s AYM Syntex Ltd.

27.3.3.3 *The EAC, after deliberations recommended the project for grant of environmental clearance, subject to compliance of specific/additional conditions as under:-*

- *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
- *As already committed by the project proponent, Zero Liquid Discharge shall*

	be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the standards prescribed under the Environment (Protection) Rules, 1986. • *The sewage treatment plant shall be installed to take care of non-industrial effluent, and the treated water shall essentially be used for gardening purposes. The layout plan shall be submitted indicating location of the guard pond at the ETP.* • *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.* • *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.* • *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler (Coal content not to exceed 0.5% of Sulphur) to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.* • *Solvent management shall be carried out as follows:-* *(a) Reactor shall be connected to chilled brine condenser system.* *(b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.* *(c) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.* *(d) Solvents shall be stored in a separate space specified with all safety measures.* *(e) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* *(f) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.* *(g) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.* • *Total fresh water requirement shall not exceed 383 cum/day to be met from Damanganga Right Bank Main Canal after the required permission from the concerned regulatory authority. No ground water shall be used without prior permission from concerned regulatory authority/CGWA.* • *Industrial/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.* • *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.* • *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm. Solvent transfer shall be by pumps.* • *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.* • *The Company shall strictly comply with the rules and guidelines under*

	Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989. • *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.* • *The company shall undertake waste minimization measures as below:-* *(a) Metering and control of quantities of active ingredients to minimize waste.* *(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* *(c) Use of automated filling to minimize spillage.* *(d) Use of Close Feed system into batch reactors.* *(e) Venting equipment through vapour recovery system.* *(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.* • *The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind directions, along road sides, at the parking vehicle loading and unloading areas, etc. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.* • *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.* • *Continuous online (24X7) monitoring system, both for emissions and the effluent, shall be installed within the plant site for measurement of discharge and pollutants concentration. Data shall be uploaded on the company's website and provided to the respective RO of MoEF&CC, CPCB and SPCB.* • *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.* • *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.* • *Potable water (treated with activated carbon and chlorination to the standards prescribed) shall be supplied to 10-15 villages.* • *Study shall be conducted to investigate the feasibility of establishing heat exchangers to reduce cooling and heating water requirements.*
27.3.4	**Quality Improvement Project from BS-IV to BS-VI grade at Mathura Refinery by M/s Indian Oil Corporation - For EC** **[J-11011/151/2016- IA II(I); IA/UP/IND2/53945/2016]**
27.3.4.1	The project proponent and the accredited Consultant M/s Cholamandalm MS Risk Services Limited, Chennai made a detailed presentation on the salient features of the project and informed that: i. The proposal is for Quality Improvement Project (QIP) from BS-IV to BS-VI grade at the same crude processing capacity of 8 MMTPA to reduce sulphur content to 10 ppm in the existing refinery by M/s IOCL, Mathura Refinery at

		Mathura.
	ii.	The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 11th EAC meeting held during 20th-21st July, 2016 and recommended Terms of References (ToR) for the Project. The ToR has been issued by Ministry vide letter dated 23rd September 2016.
	iii.	All Petroleum refining industry are listed at S.N. 4(a) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC)
	iv.	Ministry has issued EC earlier vide letter no. J-11011/208/2013- IA II(I), dated 19-Sept-2014 for Installation of Dimerization unit (55 TMTPA) & J-11011/283/2006-IA.II (I) dated 22nd April 2007 for FCCU Revamp of Mathura Refinery of M/sIndian Oil Corporation Ltd.
	v.	Existing land area is 617 acres. The proposed QIP project will be implemented within the existing IOCL Mathura refinery complex and no additional land will be acquired for proposed quality improvement project
	vi.	Industry is already developed the Ecological Park which is spread across 4.45 acres. The refinery has so far planted about 29,000 trees/shrubs in the refinery premises and more than one lac trees/shrubs in the surrounding area and township.
	vii.	The estimated project cost is Rs.1713 crores. The estimated cost of the various items under environmental management programs will be in the order of Rs.260.05 Lakhs per annum.
	viii.	No additional manpower is envisaged in the project as the project will be integrated with existing refinery. However, proposed project would generate some direct and indirect employment opportunities during construction, which will benefit the local economy. Industry proposes to allocate Rs. 6045.00 lakhs for a period of 5 Years towards Corporate Social Responsibility.
	ix.	No National parks, wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. lies within 10 km distance. Yamuna River is flowing at a distance of 6 km in Eastern direction. Project site is located within the geographical limits of Taj Trapezium Zone
	x.	Ambient air quality monitoring was carried out at eight (8) locations during 25th November 2016 to 23rd February 2017 and the baseline data indicates the average ranges of concentrations as: PM_{10} (79.5 µg/m^3 to 92.0 µg/m^3), $PM_{2.5}$ (47.4 µg/m^3 to 51.2 µg/m^3), SO_2 (10.7 µg/m^3 to 14.9 µg/m^3) and NO_2 (20.65 µg/m^3 to 23.6 µg/m^3) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.15 µg/m^3, 0.27µg/m^3 and 1.87 µg/m^3 with respect to PM_{10}, SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
	xi.	Total water requirement for existing refinery operations is 669 m^3/hr. There is no increase in raw water requirement after the post project scenario and there is decrease in waste water discharge from 176m^3/hr to 169m^3/hr due to increase in waste water recycling.
	xii.	Effluent of 582 m^3/hr will be treated through existing Effluent Treatment Plant. The discharge of treated water into the river would be decreased from 176m^3/hr to 169m^3/hr for proposed project.IOCL, Mathura is having the state of the art effluent treatment plant which is adequate to treat the effluent after post project scenario
	xiii.	Power requirement after expansion will be 73.2 MWH including existing 67.3MWH and will be met from own CPP.
	xiv.	Details of Process emissions generation and its management.

	The major pollutants from the proposed quality improvement will be Sulphur dioxide (SO2) and Oxides of Nitrogen (NOx). The peak predicted ground level concentrations of the PM_{10}, SO_2 and NO_x were estimated as 92.15 µg/m^3, 23.87µg/m^3 and 16.77 µg/m^3 respectively. Due to adoption of efficient pollution control systems, the peak predicted ground level concentrations would occur within existing plant sources. Hence the resultant post project scenario (baseline plus predicted increase) of pollutant concentration in the ambient air will be within the NAAQs. Existing air quality management facility is adequate to control the marginal increase in SO2 emission. Flare tip is designed to ensure smokeless conditions. Adequate stack height will be designed for the proposed unit in consideration with the 'Guidelines for Minimum Stack Height' as per notification by MoEF dated 19th May 1993, which fixes the minimum stack height based on emission of Sulphur Dioxide. Ambient air quality is monitored regularly and LDAR program is implemented to detect leakages and VOC emissions. No major process vents and fugitive emissions are envisaged from proposed quality improvement project. However, the currently adopted plant wide Leak Detection and Repair Program will be extended to control fugitive VOC emissions, thereby achieving the emission standards xv. Details of Solid waste/ Hazardous waste generation and its management. The expected solid wastes generation in the proposed project are hazardous and non-hazardous in nature. The main hazardous waste is spent catalyst and the time cycle for generation of spent catalyst will be three to ten years depending on the process. The hazardous waste authorization was obtained from UPPCB. The refinery is in the practice of disposing residual oily sludge through bio remediation technology developed by IOC- R&D. Facility also obtains Hazardous waste consent from UPPCB. IOCL, Mathura is already practicing a safe storage facility for disposal of Hazardous waste in environment friendly disposal methods like bioremediation, metal recovery from spent catalyst, etc. xvi. As per the approved ToR, the Public Hearing for the proposed Quality Improvement Project was exempted as under 7 (ii) of the EIA Notification, 2006 xvii. The industry is regularly submitting the Environmental compliance of EC conditions report to Regional Office of MoEF. Latest compliance report and the certified copy of the compliance were obtained from Regional Office, MoEF&CC for existing Environmental Clearance vide letter No.J-11011/208/2013- IA II(I), dated 19th September, 2014 for Installation of Dimerization unit (55 TMTPA) and J-11011/283/2006-IA.II (I) dated 22nd April 2007 for FCCU Revamp of Mathura Refinery. xviii. There is no litigation pending against the proposal.
27.3.4.2	During deliberations, the EAC noted the following:- The proposal is for Quality Improvement Project (QIP) from BS-IV to BS-VI grade at the same crude processing capacity of 8 MMTPA to reduce sulphur content to 10 ppm in the existing refinery complex by M/s IOCL at Mathura. The project and/or the activities are covered under category A of item 4(a) 'Petroleum Refining Industries' of the Schedule to Environmental Impact Assessment Notification, 2006 and require appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

	The ToR for the project was granted on 23rd November, 2016 with the exemption from public hearing as per the provisions contained in para 7(ii) of the EIA Notification, 2006. The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Earlier ECs issued - For installation of Dimerization unit of 55 MTPA on 19th September, 2014 and for FCCU revamp of Mathura Refinery on 22nd April, 2007. The Ministry's notification dated 23rd November, 2016 provides as under, quote: '*Any change in the product mix, change in quantities within products or number of products in the same category for which EC has been granted shall be exempted from the requirement of prior EC provided that there is no change in the total capacity sanctioned in prior EC granted earlier under this Notification and there is no increase in pollution load. The project proponent shall follow the procedure for obtaining* ***No Increase in Pollution Load*** *certificate from the concerned State Pollution Control Board as per the provisions given in Appendix-XIV' unquote.* In the above background, the Committee was informed about the following:- (a) There shall be no change in the total capacity of the refinery for which earlier EC was granted. (b) Due to the proposed change in the product specifications, there shall be no additional requirement of fresh water and shall remain as 669 cum/hr. Also, the waste water generation will be reduced from 176 cum/hr to 169 cum/hr. (c) There shall be no additional solid/hazardous waste generation. (d) Total SO_2 emissions will be marginally increased from 339.8 kg/hr to 341.4 kg/hr i.e. by 0.35% only, but still well within the prescribed limit of 450 kg/hr approved earlier and recorded in the EC.
27.3.4.3	*The EAC, after detailed deliberations on the proposal, opined that the amended provisions [para 7(ii)(c)] vide Notification dated 23rd November, 2016 of para 7(ii) of the Principal EIA Notification, 2006, are applicable to the present proposal. Accordingly, the Quality Improvement Project from BS IV to BS VI of Mathura Refinery needs to be exempted from the requirement of prior EC and the project proponent is required to follow the procedure for obtaining No Increase in Pollution Load certificate from the UP State Pollution Control Board for the needful.* *Alternatively, in view of the ToR for the project already issued by the Ministry with the exemption from public consultations, EIA/EMP report submitted accordingly by the project proponent, and the projected scenario for all the environmental components, the EAC recommended the project for grant of environmental clearance also subject to compliance of all the specific/general conditions stipulated in the earlier ECs to the Mathura Oil Refinery Project. The Committee desired that since the project site falls within the limits of Taj Trapezium Zone, all orders of Hon'ble Courts and other statutory requirements, guidelines and directions issued*

	from time to time, as applicable, shall be complied with in letter and spirit. *The EAC further desired that the Ministry may take a view on its observations and to take a decision accordingly. In any case, such a decision shall not be taken as precedence, and all other similar proposals shall necessarily be appraised/considered henceforth in terms of the above said Notification dated 23rd November, 2016 only.*
27.3.5	**Expansion of resin manufacturing unit at Plot No.136/E-Phase II, GIDC Estate, Vapi, Tahsil Pardi, District Valsad (Gujarat) by M/s Tridev Resins Pvt Ltd - For EC** **[IA/GJ/IND2/65768/2016, J-11011/203/2015-IA-II(I)]**
27.3.5.1	The project proponent and the accredited Consultant M/s Bhagwati Enviro care Pvt ltd., made a detailed presentation on the salient feature of the project and informed that: i. The proposal is for setting up resin manufacturing unit (Synthetic Organic Chemicals - Resins) at Plot No.136/E-1, Phase II, GIDC Estate, Vapi, District Valsad (Gujarat) by M/s Tridev Resins (I) Pvt Ltd. ii. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 12th EAC meeting held during 23rd to 24th August 2016 and recommended Terms of References (TORs) for the Project. The TOR has been issued by Ministry vide letter dated 25-10-2016. iii. The proposed project/ activity is listed at S.N. 5(f) of Schedule of Environment Impact Assessment (EIA) Notification under category 'B'. However, due to applicability of general condition (located within the interstate boundary), it is appraised at Central Level by Expert Appraisal Committee (EAC) as Category A. iv. Existing land area is 1394 m^2. No additional land will be used for proposed expansion. v. Industry has already developed Greenbelt in an area of 19.85% i.e., 276.76 sqm out of 1394 sqm of area of the project. vi. The estimate project cost is Rs.4.23 crore including existing investment of Rs. 3.43 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.34.0 lacs and the Recurring cost (operation and maintenance) will be about Rs. 35.12 Lacs per annum. vii. Total employment will be 48 persons as direct & 10 persons indirect after expansion. Industry proposes to allocate Rs. 2,00,000/- @ of 2.5 % of proposed project cost towards Corporate Social Responsibility. viii. No National parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Daman Ganga is flowing at a distance of 5.0 km in South direction and River Kolak is flowing at a distance of 2.72 km in NE direction. ix. Ambient air quality monitoring was carried out at 8 locations during October 2016 to December 2016 and the baseline data indicates the range of concentrations as: PM10 (66 - 86.28 µg /$m^{3)}$, PM2.5 (31.83 - 47.01 µg /m^3), SO_2 (7.68 - 30.87 µg/m^3) NO_2 (12.99 - 45.05 µg/m^3) respectively. AAQ modeling study for point source emission indicates that the maximum incremental GLCs after the proposed project would be 1.19381 µg/m^3, 23.24328 µg/m^3 and 9.51619 µg/m^3 with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

x. Total water requirement is 140.5.m^3/day of which fresh water requirement of 140.5 m^3/day and will be met from the GIDC supply.

xi. Total effluent generated of 126.48 m3/day will be treated through Effluent Treatment Plant and finally discharged to CETP at Vapi.

xii. Power requirement after expansion will be 200 KVA Including existing 150 KVA and will be met from Dakshin Gujarat Vij Co. Ltd. existing unit has No DG sets. Proposed 01 DG sets - 125 KVA is used during power failure. Stack (height 11 m) will be provided as per CPCB norms to the proposed DG sets of 125 KVA.

xiii. Existing unit has one steam boiler of capacity 800 Kg/Hr with a stack of height of 11 m, using natural gas as fuel. There is no air pollution control device attached to the steam boiler. For the proposed expansion, one TFH will be installed of capacity of 2 Lacs Kcal/Hr and one boiler will be installed having capacity of 1000 Kg /Hr. Wet scrubber will be installed as an air pollution control system with the steam boiler.

xiv. Details of solid waste/Hazardous waste generation and its management. : (1) ETP Waste – Cat No. 35.3 - 38 MT /Yr, disposed to TSDF site. (2) Process waste - Cat No. 23.1 - 5.7 MT /Yr – dispose to CHWIF.(3) Used Oil –Cat No. 5.1 - 35 L/Yr – sell to authorized recycler.(4) Discarded containers – Cat No. 33..1– 34400 Nos/Yr – used for packing of ETP waste or return back to raw material supplier.

xv. Unit is located in notified industrial area So, Public Hearing for the expansion project was not applicable.

xvi. Unit was established before EIA Notification dated 14thSeptember, 2006. So, at that time EC was not applicable to our unit. So, the required permission has been obtained i.e. CTE & CTO, from the State Pollution Control Board.

xvii. No Litigation Pending.

xviii. Following are the existing and proposed products:-

Sr. no.	Name of Product	Quantity in MT /M		
		Existing	**Proposed**	**Total**
1	Ketonic Resin	110	190	300
2	M.F.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
		180	**630**	**810**

27.3.5.2 During deliberations, the EAC noted the following:-

The proposal is for expansion of resin manufacturing unit from 180 TPM to 810 TPM in a total area of 1394 sqm at Plot No.136/E-1, Phase II, GIDC Estate, Vapi, District Valsad (Gujarat) by M/s Tridev Resins (I) Pvt Ltd.

The project/activity is covered under category B of item 5(f) ‘Synthetic Organic Chemicals’ of the Schedule to Environmental Impact Assessment Notification,

	2006. However, due to applicability of general conditions (within 5 km of interstate boundary), the project was appraised at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry. The ToR for the project was granted on 25th October, 2016 with the exemption from public hearing due to the project site being in notified industrial area as per the provisions of the EIA Notification, 2006. In respect of air quality monitoring, the incremental concentration for SO_2 was not found consistent with that reported in respect of PM_{10} and NO_x, and needs to be re-assessed/visited. Also, there are no details made available regarding recycling/reuse of the treated waste water, if any, in order to achieve the Zero Liquid Discharge. To take care of the proper treatment of effluent discharged from the unit, details of the CETP at Vapi needs to be first established/ascertained for its adequacy. The present proposal for EC has been submitted through the gateway of a different proposal No.IA/GJ/IND2/65768/2016 and thereby inviting technical problems, which may not be allowed.
27.3.5.3	*The proposal was deferred due to the discrepancies reported in the proposal as mentioned in the preceding para. The project proponent was asked to apply afresh through the same gateway as that of ToR with the clarifications/inputs pointed out by the Committee.*
27.3.6	**Expansion of resins Manufacturing Unit at Plot No.A-1/2002, Phase IV, GIDC Estate, Vapi, Tahsil Pardi, District Valsad, Gujarat by M/s Micro Resins Pvt Ltd - For EC** **[IA/GJ/IND2/58365/2016, J-11011/304/2016- IA II(I)]**
27.3.6.1	The project proponent and the accredited Consultant M/s Bhagwati Enviro care Pvt ltd, made a detailed presentation on the salient feature of the project and informed that: i. The proposal is for Synthetic Organic Chemicals/Resins at Plot No.A-1/2002, Phase IV, GIDC Estate, Vapi, District Valsad (Gujarat) by M/s Micro Resins Pvt Ltd. ii. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 14th EAC meeting held during 26th – 27th October 2016 and recommended Terms of References (TORs) for the Project. The TOR has been issued by Ministry vide letter dated 13-12-2016. iii. The proposed project/activity are listed at S.N. 5(f) of Schedule of Environment Impact Assessment (EIA) Notification under category 'B'. However, due to applicability of general condition (interstate boundary), it is appraised at Central Level by Expert Appraisal Committee (EAC) as category A. iv. Existing land area is 2702 m^2. No additional no land will be used for proposed expansion. Industry is already developed Greenbelt in an area of 20.36% i.e., 550 sqm out of 2702 sqm of area of the project. v. The estimate project cost is Rs. 5.0 Crore including existing investment of Rs. 3.0 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.72.0 lacs and the Recurring cost (operation and maintenance) will be about Rs. 30.12 Lacs per annum.

vi. Total employment will be 36 persons as direct & 10 persons indirect after expansion. Industry proposes to allocate Rs.5,00,000/- @ of 2.5 % of proposed project cost towards Corporate Social Responsibility.

vii. No National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife Corridors etc. lies within 10 km distance. Daman Ganga Is flowing at a distance of 5.09 km in South direction and River Kolak is flowing at a distance of 3.85 km in NE direction.

viii. Ambient air quality monitoring was carried out at 08 locations during October 2016.to December 2016 and the baseline data indicates the range of concentrations as: PM_{10} (68.23 – 86.28 µg /$m^{3)}$, PM2.5 (31.69 – 47.01 µg /m^3), SO2 (7.68 – 30.87 µg /m^3) NO2 (12.99 – 45.05 µg /m^3) respectively. AAQ modeling study for point source emission indicates that the maximum incremental GLCs after the proposed project would be 1.19897 µg/m^3, 0.58825 µg /m^3 and 10.35844 µg /m^3 with respect to PM10, SO_2 and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

ix. Total water requirement is 102.16 m^3/day of which fresh water requirement of 94.87 m^3/day and will be met from GIDC, Vapi.

x. Total generated effluent of 94.87 m^3/day will be treated through Effluent Treatment Plant and finally discharge to CETP plant of Vapi.

xi. Power requirement after expansion will be 300 KVA Including existing 150 KVA and will be met from Dakshin Gujarat Vij Co. Ltd. existing unit has No DG sets. Proposed 01 DG set – 500 KVA is used during power failure. Stack (height: 11 m) will be provided as per CPCB norms to the proposed DG set of 500 KVA.

xii. Existing unit has 01 No of Thermic Fluid heater of capacity 2.0 lacs Kcal with a stack of height of 11 m. unit is using LDO as a fuel @ 0..4 KLPD in 21xisting Thermic Fluid heater. There is no Air Pollution Control Device attached to TFH. For proposed 02 No. of Steam Boiler will be installed having capacity of 800 Kg/Hr and 1000 Kg/Hr. Wet scrubber will be installed as a Air Pollution Control System attached to steam boiler No. 02. LDO @ 1.0 KLPD will be used in Steam Boiler no. 01. Stack height of steam boiler no. 01 will be 11 m and wet scrubber will be used as a Air Pollution Control System. Natural gas @ 400 scm/Day will be used in steam boiler no. 02.

xiii. There will be no Process emission generation from the unit.

xiv. Details of solid waste/Hazardous waste generation and its management. : (1) ETP Waste – Cat No. 35.3 – 25 MT /Yr, disposed to TSDF site. (2) Process waste – Cat No. 23.1 – 4.750 MT /M – dispose to CHWIF(3) Used Oil –Cat No. 5.1 – 0.048 KL/Yr – sell to authorized recycler.(4) Discarded containers – Cat No. 33..1– 59 MT/Yr – used for packing of ETP waste or return back to raw material supplier.

xv. Unit is located in notified industrial area So, Public Hearing for the expansion project was not applicable.

xvi. PP has obtained First CTE on 8-04-2010. First consent order on 04-10-2011, Valid Up to – 15-06-2015. Present consent order issue on 13-10-2015, Valid Up to – 14-06-2020.For existing products Environment Clearance is not applicable.

xvii. No Litigation Pending.

xviii. Following are the existing and proposed products:-

Sr. no.	Name of Product	Quantity in MT /M		
		Existing	Proposed	Total After Expansion

1	Drying of Ketonic Resin	100	0	100
2	Drying of poly vinyl Butyl Resin	50	0	50
3	Printing Ink & Resin (through Mixing only)	200	0	200
4	Ketonic Resin	0	250	250
5	Ketone free Formaldehyde Resin	0	50	50
6	PVB (Poly Vinyl Butyral Resin)	0	50	50
7	Adhesion Promoter TA -10	0	50	50
8	Acrylic Resin & Acrylic Emulsion	0	300	300
9	Phenolic Resin, Terpene Phenol Resins & Alkyl Phenol Resins	0	300	300
10	PU Resins	0	100	100
11	Oil Based Polyester Polyols	0	200	200
12	Polyamide Resins	0	200	200
13	Maleic Resin	0	100	100
	Total	**350**	**1600**	**1950**
	By product: Turpentine	**0**	**4**	**4**

27.3.6.2 During deliberations, the EAC noted the following:-

The proposal is for expansion of resin manufacturing unit from 350 TPM to 1950 TPM in a total area of 2702 sqm at Plot No.A-1/2002, Phase IV, GIDC Estate, Vapi, District Valsad (Gujarat) by M/s Micro Resins Pvt Ltd.

The ToR for the project was granted on 25th October, 2016 with the exemption from public hearing due to the project site being in notified industrial area as per the provisions of the EIA Notification, 2006.

The project/activity is covered under category B of item 5(f) 'Synthetic Organic Chemicals' of the Schedule to Environmental Impact Assessment Notification, 2006. Considering the applicability of General Conditions (within 5 km from the interstate boundary), the proposal was submitted to the Ministry. However, it was reported and confirmed during the presentation that the project site is located at a distance of 5.2 km from the interstate boundary. As such, the general conditions shall not be applicable and appraisal of the proposal shall remain the jurisdiction of SEAC/SEIAA.

27.3.6.3 *In view of the general conditions not applicable and thus the change in categorization of the project/activity from B to A not permissible, the EAC decided not to consider the proposal. The Committee further desired that the proposal may*

	be forwarded to SEIAA for their consideration with the date of submission of the proposal being the same i.e. 4th July, 2017.
27.3.7	**Setting up medicine formulation plant by M/s Ish MEDICOS Pvt Ltd at plot No. 9 Pharmacity Selaqui, District Dehradun (Uttrakhand) - For EC** **[IA/UK/IND2/61486/2017, IA-J-11011/4/2017-IA-II(I)]**
27.3.7.1	The project proponent made a detailed presentation on the salient features of the project and informed that: (i) The proposal is for pharmaceutical formulation unit by M/s Ish Medicos Private (ii) Limited and located at 9 Pharma City, Selaqui, District Dehradun (Uttarakhand). (iii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 18th EAC meeting held during 23-25 January 2017 and recommended Terms of References (TORs) for the Project. The TOR has been issued by Ministry vide letter dated April 29, 2017. (iv) All Pharmaceutical Formulations are listed at S.N. 5(f) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'B'. As SEIAA in Uttarakhand is not functional, the project is appraised at central level as category B. (v) Land area is 2606 sqm. (vi) Industry will develop greenbelt in an area of 33 % i.e., 860 m^2 out of 2606 m^2 of area of the project. (vii) The estimated project cost is Rs.4 crores including existing investment of Rs.1 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.13.25 lacs and the Recurring cost (operation and maintenance) will be about Rs.0.85 lac per annum. (viii) Total Employment will be 40 persons as direct & 30 persons indirect after expansion. Industry proposes to allocate Rs.10 lac @ 2.5% towards Corporate Social Responsibility. (ix) No National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. lies within 10 km distance. Seasonal river is flowing at a distance of 600 m in NS direction. (x) Ambient air quality monitoring was carried out at 6 locations during March to May 2017 and the baseline data indicates the ranges of concentrations as: PM10 between 57 - 63 µg/m3 and 64-73 µg/m3, PM2.5 between 38-41 µg/m3 and 42-46 µg/m3, SO2 between 16-20 µg/m3 and 20-25 µg/m3 and NO2 between 16-22 µg/m3 and 16-26 µg/m3 respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.860 µg/m3, 0.359 µg/m3 and 0.294 µg/m3 with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). (xi) Total water requirement is 14.5 m3/day and will be met from borewell. (xii) Total generated effluent of 2650 litres/day will be treated through Effluent Treatment Plant, consisting primary and tertiary treatment units to achieve zero effluent discharge. (xiii) Power requirement after expansion will be 100 HP and will be met from Uttarakhand Power Corporation Limited (UPCL). Existing unit has Nil sets, additionally 62.5 KV and 92 KV DG sets are used as standby during power failure. Stack height of 7 mwill be provided as per CPCB norms to the

	proposed DG sets of 62.5 and 92 KV, which will be used as standby during power failure. (xiv) Multi cyclone separator/ bag filter with a stack of height of 15 m will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm3) for Proposed 300kg diesel and gas (dual fuel) fired boilers respectively. (xv) The main point sources will be flue gas emission from the stack attached to boiler due to combustion of fuel and D. G. Sets. The major air pollutants identified from this industry will be; SPM, SO2 and NOx due to flue gas emission there will be process emission. However, in order to achieve the reduction, it is suggested that during operational phase regular maintenance and periodic tuning of the burner system should be done to ensure proper atomization and subsequent minimization of any unburned combustibles. It reduces particulate emissions. For this, combustion process may be further improved by adopting following measures. Optimization of combustion aerodynamics should be done using a flame retention device. (xvi) Re-circulation of flue gas may be considered to achieve the triple goals of low PM emissions, low NOx emissions and high thermal efficiency. (xvii) Primary flame zone O2 level should be decreased by decreasing overall O2 level, controlling (delaying) mixing of fuel and air, and use of fuel-rich primary flame zone. (xviii) Hazardous/Solid Waste management includes following: - Measures to minimize waste generation. - Operation of waste handling, treatment and disposal facilities. The Waste Management plan includes: - Waste Inventory - Classification of waste - Packaging, Storing and Transporting Wastes to Disposal site - Data Management and Reporting - Personnel Training - Waste Minimization After proposed activities, the main source of hazardous waste will be spent oil, discarded bags/containers/liners and ETP sludge. The unit proposes to adequate area for the storage of hazardous waste having leachate collection system, roof cover and impervious floor. ETP sludge will be disposed off to approve TSDF site operated by Naroda Enviro Projects Ltd. (NEPL), Odhav whereas discarded bags/containers/liners will be reused within premises or sold to approve recyclers and spent oil will be sold to CPCB approved recyclers. The unit also maintains the records for the hazardous waste storage and disposal. Entire quantity of hazardous is handled as per Hazardous Waste (Management, Handling and Transboundary movement) Rules ’08. (xix) Public Hearing for the proposed project is exempted as per EIA Notification 2006. (xx) Status of Litigation Pending against the proposal, if any. Not applicable. **Proposed Products and their Capacities for Expansion** **S. No** — **Products Quantity(TPA)** 1 — Tablets 10.0 Lacs Nos/day 2 — Capsules 3.0 Lacs Nos/day 3 — Food Supplements 1.5 MT/day 4 — Medical Devices 1000 units/day 5 — Ointments/Creams/Lotions 3MT/day 6 — Powder 1 MT/day
27.3.7.2	During deliberations, the EAC noted the following:-

The proposal is for setting up pharmaceutical formulation unit by M/s Ish Medicos Private Limited in an area of 2606 sqm at 9 Pharma City, Selaqui, District Dehradun (Uttarakhand).

The project/activity is not covered under the ambit of the Environmental Impact Assessment Notification, 2006. However, due to the possible applicability of Doon Valley Notification dated 4th July, 2005 and SEIAA not functional in the State, the project was appraised at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The Ministry's Notification dated 4th July, 2005 reads as under:-

'*It is hereby directed that all proposals relating to development in Doon Valley, Uttaranchal falling in the category of orange industry categorized vide notification No.S.O.102 € dated the 1st February, 1989, shall follow the same procedure as is being followed for the environmental clearance of Industry Sector Projects under Environment Impact Assessment Notification, 1994 issued vide No.S.O.60€ dated the 27th January, 1994 as amended from time to time with effect from the date of publication of this notification in the Official Gazette.' unquote*

The ToR for the project was granted on29th April, 2017 with the exemption from public hearing due to the project site being in notified industrial area as per the provisions of the EIA Notification, 2006.

27.3.7.3 *The EAC, after detailed deliberations on the proposal, observed that the Principal EIA Notification, 2006 and the subsequent amendments therein, do not provide for the requirement of prior EC for drug formulation units. However, at the same time, as per the Ministry's Notification dated 4th July, 2005, the proposals covered under the orange category are to be dealt with as industries requiring EC as per the Environment Impact Assessment Notification, 1994 issued vide No.S.O.60€ dated the 27th January, 1994. As such, there seems to be a contradiction and needs to be resolved by the Ministry. The Committee further desired that the matter may be examined in the perspective of present categorization of industries vis-à-vis the extant provisions of the EIA Notification, 2006 and the amendments therein.*

27.3.8 **Exploratory/appraisal wells (4 nos.) in existing NELP Block AA-ONN-2001/2, Mizoram by M/s Oil and Natural Gas Corporation Ltd - For EC**

[IA/MZ/IND/24370/2014, J-11011/305/2014 IA II (I)]

27.3.8.1 The project proponent and the accredited Consultant M/s Vimta Labs limited made a detailed presentation on the salient features of the project and informed that:

(i) The proposal is for exploratory drilling of 4 wells in existing NELP Block AA-ONN-2001/2 in the Districts Kolasib & Mamit (Mizoram) by M/s ONGC Ltd. The details of location of wells are as under:-

S. No.	Proposed Location	Latitude	Longitude	Nearest Village	District
1	HOAC	24^0 12' 14.24"	92^0 35' 53.32"	North of Medium	Kolasib
2	HOAD	24^0 09' 41.42"	92^0 36' 13.31"	South of Medium	Kolasib

3	BRBAA	24^0 07' 10.08"	92^0 31' 06.77"	South of Sauhliap	Mamit
4	AZAA	24^0 58' 59.99"	92^0 42' 49.76"	Taitow, Zanlawn	Kolasib

(ii) The TOR was issued by Ministry vide letter dated 6th January 2015

(iii) All Offshore and Onshore Oil and Gas Exploration, Development &Production are listed at Schedule1(b) of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iv) Land requirement for each well will be of total average 1.5-2.25 ha.

(v) The estimated project cost is Rs.200 crores. The 2% total project cost earmarked towards environmental pollution control measures.

(vi) Total employment will be 25 persons as direct & 500-600 persons indirect after expansion. The 2.5% of total project cost is allocated towards Corporate Social Responsibility.

(vii) There are no National parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance.

(viii) Ambient air quality monitoring was carried out at 10 locations during 15th January 2016 to 8th April 2016 representing partly winter and partly pre-monsoon season and the baseline data indicates the ranges of concentrations as: PM_{10} (37.7 to 46.0 µg/m^3), $PM_{2.5}$ (11.6 to 15.8 µg/m^3), SO_2 (7.9 to 15.0 µg/m^3) and NO_2 (11.0 to 17.3 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.31 µg/m^3, 3.1 µg/m^3 and 4.6 µg/m^3 with respect to PM_{10}, Sox and Nox. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(ix) Total water requirement is 25 m^3/day of which fresh water requirement is 5 m^3/day. The water requirement will be met from the local sources through water tankers. Suitable water transport arrangement will be made to transfer water for both drilling and domestic purposes.

(x) Domestic waste water of 4 KLD will generated from the camps would be discharged and treated in septic tanks. All wastewater streams except sewage will be directed to a 1.5 mm HDPE lined pit.

(xi) The total power requirement at the drilling site and camp site will be 2250 KVA. The power requirement in the drilling site and the campsites will be catered through Diesel Generator (DG) sets. The power requirement will be met by 3 nos. of 750 KVA DG sets. Stand by DG set arrangement of 1 no of 750 KVA at drilling site will be made.

(xii) The incremental concentrations of SO_2 and Oxides of Nitrogen due to the operation of DG sets and flaring will be negligible. Appropriate management of DG sets to achieve fuel efficiency and therefore reduce emissions. Low sulphur diesel oil will be used during drilling. Environmental monitoring during drilling and well testing will be done to ensure compliance to the standards.

(xiii) Details of Solid waste/ Hazardous waste generation and its management-

Drill cuttings –Approx. 500 m^3 per well- Collected in lined pits, stabilized and buried and restored with native soil.

Used oil - Approximately 150-200 liters/well: Disposed through MPCB authorized waste recyclers.

	(xiv) The public hearing was conducted by State Pollution Control Board on 23rd September, 2016 atMamit district (Mizoram).
27.3.8.2	During deliberations, the EAC noted the following:- The proposal is for exploratory drilling of 4 wells in existing NELP Block AA-ONN-2001/2 in an area of 1.5 - 2.25 ha for each well by M/s Oil & Natural Gas Corporation Ltd in the Districts Kolasib & Mamit (Mizoram). The project/activity is covered under category A of item 1(b) 'Offshore and Onshore Oil and Gas Exploration, Development & Production' of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006, and requires appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry. The ToR for the project was granted on 6th January, 2015 and the public hearing was conducted by the State Pollution Control Board on 23rd September, 2016 in District Mamit.
27.3.8.3	*The project proponent informed the Committee that the proposal in its present form was no more viable and requested for withdrawal of the same. The proposal was, therefore, not taken forward.*
27.3.9	**Setting up Bulk drugs manufacturing plant at Survey No. 102/p, 105/p, 106, 119,120/p, 121, 73, 74, Ahmedabad Mehsana Highway, Village Bileshwarpura, Taluka Kalol, District Gandhinagar (Gujarat) by M/s Torrent Pharmaceuticals Limited (Oncology) - For EC** **[IA/GJ/IND2/53242/2016, J-11011/129/2016- IA II(I)]**
27.3.9.1	The project proponent and the accredited Consultant M/s Anand Environmental Consultants Private Limited made a detailed presentation on the salient features of the project and informed that: (i) The proposal is for setting up Bulk Drug manufacturing plant at Survey No. 102/p, 105/p, 106, 119, 120/p, 121, 73, 74, Village Bileshwarpura, Taluka Kalol, District Gandhinagar (Gujarat) by M/s Torrent Pharmaceuticals Limited. (ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 11th meeting held during 20-21July, 2016 and recommended Terms of References (ToRs) for the Project. The ToR was issued by Ministry vide letter dated 23rd September, 2016. (iii) Proposed project/activities are listed at S.N. 5 (f) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). (iv) Land area for the proposed project is 57737 m^2. Industry will develop Greenbelt in an area of approximately 40 % i.e.23000 m^2 out of 57737 m^2 of area of the project. (v) The estimated project cost is Rs.300 crores. Total capital cost earmarked towards environmental pollution control measures is Rs.20 crores and the

recurring cost (operation and maintenance) will be about Rs.3.25 crores per annum.

(vi) Total employment will be 100 persons. Industry proposes to allocate Rs.6 crore @ 2 % towards Corporate Social Responsibility.

(vii) No National park, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. lie within 10 km distance. River Sabarmati is flowing at a distance of 25 km in SE direction.

(viii) Ambient air quality monitoring was carried out at 8 locations during November, 2016 to January, 2017 and the baseline data indicates the ranges of concentrations as: PM_{10} (56 to 77 µg/m^3), $PM_{2.5}$ (10 to 34 µg/m^3), SO_2 (8 to 19 µg/m^3) and NO_2 (10 to 26 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum GLCs after the proposed project would be 79 µg/m^3, 20 µg/m^3, 25 µg/m^3 with respect to PM_{10}, SO_2 and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS)

(ix) Total water requirement is 283 m^3/day (153 m^3/day Fresh water + 130 m^3/day recycled) of which fresh water requirement of 153 m^3/day will be met from Sardar Sarovar Narmada Nigam Limited.

(x) Industrial effluent of 150 m^3/day along with domestic effluent of 4 m^3/day will be treated through multiple effect evaporator/effluent treatment plant comprising of primary, secondary and tertiary treatment facilities. Treated effluent emanating from the ETP will be passed through a post ETP RO and the RO reject will be treated in MEE and the good permeate from the said RO will be reused in cooling tower, toilet flushing, washing, other etc. as well as remnant will be used on land for gardening purpose within premises. Therefore, no liquid effluent will be required to be discharged and the plant will be based on Zero Liquid Discharge System.

(xi) Power requirement will be 2500 KVA and will be met from UGVCL (Uttar Gujarat Vij Company Limited). There is no existing DG set. Two nos. of proposed 2000 KVA DG sets will be used to fulfill power requirement and it will have a stack height of 18 m each as per CPCB norms. Two nos. of proposed 500 KVA DG sets will be used as standby during power failure and it will have a stack height of 12 m each as per CPCB norms.

(xii) Bag Filter with a stack height of 30 m will be installed for controlling the Particulate emissions (to be within statutory limit of 150 mg/Nm^3) for the proposed 2 nos. of 5 TPH Natural Gas/ Furnace Oil fired boilers.

(xiii) Details of emissions generation and its management:

Flue Gas Emissions :

Sr. No.	Stack attached to	Stack height from G.L.	Stack dia. at top	Expected pollutant	Expected emission	Permissible limit	Air Pollution Control Measures
1.	Steam	30 m	0.60	SPM	50	150	Bag

	Boiler – 1 (5 TPH)		m		mg/Nm^3	mg/Nm^3	Filter
				SO_2	10 ppm	100 ppm	
	Steam Boiler – 2 (5 TPH)			NO_x	20 ppm	50 ppm	
2.	D. G. Set – 1 (2,000 KVA)	18 m	0.10 m	SPM	40 mg/Nm^3	150 mg/Nm^3	Not applicable, as HSD will be used as a fuel.
				SO_2	40 ppm	100 ppm	
				NO_x	20 ppm	50 ppm	
3.	D. G. Set – 2 (2,000 KVA)	18 m	0.10 m	SPM	40 mg/Nm^3	150 mg/Nm^3	
				SO_2	40 ppm	100 ppm	
				NO_x	20 ppm	50 ppm	
4.	D. G. Set – 3 (500 KVA)	12 m	0.10 m	SPM	40 mg/Nm^3	150 mg/Nm^3	
				SO_2	40 ppm	100 ppm	
				NO_x	20 ppm	50 ppm	
5.	D. G. Set – 4 (500 KVA)	12 m	0.10 m	SPM	40 mg/Nm^3	150 mg/Nm^3	
				SO_2	40 ppm	100 ppm	
				NO_x	20 ppm	50 ppm	

(A) Process Emissions

S. No.	Vent attached to	Stack height from G.L.	Stack dia. at top	Expected pollutant	Air Pollution Control Measures
1.	Process Vent – 1 attached to condenser of reactors.	23 m	0.1 m	Process solvent vapors	Water Scrubber
2.	Process Vent – 2 attached to condenser of reactors.	23 m	0.1 m	HCl	Water Scrubber followed by a conventional Caustic Scrubber
3.	Process Vent – 3 attached to condenser of reactors.	17 m	0.1 m	Process solvent vapors	Water Scrubber
4.	Process Vent – 4 attached to condenser of reactors.	17 m	0.1 m	HCl	Water Scrubber followed by a conventional Caustic Scrubbe

(xiv) Details of Solid waste/ Hazardous waste generation and its management:

Sr. No.	Type of Waste	Cat.	Quantity Per Year	Mode of Disposal
1.	Used Oil	5.1	1 KL	Will be reused within premises OR sold to registered recyclers.

2.	a. Incinerable Waste containing activated charcoal etc.	28.1	20 MT	Will be sent to CHWIF site for incineration or for co-processing.
	b. Waste containing $NaSO_4$ / other salts, Hyflow and Silica Gel		5 MT	Will be disposed at secured landfill site.
3.	Spent Organic Solvent / Mother Liquor	28.6	2000 MT	Will be sold to an authorized recycler after solvent recovery.
4.	Discarded Barrels/ Containers/ Bags/ Liners	33.1	50 MT	Will be sold to MoEF authorized recyclers.
5.	Resins from DM Plant	35.2	1 MT	Will be sold to registered re-processors or landfill site.
6.	ETP Sludge (100% basis)	35.3	50 MT	Will be disposed at secured landfill site.
7.	Process Waste	28.1	20 MT	Will be sent to CHWIF site for incineration or for co-processing.
8.	Carbon Waste (from ETP)	28.3	20 MT	Will be disposed at secured landfill site.
9.	Solid waste from MEE	35.3	100 MT	Will be disposed at secured landfill site/CHWIF site.
10.	Oil Contaminant Waste	5.2	500 kg	Will be sent to CHWIF site for incineration or for co-processing.
11.	Spent Carbon (from boiler)	28.3	50 MT	Will be sent to CHWIF site for incineration or for co-processing.
12.	Spent Catalyst	28.2	500 kg	Will be return back to origin supplier/re-processor or sent to CHWIF site for incineration or for co-processing.
13.	Distillation Residue	36.1	100 MT	Will be sent to CHWIF site for incineration or for co-processing.
14.	Off specification products	28.4	100 MT	Will be sent to CHWIF site for incineration or for co-processing.
15.	Date expired products	28.5	100 MT	Will be sent to CHWIF site for incineration or for co-processing.
16.	Contaminated cotton rags or other cleaning Materials	33.2	10 MT	Will be sent to CHWIF site for incineration.
17.	Sludge and filters contaminated with oil	3.3	10 MT	Will be sent to CHWIF site for incineration.

(xv) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 16th June, 2017.

(xvi) The product details are as below:

Sr. No.	Name of Product	Production Capacity	
		Kg/Annum	MT/Annum
1	Lenalidomide (Amorphous)	50	0.050
2	Everolimus API	50	0.050
3	Sunitinib Maleate	50	0.050
4	Paclitaxel	50	0.050
5	Carboplatin	60	0.060
6	Pemetrexed disodium	60	0.060
7	Pazopanib	100	0.100
8	Cyclophosphamide monohydrate	180	0.180
9	Dasatinib	200	0.200
10	Erlotinib	200	0.200
11	Exemestene	250	0.250
12	Gefitinib	250	0.250
13	Methotraxate	250	0.250
14	Sorafenib tosylate	450	0.450
15	Enzalutamide	500	0.500
16	Nilotinib	550	0.550
17	Imatinib Mesylate	1,000	1.000
18	Bicultamide	1,000	1.000
19	Cytarabine	1,000	1.000
20	Tamoxifen Citrate	1,000	1.000
21	Ibrutinib	1,500	1.500
22	Abiraterone Acetate	2,000	2.000
23	Gemcitabine	2,000	2.000
24	Hydroxyurea	4,000	4.000
25	Capecitabine	4,500	4.500
26	Ulipristal Acetate	5	0.005
27	Travoprost	5	0.005
28	Bimatoprost	5	0.005
29	Bromophenac	5	0.005
30	Latanoprost	5	0.005
31	Briminodine Tartrate	10	0.010
32	Olopatadine Hydrochloride	10	0.010
33	Misoprostol	20	0.020
34	Brinzolamide	100	0.100
TOTAL		21,415	21.415

27.3.9.2	During deliberations, the EAC noted the following:- The proposal is for setting up Bulk Drug manufacturing plant of production capacity of 21.415 TPA by M/s Torrent Pharmaceuticals Limited in a total area of 57737 sqm at Survey No.102/p, 105/p, 106, 119, 120/p, 121, 73, 74 at village Bileshwarpura, Taluka Kalol, District Gandhinagar (Gujarat). The project/activity is covered under category A of item 5(f) 'Synthetic Organic Chemicals (Bulk drugs)' of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry. The ToR for the project was granted on 23rdSeptember, 2016 and the public hearing was conducted by the State Pollution Control Board on 16th June, 2017. The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent. The Sardar Sarovar Narmada Nigam Ltd vide their letter dated 17th March, 2016 ha accorded approval for additional requirement 2.5 MLD of Narmada water to cater to the fresh water demand of the unit.
27.3.9.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of specific/additional conditions as under:-* • *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.* • *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the standards prescribed under the Environment (Protection) Rules, 1986.* • *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.* • *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.* • *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler (Coal content not to exceed 0.5% of Sulphur) to control particulate emissions within the permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.* • *Solvent management shall be carried out as follows :* a. *Reactor shall be connected to chilled brine condenser system.* b. *Reactor and solvent handling pump shall have mechanical seals to prevent*

	leakages. *c. The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.* *d. Solvents shall be stored in a separate space specified with all safety measures.* *e. Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* *f. Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.* *g. All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.* • *Total fresh water requirement shall not exceed 137.7 cum/day to be met from Sardar Sarovar Narmada Nigam Ltd. No ground water shall be used without prior permission from concerned regulatory authority/CGWA.* • *Industrial/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.* • *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.* • *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm.* • *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.* • *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.* • *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.* • *The company shall undertake waste minimization measures as below:-* *(a) Metering and control of quantities of active ingredients to minimize waste.* *(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* *(c) Use of automated filling to minimize spillage.* *(d) Use of Close Feed system into batch reactors.* *(e) Venting equipment through vapour recovery system.* *(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.* • *The green belt over 33% of the total project area shall be developed with at least 10 m wide along the plant periphery, in downward wind direction, and along road sides etc. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.* • *All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 16th June, 2017 shall be satisfactorily implemented.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.*

	• *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.* • *Continuous online (24X7) monitoring system, both for emissions and the effluent, shall be installed within the plant site for measurement of discharge and pollutants concentration. Data shall be uploaded on the company's website and provided to the respective ROs of MoEF&CC, CPCB and SPCB.* • *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.* • *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.* • *Raw material storage should not exceed 3 days at any point of time* • *As a part of ESC, potable water (treated with activated carbon and chlorination to the prescribed standards) shall be supplied to 10-15 villages.*
27.3.10	**Development Drilling of one well (BKDB)-A of M/s ONGC Ltd in Banaskandi PML Block of Cachar, A&AA Basin, District Cachar (Assam) - For EC** **[IA/AS/IND/21048/2013, J-11011/20/2014-IA-II (I)]**
27.3.10.1	The project proponent and the accredited Consultant M/s SGS India Pvt Ltd made a detailed presentation on the salient features of the project and informed that: (i) The proposal is for development drilling at Banaksnadi PML by M/s ONGC Ltd and located at District Cachar in Assam. (ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 16thmeeting held during 20-21 February, 2014 and recommended Terms of References (ToRs) for the project. The ToR was issued by Ministry vide letter No.J -11011/20/2014-IA-II (I) 23rd April, 2014. (iii) All Offshore and Onshore Oil and Gas Exploration, Development &Production are listed at S.N.1(b) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). (iv) Existing land area is 1.5-2.0 ha per location.Industry will developgreenbelt in an area of 33 %. (v) The estimated project cost is Rs.30 Crore. Total capital cost earmarked towards environmental pollution control measures is Rs.60 Lakh. (vi) Total Employment will be 40 persons as direct & 35 persons indirect after expansion. (vii) No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Barak river is flowing at a distance of 1.2 km in West direction. (viii) Ambient air quality monitoring was carried out at 08 locations during January 2015 to April 2015 and the baseline data indicates the ranges of concentrations as: PM10 (40.6 - 83.4µg/m3), PM2.5 (22.3- 48.7µg/m3), SO2 (4.2- 9.9µg/m3) and NO2 (18.3- 29.8 µg/m3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 83.4 µg/m3, 10.06 µg/m3 and 34.86 µg/m3 with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). (ix) Total water requirement is 25 m3/day of which fresh water requirement of 5 m3/day and will be met from local water suppliers.

(x) Effluent will be treated through mobile ETP.

(xi) Power requirement- Existing unit has 3 DG sets of 720 KW capacity, additionally1 DG sets are used as standby during power failure. Stack (height 6 m) will be provided as per CPCB norms to the proposed DG sets of 3 in addition to the existing DG sets of which will be used as standby during power failure.

(xii) Details of Process emissions generation and its management.

Sl. No.	Particulars	Unit	Flare stack*	DG set (1430 KVA)	DG set (250 KVA)	DG set (100 KVA)
1	Number of Stack	-	1	4	1	1
2	Fuel feed rate	m^3/hr	2500 (natural gas)	0.2700 (HSD)	0.075 (HSD)	0.023 (HSD)
3	Stack Diameter	m	0.21	0.42	0.28	0.12
4	Stack Height	m	30	16	6	4.7
5	Stack Exit Temperature	°K	1273	815	524	510
6	Stack Exit Velocity	m/s	20	25	23	21
7	Actual Flow Rate	m^3/s	0.69	3.5	1.32	0.26
8	Normal Flow Rate**	Nm^3/s	0.15	1.5	0.42	0.1
9	Emission					
	PM	g/s	-	0.04	0.01	0.005

(xiii) Details of Solid waste/ Hazardous waste generation and its management.

It is estimated that nearly about 250-300 cum of drill cuttings and 700 m^3 of drilling mud is likely to be generated from each well during drilling operation. HDPE lined impervious pits for storage of drilling cuttings and drilling mud will be used respectively and their disposal in accordance with CPCB Oil & Extraction Industry standard-guideline for Disposal of Soil wastes. Further ONGC committed to use water based mud, the drilling cutting and drilling fluid generated is nonhazardous in nature.

(xiv) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 30th January, 2017.

(xv) The coordinates of the drilling location is:

SNo.	Location	Latitude	Longitude
1	BKDB-IA	24º44'47.0"N	92º51'21.0"E.

27.3.10.2 During deliberations, the EAC noted the following:-

The proposal is for development drilling of one well at Banaksnadi PML by M/s ONGC Ltd in an area of 1.5-2.0 ha in District Cachar (Assam).

The project/activity is covered under category A of item 1(b) 'Offshore and Onshore Oil and Gas Exploration, Development & Production' of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006, and requires appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The ToR for the project was granted on 23rd April, 2014, which was extended for a period of one year on 1st August, 2017. Public hearing was conducted by the State Pollution Control Board on 30th January, 2017.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the

	environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.
27.3.10.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of specific conditions as under:-* • *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.* • *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged to any surface water body, sea and/or on land.* • *Ambient air quality shall be monitored at the nearest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, CH_4, HC, Non-methane HC etc.* • *Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.* • *Approach road shall be made pucca to minimize generation of suspended dust.* • *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.* • *Total water requirement shall not exceed the proposed and prior permission shall be obtained from the concerned regulatory authority.* • *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.* • *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.* • *No effluent/drilling mud/drill cutting shall be discharged/disposed off into nearby surface water bodies.* • *Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/soak pit.* • *Oil spillage prevention and mitigation 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.* • *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.* • *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.* • *The company shall develop a contingency plan for H_2S release including all*

	necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H_2S detectors in locations of high risk of exposure along with self containing breathing apparatus. • *The Company shall carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected shall be submitted six monthly to the Ministry and Regional Office.* • *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.* • *Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.* • *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 the area in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.* • *All the commitments made to the public during public hearing/public consultation meeting on 30th January, 2017 shall be satisfactorily implemented and adequate budget provision shall be made accordingly.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.* • *Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.* • *Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office.* • *Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office.* • *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.* • *Company shall have own Environment Management Cell having qualified persons with proper background.* • *Company shall prepare operating manual in respect of all activities, which would cover all safety & environment related issues and 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. Remote monitoring of site should be done.* • *On completion of drilling, the company has to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.* • *Hazardous Waste shall be handled and disposed as per the provisions of the Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 and necessary permissions shall be obtained under the said rules.*
27.3.11	**Manufacture of Melamine Formaldehyde Resin, Phenol Formaldehyde Resin and Urea Formaldehyde Resin and Laminated Sheets at Survey No.179/P2, VillageRatavirda, TalukaWankaner, District Morbi (Gujarat) by M/s Vansh Laminate LLP - For EC**

	[IA/GJ/IND2/60963/2016, J- 11011/362/2016-IA.II(I)]
27.3.11.1	The project proponent and the accredited consultant M/s T. R. Associates (Ahmedabad) made a detailed presentation on the salient features of the project and informed that: (i) The proposal is for manufacturing Melamine Formaldehyde Resin, Phenol Formaldehyde Resin, Urea Formaldehyde Resin and Laminated Sheets manufacturing unit by M/s Vansh Laminate LLP and located at Survey No.: 179/P2, Village Ratavirda, Taluka Wankaner, District Morbi (Gujarat). (ii) The project proposal was considered by the expert appraisal committee (Industry 2) in its 17th EAC meeting held during 26th to 29th December 2016 and recommended Terms of References (ToRs) for the project. The ToR was issued by Ministry vide letter dated 15/3/2017 as well as dated 29/04/2017. (iii) All Synthetic Organic Chemicals Industry projects, located outside the notified industrial area/estate are listed at S. N. 5(f) of schedule of Environmental Impact Assessment (EIA) notification under Category 'A' and are appraised at Central level by the Expert Appraisal Committee (EAC). (iv) An area of 11,534 m^2 will be used for proposed project. Industry will develop greenbelt in an area of 33.6 % i.e. 3,875 m^2 out of 11,534 m^2 area of the project. (v) The estimated project cost is Rs. 5.3 Crores out of which Resin plant cost will be Rs. 95 Lakhs Total capital cost earmarked towards environmental pollution control measures is Rs. 50 Lakhs and the recurring cost (operation and maintenance) will be about Rs. 18 Lakhs per annum. (vi) Total employment will be 75. Industry proposes to allocate Rs. 13.3 Lakhs towards Corporate Social Responsibility. (vii) No National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. Lies within 10 km distance. Macchuriver is flowing at a distance of 5.8 km in SW direction. (viii) Ambient air quality monitoring was carried out at 8 locations during December 2016 to February 2017 and the baseline data indicates the ranges of concentrations as: PM_{10} (61.28 to 90.28 µg/m^3), $PM_{2.5}$ (25.25 to 38.45 µg/m^3), SO_2 (9.84 to 18.89 µg/m^3) and NO_2 (14.46 to 34.91 µg/m^3) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 4.0 µg/m^3, 0.3 µg/m^3 and 1.0 µg/m^3 with respect to PM_{10}, SO_2 and NO_2. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). (ix) Total water requirement is 64 m^3/day of which fresh water requirement of 49 m^3/day and which will be met from Borewell. (x) Treated effluent of 15.7 m^3/day will be treated through Effluent Treatment Plant (having Evaporator followed by Condenser). The unit will be based on Zero Liquid Discharge system. (xi) Power requirement of proposed project will be 375 KVA and will be met from Paschim Gujarat Vij Company Limited (PGVCL). 350 KVA D. G. Set is used as standby during power failure. Stack (height 6 m) will be provided as per CPCB norms to the proposed D.G. sets. (xii) Briquettes/Agro-Waste fired 4 TPH Boiler and 10 Lakh Kcal/hr Thermic Fluid Heater will be installed. Cyclone Separator followed by Bag Filter with a stack height of 30 m will be installed for controlling the Particulate Emissions (within statutory limit of 150 mg/Nm^3). (xiii) Details of process emissions generationand its management.

Sr. No	Vent attached to	Vent Height	Expected Pollutant	APC System	Quality of Pollutant
1	Dryer	11 m	Methanol	Condenser	As per GPCB Norms

(xiv) Details of solid waste/hazardous waste generation and its management.

Sr. No.	Description	Category	Quantity	Mode of Disposal
1	ETP Sludge & Evaporation Residue	35.3	45 MT/Annum	Collection, storage, transportation and disposal at approved TSDF Site
2	Used/Spent Oil	5.1	0.09 MT/Annum	Collection, storage and used within premises as a lubricant / sold to registered recycler.
3	Discarded Bags/Barrels	33.1	12 MT/Annum	Collection, storage & sold to authorized vendor
4	Edge Cutting Waste	23.1	9 MT/Annum	Collection, storage and disposal at CHWIF Site
5	Spent Carbon	36.2	9.6 MT/Annum	Collection, storage and disposal at CHWIF Site

(xv) Public hearing for the proposed project has been conducted by the State Pollution Control Board on 04/07/2017.

(xvi) Proposed Product and their Capacities

Sr. No.	Name of Product	Quantity
1	Melamine Formaldehyde Resin	300 MT/Month
2	Phenol Formaldehyde Resin	300 MT/Month
3	Urea Formaldehyde Resin	300 MT/Month
4	Laminated Sheets	1,50,000 Nos./Month

27.3.11.2 During deliberations, the EAC noted the following:-

The proposal is for manufacturing Melamine Formaldehyde Resin (300 TPM), Phenol Formaldehyde Resin (300 TPM), Urea Formaldehyde Resin (300 TPM) and Laminated Sheets (150000 Nos per month) by M/s Vansh Laminate LLP in a total area of 11534 sqm at Survey No.179/P2, VillageRatavirda, Taluka Wankaner, District Morbi (Gujarat).

The project/activity is covered under category A of item 5(f) 'Synthetic Organic Chemicals' of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The ToR for the project was granted on 15th March, 2017 and the public hearing was conducted by SPCB on 4th July, 2017.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.

In compliance of the one of the conditions of the ToR regarding permission of

	CGWB, the project proponent has submitted the application for ground water abstraction on 23rd December, 2016.
27.3.11.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of specific/additional conditions as under:-* • *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.* • *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the standards prescribed under the Environment (Protection) Rules, 1986.* • *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.* • *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.* • *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler (Coal content not to exceed 0.5% of Sulphur) to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.* • *Solvent management shall be carried out as follows :* a) *Reactor shall be connected to chilled brine condenser system.* b) *Reactor and solvent handling pump shall have mechanical seals to prevent leakages.* c) *The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.* d) *Solvents shall be stored in a separate space specified with all safety measures.* e) *Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* f) *Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.* g) *All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.* • *Total fresh water requirement shall not exceed 49 cum/day to be met from ground water supply. Prior permission in this regard shall be obtained from concerned regulatory authority/CGWA.* • *Industrial/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.* • *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.* • *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.*

	• *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.* • *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.* • *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.* • *The company shall undertake waste minimization measures as below:-* a. *Metering and control of quantities of active ingredients to minimize waste.* b. *Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* c. *Use of automated filling to minimize spillage.* d. *Use of Close Feed system into batch reactors.* e. *Venting equipment through vapour recovery system.* f. *Use of high pressure hoses for equipment clearing to reduce wastewater generation.* • *The green belt over 33% of the total project area shall be developed with at least 10 m wide along the project periphery, in downward wind direction, and along road sides etc. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.* • *All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 4th July, 2017 shall be satisfactorily implemented.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.* • *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.* • *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.* • *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.*
27.3.12	**Setting up 90 KLPD Molasses based distillery at Sr. No. 164 to 170 & 85, Village Bedkihal, Tehsil Chikkodi, District Belgaum (Karnataka) by M/s Venkateshwara Power Project Limited - For EC** **[IA/KA/IND2/66134/2016, J-11011/179/2016- IA II(I)]**
27.3.12.1	The project proponent and the accredited Consultant M/s SMS Envocare Limited, made a detailed presentation on the salient features of the project and informed that: i. The proposal is for setting up 90 KLPD molasses based distillery project at Survey No. 85 & 164 to 170, Village Bedkihal, Taluka Chikkodi, District Belgaum (Karnataka). ii. The project proposal was considered by the Expert Appraisal Committee

	(Industry- 2) in i's 11th meeting held during 21/07/2016 and recommended Terms of References (ToRs) for the project. The ToR has been issued by Ministry vide letter dated 23rd September, 2016. iii. The project/activity are listed at S.N. 5 (g) ii of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). iv. land area is 28206.59 Sq. m. Industry will develop Green belt in an area of 33 % i.e. 9307.77 m^2 (33%) out of 28206.59 sqm of area of the project. v. The estimated project cost is Rs.103.73 Crore. Total capital cost earmarked towards environmental pollution control measures is Rs.223 lakhs and the Recurring cost (operation and maintenance) will be about Rs. 36 Lakh per annum. vi. Total Employment will be 70-100 persons as direct & 80-100 persons indirect. Industry proposes to allocate Rs.2.5 Crore towards Corporate Social Responsibility. vii. No National parks, Wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wild life Corridors etc. lies within 10 km distance. Doodhganga River and Vedganga River is flowing at a distance of 4.5 and 3.87 km in North and West direction. viii. Ambient air quality monitoring was carried out at ten locations during October, 2016 to December, 2016 and the baseline data indicates the ranges of concentrations as: PM_{10}(47.8 to 89.2 µg/m^3), $PM_{2.5}$ (25.00 to 45.0 µg/m^3), SO_2 (4.0 to 10.1 µg/m^3) and NO_2 (4.8 to 18.5 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.73 µg/m^3, 22.3 µg/m^3 and 8.84 µg/m^3 with respect to PM_{10}, Sox and Nox. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). ix. Total water requirement is 1664 m^3/day of which fresh water requirement of 704 m^3/day and will be met from Sadalga Barrage on Doodhganga River. x. Treated effluent of process condensate will be treated through Condensate Polishing Unit Plant will be based on Zero Liquid discharge system (if applicable). xi. Power requirement will be 2595 kWhand will be met from in-house 30 TPH Boiler. Proposed unit will have 2 Nos. DG sets of 250 kVA capacities are used as standby during power failure. Stack (8-10 m) will be provided as per CPCB norms to the proposed DG sets of 2 x 250 kVA which will be used as standby during power failure. xii. Proposed unit has 30 TPH Coal and spent wash fired boiler will be installed. ESP with a stack of height of 62 m will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm3) xiii. Details of Process emissions generation and its management. The process emissions likely to be generated for manufacturing of ENA/ TA will be from various process like CO_2, VOC, and alcohol vapor VOC, alcohol Vapor and Odor. Bottling plant for CO_2 recovery will be provided. The whole process will be carried out in closed condition so as to avoid any chances of VOC emissions. Spent wash from evaporation would be in a closed tank and directly send to the incineration in boiler. No bio-methanation will be adopted. Fermentation unit will be provided with proper cover to avoid the spread of odor and regular steaming of all fermentation equipment's; temperature will be kept under control during fermentation to avoid inactivation/killing of yeast; staling of fermented wash would also be avoided. xiv. Details of Solid waste/ Hazardous waste generation and its management.

Sr. No.	Waste	Quantity (In TPD)	Treatment	Disposal
1.	Yeast sludge	28.5 TPD	Drying	Used as manure
2.	Ash	Coal ash: 22-24 TPD Spent wash ash: 29-30 TPD	Stored in silos	Spent wash ash is potash rich ash and can be use directly use as manure. Ash will be store in the ash silos, Coal ash will be separately collected in the ash silos and sent to brick manufacturer.
3.	Domestic waste	25-30 kg/d	Storage	Local waste collection system
4.	Oil from DG	Negligible	Storage	To authorized dealer or mixed with coal and burnt in the boiler.
5.	Discarded drums and containers	Negligible	-	Will be sold to authorized Recyclers

xv. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 5th May, 2017.

xvi. Following are the list of existing and proposed products:

Proposed Products

- Rectified spirit(RS) :90 KLPD Or
  Extra Neutral Alcohol (ENA): 90 KLPD Or
  Anhydrous Alcohol (only Fuel grade) - 90.00 KLPD
- Impure Spirit: 6.25 KLPD
- CO_2 gas: 71 MT and captured 50 MT

27.3.12.2 During deliberations, the EAC noted the following:-

The proposal is for setting up 90 KLPD Molasses based Distillery (Rectified Spirit/ Extra Neutral Alcohol/Absolute Alcohol) in a total area of 28206.59 sqm at Survey No. 85 & 164 to 170, Village Bedkihal, Taluka Chikkodi, District Belgaum (Karnataka) by M/s Venkateshwara Power Project Limited.

The project/activity is covered under category A of item 5(g) 'Distillery' of the Schedule to Environmental Impact Assessment Notification, 2006 and require appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The ToR for the project was granted on 23rd September, 2016 and the public hearing was conducted by the State Pollution Control Board on 5th May, 2017.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.

	Total fresh water requirement is estimated to be 704 cum/day to be met from Sadalga Barrage on Doodhganga River. This is not in compliance of the conditions stipulated in the ToR i.e. to further reduce the water requirement from 649 cum/day reported earlier The Ministry had earlier accorded EC vide letter dated 9th September, 2010 for the expansion project of Co-gen power plant from 15 MW to 30 MW to cater to the existing sugar industry of capacity 3500 TCD. The same is not reflected in the EIA/EMP report and the presentation made.
27.3.12.3	*The EAC, after deliberations, suggested the project proponent to apply for the environmental clearance to the integrated project in terms of the provisions of the EIA Notification, 2006, covering all the activities namely, sugar manufacturing, Co-generation power plant and the now proposed distillery. The proposal needs to be revised also in respect of the discrepancies reported above.*
27.3.13	**Augmentation of LPG Storage Capacity from 300 MT To 900 MT at LPG Indane Bottling Plant, Odiyampet, Villianur, Pondicherry by M/s IOCL - For EC** **[IA/PY/IND2/55688/2016, J-11011/164/2016- IA II(I)]**
27.3.13.1	The Project Proponent and the accredited Consultant M/s. Ultra-Tech Environmental Consultancy and Laboratory, made a detailed presentation on the salient features of the project and informed that: i. The proposal is for expansion of LPG Bottling Plant at Pondicherry (UT) by M/s Indian Oil Corporation Ltd and located at P.B No. 001, Odiyampet, Villianur, Pondicherry - 605 110 ii. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 12th meeting held during 23-24 August 2016 and recommended Terms of References (TORs) for the Project. The ToR was issued by Ministry vide letter dated 25.10.2016. iii. All Isolated storage and handling of hazardous chemicals are listed at S.N. 6 (b) B of Schedule of Environmental Impact Assessment (EIA) Notification under category 'B'. However, due to general condition (located within 5 km from the protected area under W(P) Act, 1972), the proposal is appraised at Central Level by Expert Appraisal Committee (EAC) as Category 'A'. iv. Though this is an expansion project, it was established before 1994, it does not have earlier EC. v. Total plot area is 17 acres expansion will be taken place within existing premises only. So no additional land will be used for proposed expansion. vi. Industry already have Greenbelt in an area of more than 33 % i.e., 7.7 acres out of 17 acres of area of the project. vii. The estimated project cost is Rs 15 Cr. Total capital cost earmarked towards environmental pollution control measures is Rs 1.5 Cr and the Recurring cost (operation and maintenance) will be about Rs 15 Lakhs per annum. viii. Total Employment will be 71 persons after expansion. It is proposed to allocate approximately Rs 30-35 Lakhs towards Corporate Social Responsibility activity.

ix. Ossudu Bird Sanctuary is located within 5 km distance from the project site. Apart from that no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. are within 10 km distance. Sanganbarani River is flowing at a distance a distance of 200 m in south direction.

x. Ambient air quality monitoring was carried out at 10 locations during January to March 2016 and the baseline data indicates the ranges of concentrations as: PM_{10} (30-50 µg/m^3), $PM_{2.5}$ (14-30 µg/m^3), SO_2 (BDL-6 µg/m^3) and NO_2 (6-16 µg/m^3) respectively. The concentrations are within the National Ambient Air Quality Standards (NAAQS).

xi. Total water requirement is 15 m^3/day of which will be met from Municipal Corporation/bore wells

xii. There will be no industrial effluent generated in this plant. Waste water generated during plant operations (during washing of empty cylinders) will be re-circulated/ re-used. There shall no increase in quantity of waste water generation from operation of proposed project.

xiii. DG sets of capacity 1x250 kVA will be used as stand by during power failure. Stack (height 3m) will be provided as per CPCB norms

xiv. There will not be any process; the project is for storage facility.

xv. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 25.05.2017

xvi. No litigation is pending against the proposal.

xvii. Following are the existing and proposed storage facility:

Existing and Proposed LPG Storage facility

Type of Vessel	**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**

27.3.13.2 During deliberations, the EAC noted the following:-

The proposal is for augmentation of LPG storage capacity from 300 MT to 900 MT by installing 2x300 MT Mounded Storage Vessels by M/s Indian Oil Corporation Ltd in an area of 17 acres at Indane Bottling Plant, Odiyampet, Villianur, Puducherry.

The project/activity is covered under category B of item 6(b) 'Isolated Storage of Hazardous Chemicals' of the Schedule to Environmental Impact Assessment Notification, 2006. However, due to applicability of general conditions (located within 5 km from the Ossudu Bird Sanctuary), the project was appraised as Category 'A' at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The ToR for the project was granted on 25th October, 2016, and the public hearing was conducted by SPCB on 25th May, 2017. To obtain wildlife clearance from the Standing Committee of NBWL for the Oussudu Bird Sanctuary, application has been submitted on 10th February, 2017.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.

	The present capacity of LPG storage of 300 MT has been in operation reportedly since 1995 based on the Consent to Operate under the Air/Water Act granted by the Puducherry PCC from time to time. The consent to Operate is presently valid up to 31st August, 2019.
27.3.13.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of specific conditions as under:-* • *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.* • *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the general standards prescribed under the Environment (Protection) Rules, 1986.* • *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.* • *During construction phase, air pollution and the solid waste management aspects need to be properly addressed ensuring compliance of the Construction and Demolition Waste Management Rules, 2016.* • *The green belt of at least 5 m width shall be developed in nearly 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines and in consultation with the State Forest Department.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment and the details along with time bound action plan shall be submitted to the Ministry's Regional Office.* • *Regular 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, 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.* • *The project proponent shall conduct a traffic density survey on the approach road to be used for transportation of LPG tankers and LPG cylinders.* • *Necessary approvals from Chief Controller of Explosives, as applicable, shall be obtained before commissioning of the project. Requisite On-site and Off-site Disaster Management Plans shall be prepared and implemented.* • *Emergency Response Plan should be based on the guidelines prepared by OISD, DGMS and Govt. of India. Mock drill should be conducted once 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, if applicable.* • *Occupational health surveillance of worker should be done on a regular basis and records maintained as per the Factory Act.* • *The norms/guidelines of Oil Industry Safety Directorate (OISD) for installation and design of equipments and operation of the LPG Bottling Plants shall be strictly followed. Safety audit to be carried out and report*

	submitted to the Regional Office. • *No packing/loading/unloading of LPG cylinders shall be made on road/outside factory premises. Vehicles loaded/unloaded with LPG cylinders shall be parked inside the plant premises only and not on road sides.* • *Road tankers should be equipped to the standard specified in national regulations reputable code. Vehicles should be mobilized during transfer operations and equipped to prevent untimely movement. Loading/unloading bays should be protected against impact. Fire-resistant coatings shall be provided to tanks/vessels.* • *Sections of pipeline and storage systems that can be isolated with valves or blinds should be equipped with safety valves to protect against possible damage as liquid LPG expands with increases in temperature.* • *High and low-level alarms shall be fitted to plant storage tanks which can detect overfilling. However, proper supervision shall be done every time.* • *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.* • *Water sprinkling has to be undertaken on regular basis to control the polluting particles.*
27.3.14	**Expansion of Epoxy Hardening Plant at Sy. Nos. 206 & 207, Village Luna, Tahsil Padra, District Vadodara (Gujarat) by M/s Admark Polycoats Pvt Ltd - For EC** **[IA/GJ/IND2/35855/2015, J-11011/15/2016-IA II (I)]**
27.3.14.1	The project proponent and the accredited Consultant M/s Ramans Enviro Services Pvt Ltd made a detailed presentation on the salient features of the project and informed that: i. The proposal is for expansion in manufacturing capacity of epoxy hardeners from 1000 MT/month upto 2000 MT/month by M/s Admark Polycoats Pvt Ltd in the existing premises at Sy. Nos.206 & 207, Village Luna, Taluka Padra, District Vadodara (Gujarat). ii. All Synthetic Organic Chemicals Industry located outside the notified industrial area are listed at S.N. 5(f) of Schedule of Environmental Impact Assessment (EIA) Notification under Category 'A' and appraised at Central level by Expert Appraisal Committee (EAC). iii. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 4th meeting held during 11-12 February, 2016 and recommended Terms of Reference (ToRs) for the project. The ToR has been issued by Ministry vide letter No. J-11011/15/2016-IA II (I); dated 31st March, 2016. iv. Ministry has issued EC earlier vide letter no. J-11011/91/2009-IA-II (I) on 1st September, 2009 for expansion of Epoxy Hardeners Plant 35 MT/month to 1000 MT/month at Sr. No.207, Village Luna, Taluka Padra, District Vadodara (Gujarat). v. Existing land area is 14,215 sqm, and no additional land will be used for proposed expansion. vi. Industry has already developed greenbelt in an area of 33 % i.e., 5010 m^2 out of 14215 m^2 of area of the project. vii. The estimated project cost is Rs.250 lacs including existing investment of Rs 510 lacs. Total capital cost earmarked towards environmental pollution control

measures is Rs. 35 lacs and the Recurring cost (operation and maintenance) will be about Rs. 5 Lacs per annum.

viii. Total Employment will be 10 persons as direct & 10 persons indirect after expansion. Industry proposes to allocate Rs 6.25 lacs @ of 2.5% towards Corporate Social Responsibility.

ix. It is reported that no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. River Mahisagar is flowing at a distance of 4.6 km in North-West direction.

x. Ambient air quality monitoring was carried out at 6 locations during 7th March, 2016 to 27th May, 2016 and submitted baseline data indicates that ranges of concentrations of PM10 (81.2 - 112.3 µg/m3), PM2.5 (39.5 - 53.8 µg/m3), SO2 (12.8 - 15.3 µg/m3) and NO_x (17.0 - 25.8 µg/m3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.03 µg/m3, 7.61 µg/m3 and 0.58 µg/m3 with respect to PM10, SOx and NOx.

xi. Total water requirement is 41 m3/day of which fresh water requirement of 41 m3/day and will be met from existing borewell on site.

xii. Power requirement after expansion will be 300 kVA including existing 200 kVA and will be met from Gujarat Electricity Board (GEB). Existing unit has 1 DG set of 320 kVA capacity, no additional DG sets are used as standby during power failure. Stack (height 5 m) will be provided as per CPCB norms for the existing DG sets of 320 kVA which will be used as standby during power failure.

xiii. Details of Solid waste/ Hazardous waste generation and its management –

Sr. No.	Waste Description	Category	Quantity (Per Annum)		Disposal
			Consented	Ultimate	
1	Used Oil	5.1	250 L	500 L	Collection, storage and sale to registered recyclers or re-users.
2	Polymerized Solid Waste*	23.1	5 MT	15 MT	To Common Hazardous Waste Incineration facility of NECL.
3	Discarded Containers	33.3	2000 nos.	400 MT	Collection, storage and transportation to registered / authorized recyclers - M/s Maruti Enterprise.

xiv. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 19th April, 2017.

xv. Details of Certified compliance report submitted by RO, MoEF&CC - MoEF&CC RO Bhopal for issuance of Certified Compliance Report. However, the same is awaited.

xvi. There are no litigations pending against the project.

xvii. Following are the list of existing and proposed products:

Sr. No.	Name of Product	Quantity in MT/month		
		Existing	Proposed	Ultimate
1	Epoxy Hardeners	1000	1000	2000

27.3.14.2 During deliberations, the EAC noted the following:-

	The proposal is for expansion of epoxy hardeners manufacturing unit from 1000 MT/month upto 2000 MT/month by M/s Admark Polycoats Pvt Ltd in the existing premises of area 14215 sqm at Sy. Nos.206 & 207, Village Luna, Taluka Padra, District Vadodara (Gujarat). The project/activity is covered under category A of item 5(f) 'Synthetic Organic Chemicals' of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry. The ToR for the project was granted on 31st March, 2016, and the public hearing was conducted by SPCB on 19th April, 2017. The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent. The base line air quality data indicates that PM_{10} values are already exceeding the prescribed standards of 100 ug/m3. The same is bound to increase further with the implementation of the project, and may not be allowed. The Ministry has earlier accorded EC vide letter dated 1st September, 2009 for expansion of the Epoxy Hardening Plant from 35 TPM to 1000 TPM. No monitoring report on compliance status of EC conditions was made available. No details in respect of Epoxy hardeners were provided.
27.3.14.3	*The EAC, after deliberations on the proposal, asked for the inputs and clarifications in respect of the deficiencies reported above. The proposal was, therefore, deferred.*
27.3.15	**Expansion of Grain based distillery from 80 to 160 KLPD & Co-generation Power Plant (2 MW to 5 MW) within the existing premises at Village & Tehsil Hathin, District Palwal (Haryana) by M/s Ashoka Distillers & Chemicals Pvt Ltd - For EC** **[IA/HR/IND2/50750/2016, J-11011/23/2016-IA II (I)]**
27.3.15.1	The project proponent and the accredited Consultant M/s JM Enviro Net Pvt Ltd made a detailed presentation on the salient features of the project and informed that: i. The proposal is for expansion of Grain based Distillery from 80 to 160 KLPD & Co-generation Power Plant (2 MW to 5 MW) by M/s Ashoka Distillers & Chemicals Pvt Ltd within the existing premises at Village & Tehsil Hathin, District Palwal (Haryana). ii. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 8th meeting held during 26th May, 2016 and recommended Terms of References (ToRs) for the project. The ToR was issued by Ministry vide letter No. J-11011/23/2016-IA II (I) on 15th July, 2016. ii. All grain based distilleries having capacity more than 60 KLD are listed at S.N. 5(g) of Schedule of Environmental Impact Assessment (EIA) Notification under

category ‘A’ and are appraised at Central Level by Expert Appraisal Committee (EAC).

v. ADCPL is operating 80 KLPD distillery on the basis of CTO acquired from HSPCB since 1992.

v. Existing land area is 11.82 ha and no additional land will be used for proposed expansion.

vi. Industry has already developed Greenbelt in an area of 33 % i.e., 3.9 Ha out of 11.82 ha of area of the project.

ii. The estimated project cost is Rs. 30 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 10 Crores and the Recurring cost (operation and maintenance) will be about Rs. 1 Crore per annum.

ii. Total Employment will be 150 persons as direct & 250 persons indirect after expansion. Industry proposes to allocate Rs 1.31 Crores @ of ~5% towards Corporate Social Responsibility.

x. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. No river is flowing in the 10 km radius of the plant site. Gaunchhi drain (seasonal drain) is flowing adjacent to the plant site in east direction. There are few agricultural minors in the 10 km radius of the plant site used for irrigation purposes.

x. Ambient air quality monitoring was carried out at 8 locations during March to May, 2016 and submitted baseline data indicates that ranges of concentrations of PM10 (62.5 to 82.3 µg/m^3), PM2.5 (25.3 to 41.7 µg/m^3), SO2 (5.2 to 10.5 µg/m^3) and NO_x (13.2 to 23.4 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum GLCs after the proposed expansion would be 83.02 µg/m^3, 14.43 µg/m^3 and 25.67µg/m^3 with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

xi. Total water requirement will be 3517 m^3/day of which fresh water requirement of 1350 m^3/day and will be met from groundwater.

ii. Treated effluent of 510 m^3/day will be treated through Condensate Polishing Unit (CPU) and Effluent Treatment Plant (ETP) and reused/ recycled in the plant. The distillery is being/ will be based on Zero liquid discharge system.

ii. Power requirement after expansion will be 3.6 MW including existing 2.0 MW and will be met from Co- generation power plant. Existing unit has 3 DG sets of capacity 750 KVA, 725 KVA & 500 KVA each with adequate stack height. DG sets are used as standby during power failure. No additional DG set is proposed.

v. Existing unit has 3 boilers of capacity 25, 12 & 6 TPH each. After proposed expansion old boilers of 12 & 6 TPH each will be dismantled and new boiler of 45 TPH will be installed and 25 TPH will be kept as standby for emergency usage. Bag filter with a stack of height of 60 m will be installed for controlling the particulate emissions (within statutory limit of 50 mg/Nm3) for proposed 45 TPH Biogas & multi fuel fired boiler.

v. Details of Process emissions generation and its management.

Particulars	**Type**	**Source**	**Management**
Emission	PM	Boiler	Bag filters
	SOx		Lime dosing for desulphurization & adequate stack height
	CO2	Fermentation	Collected and thereafter sold

Effluent (Zero Effluent Discharge)	Spent Wash	Distillation	Treated in decanter, MEE, bio digester, aeration & dryer
	Condensate	MEE	Treated in CPU & recycled in process
	Blow down & Reject water	Boiler, cooling tower, WTP	Treated in CPU and recycled in process
	Fermentation Washing	Fermenters	Treated in ETP & recycled in process
Hazardous Waste	Used oil & grease	Machinery	Sold out to the authorized vendors for recycling.

vi. Details of Solid waste/ Hazardous waste generation and its management.

Solid Waste Management

- Solid waste from the grain based operations generally comprises of fibres and proteins in the form of DDGS, which is being/will be ideally used as cattle feed.
- Yeast sludge is being/ will be added to wet cake.
- Ash from the boiler is being/will be given to brick manufacturers.
- ETP sludge after drying is burnt in the boiler.

Hazardous Waste Management

- Used oil generated from plant machinery/Gear boxes as hazardous waste is being / will be sold out to the CPCB authorized recyclers.

ii. Public Hearing for the proposed expansion project has been conducted by the Haryana State Pollution Control Board on 14th March, 2017.

ii. Details of Certified compliance report submitted by RO, MoEF&CC.

ADCPL is operating 80 KLPD distillery on the basis of CTO acquired from HSPCB since 1992. RO Haryana State Pollution Control Board has certified the compliance report of the conditions stipulated in Consent to operate for the ongoing / existing operation of the project.

x. Status of Litigation Pending against the proposal, if any.

No litigation is pending against the project.

x. Following are the list of existing and proposed products:

Existing Product list (In case of Expansion proposals):

S. No.	Existing Products	Capacity
1.	Product - Extra Neutral Alcohol, Rectified Spirit, CL & IMFL Byproduct - Cattle feed (DWGS / DDGS) and CO2	80 KLPD
2.	Co-generation Power Plant	2.0 MW

After expansion products and their capacities

S. No.	Products after expansion	Capacity
1.	Product - Extra Neutral Alcohol, Rectified Spirit, CL & IMFL Byproduct - Cattle feed (DWGS /DDGS) and CO2	160 KLPD
2.	Co-generation Power Plant	5.0 MW

27.3.15.2 During deliberations, the EAC noted the following:-

The proposal is for expansion of Grain based Distillery from 80 to 160 KLPD (Rectified Spirit/ Extra Neutral Alcohol) and Co-generation Plant from 2 to 5 MW by

	M/s Ashoka Distilleries & Chemicals Pvt Ltd in a total area of 11.82 ha at Village & Tehsil Hathin, District Palwal (Haryana). The project/activity is covered under category A of item 5(g) 'Distilleries' of the Schedule to Environmental Impact Assessment Notification, 2006 and requires appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry. The ToR for the project was granted on 15th July, 2016 and the public hearing was conducted by the State Pollution Control Board on 14th March, 2017. The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent. The distillery reported to be operational since 1992 (duly acknowledged by the Department of Industrial Development, Ministry of Industry) at the capacity of 80 KLPD, and thus not having any prior EC. As such, there is no requirement of any report on compliance status of EC conditions from the Regional Office of the Ministry. The unit has obtained consent to operate under the Air Act, 1981 and the Water Act, 1974 from Haryana SPCB, with its validity upto 30th September, 2021.
27.3.15.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of the specific/additional conditions as under:-* • *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.* • *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the standards prescribed under the Environment (Protection) Rules, 1986.* • *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.* • *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.* • *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the agro fuel fired boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.* • *Solvent management shall be carried out as follows :* a. *Reactor shall be connected to chilled brine condenser system.* b. *Reactor and solvent handling pump shall have mechanical seals to prevent leakages.*

	c. The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery. *d. Solvents shall be stored in a separate space specified with all safety measures.* *e. Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* *f. Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.* *g. All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.* • *Total fresh/ground water requirement shall not exceed 1350 cum/day. The required permission in this regard shall be obtained from the concerned regulatory authority/CGWA before the proposed expansion.* • *Industrial/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.* • *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.* • *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm. Solvent transfer shall be by pumps.* • *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.* • *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.* • *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.* • *The company shall undertake waste minimization measures as below:-* *(a) Metering and control of quantities of active ingredients to minimize waste.* *(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* *(c) Use of automated filling to minimize spillage.* *(d) Use of Close Feed system into batch reactors.* *(e) Venting equipment through vapour recovery system.* *(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.* • *The green belt of at least 10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.* • *All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 14th March, 2017 shall be satisfactorily implemented.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's*

	Regional Office. • *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.* • *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.* • *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.* • *Continuous online (24X7) monitoring system, both for emissions and the effluent, shall be installed within the plant site for measurement of discharge and pollutants concentration. Data shall be uploaded on the company's website and provided to the respective RO of MoEF&CC, CPCB and SPCB.*
27.3.16	**Bulk Drugs and Intermediates manufacturing Unit at Plot No. E-12, Chincholi MIDC, Taluka Mohol, District Solapur (Maharashtra) by M/s Shree Kartikeya Kameshwari Industries - For EC** **[IA/MH/IND2/50510/2016, J-11011/96/2016- IA II(I)]**
27.3.16.1	The project proponent and the accredited Consultant M/s Equinox Environments (I) Pvt. Ltd, Kolhapur gave a detailed presentation on the salient features of the project and informed that: i. The proposal is for setting up Bulk Drug & Intermediates manufacturing unit by M/s Sree Kartikeya Kameshwari Industries (SKKI) at Plot No.E-12, Chincholi MIDC, Taluka, Mohol, District Solapur (Maharashtra). ii. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 8th meeting held during 26-27 May 2016 and recommended Terms of Reference (ToRs) for the project. The ToR has been issued by Ministry vide letter no.J-11011/96/2016-IA II (I) dated 15th July, 2016. iii. All Synthetic Organic Chemicals Industry are listed at S.N. 5(f) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'B'. However, as the project is located at 2.4 Km from boundary of Great Indian Bustard Sanctuary, the project category changes from **'Category – B.' to 'Category A'** and appraised at Central Level by Expert Appraisal Committee. iv. Proposed land area 2.4 ha. v. Industry will develop Green belt area of the open space i.e., proposed greenbelt in an area of 0.88 ha out of 2.4 ha of area of the project. vi. The estimated project cost is Rs.5.28 Crores. Total capital cost earmarked towards environmental pollution control measures for proposed project shall be Rs. 230 Lakhs and the Recurring cost (Operation and maintenance) will be about Rs. 45 Lakhs per annum. vii. Total Employment will be 100 persons as 50 skilled & 50 unskilled in proposed unit. Industry proposes to allocate Rs. 27.12 Lakhs @ of 5.1 % of capital investment towards Corporate Social Responsibility.

	viii. It is reported that Great Indian Bustard (GIB) Sanctuary lies within 05 km distance. River Sina is flowing at a distance of 6 Km in south-west direction of project. ix. Ambient air quality monitoring was carried out at 07 locations during October 2016 to December 2016 and submitted baseline data indicates that ranges of concentrations of PM_{10} (41.9 to 71.2 µg/m3), $PM_{2.5}$ (12.3 to 20.2 µg/m3), SO_2 (10.1 to 20.9 µg/m3) and NOx (12 to 26.1µg/m3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.22 µg/m3 with respect to PM_{10} and 0.434 µg/m3 with respect to $PM_{2.5}$ and 55.7 µg/m^3 with respect to SOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). x. Total water requirement in proposed project will be 208.68 m^3/day, out of which fresh water requirement shall be 120.3 m^3/day and remaining 88.38 is recycled water from treated water from ETP, distilled water from process and treated STP water. The fresh water requirement will be met from MIDC water Supply Scheme. xi. Effluent of 61.57 m3/day comprising of Stream – I effluent of 49.57 CMD and Stream-II of 12 CMD. Effluent generated from proposed activities would be segregated in two different streams, viz. Stream – I (High COD & High TDS) and Stream – II (Low COD & Low TDS). The details w.r.t effluents considered under Stream – I and Stream – II are as follows – The Stream I effluent generated would be to the tune of 49.57 M3 / Day. Same comprise of effluent from manufacturing operations viz. process effluent and washing. This effluent will be treated in an ETP comprising of Screen Chamber, OG Removal Tank, Equalization Tank, Flash Mixer, Flocculator, Tube Settler, Holding Tank followed by Triple Effect Evaporator (TEE) and Agitated Thin Film Dryer (ATFD). The condensate from TEE to the tune of 48 M3 / Day would be forwarded to Stream II for treatment. Further salts from TEE would be forwarded to authorized reprocessor. The Stream II effluents generated would be to the tune of 12 M3 / Day, MEE condensate from Stream I of 48 M3 / Day. Stream II effluent shall be contributed by DM back wash, boiler blow down, and cooling blow down. The same will be treated Screen Chamber, OG Removal Tank, Equalization Tank, Flash Mixer, Flocculator, Primary Tube Settler (PTS), MBBR Tank, Secondary Tube Settler (STS), Holding Tank, Sand and Carbon Filters and R.O. Unit & Sludge drying bed. The treated water from stream II of 42 M3 / Day would be recycled back for cooling make up. The RO reject 18 M3 / Day will be sent to MEE in Stream-I treatment thereby achieving Zero Liquid Discharge (ZLD). xii. Power requirement after proposed project will be -0.6 MW and will be met from Maharashtra State Electricity Board (MSEB). D.G.Sets 2 Nos. of 250 KVA each would be used only during power failure. Stack height of 3 M above roof would be provided to DG set as per CPCB norm. xiii.

Details of Fuels for Boilers, TFH & DG Sets

Sr. No.	Description	Specifications		
		Steam Boiler	TFH	D.G. Sets (Nos.)
1.	Capacity	5 TPH	8 Lakh Kcal/Hr	250 KVA
2.	Fuel	Coal (Imported; low ash & sulphur)	Coal (Imported; low ash & sulphur)	HSD
3.	Fuel Quantity	30 TPD	5 TPD	60 Ltr. /Hr
4.	Calorific value of fuel	4300 Kcal/Kg	4300 Kcal/Kg	10,500 Kcal/K
5.	Ash content (%) of fuel	6-8%	6-8%	0.01%
6.	Sulphur content (%) of fuel	0.1-0.2%	0.1-0.2%	1%
7.	Material of construction	M.S.	M.S.	M.S.
8.	Shape	Round	Round	Round
9.	Height (AGL)	30 M	18 M	3 M
10.	Nature of pollutants likely to be present in the stack gases	PM_{10}, $PM_{2.5}$, SO_2, NOx	PM_{10}, $PM_{2.5}$, SO_2, NOx	SO_2
11.	Air Pollution Control Equipment	MDC followed by Bag Filter	MDC followed by Bag Filter	--

xiv. Details of Process emissions generation and its management.

Details of Process Emissions

Sr. No.	Scrubber Connected to Reactor	Process Emission from Reactors	Dia. of Column	Height of Column	Packing Material used in Scrubber	Mode of regeneration of the packing material	Scrubbing Media	Disposal of Scrubbed Media
1.	Column 1	Nitric Acid	400 mm	21.5 M	Ceramic saddles	Water Wash	Water	Sale
2.	Column 2							
3.	Column 3							

xv. Details of Solid waste/ Hazardous waste generation and its management.

Details of Solid Wastes

No	Type of Waste	Quantity	Disposal
1.	Boiler Ash	2 MT/Day	Sold to brick manufacturers for secondary use
2.	Scrap Material	60 MT /Yr	By Sale as scrap
3.	Office Paper waste	1 MT/Yr	
4.	Woven Sack Bag (HDFE)	0.50 MT/Yr	
5.	Drums	450 Nos. /Yr	

Details of Hazardous Wastes

No.	Type of Waste	Quantity	Disposal
1.	Cat.: 20.3 Distillation Residue	0.6 MT/M	CHWTSDF
2.	Cat.: 28.1; Process Residue (Un-reacted) & Waste	2.0 MT/Day	
3.	Cat.: 34.3; ETP Sludge	0.1 MT/ Day	
4.	Cat.:34.3; Salts generated from MEE	1.0 MT/Day	Sold to authorise reprocessor

xvi. 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

xvii. Details of Certified compliance report submitted by RO, MoEF& CC. – Not applicable as SKKI is a proposed new establishment industrial unit.

xviii. Following are the list of proposed products to be manufactured:

List of Proposed Products

Sr. No.	Name of Product	Quantity MT/Month	Quantity MT/Day	Uses
1	Methyl 2- (4- (4-chlorobutanoyl phenyl)-2-methylpropanoate	15.01	0.5	Used in anti-aller drugs
2	Nicotinic Acid Methyl Ester/Ethyl Ester	14.85	0.5	Used in Anti-aller drugs
3	Pyridine-3-Carboxyamide (Niacin Amide)	105	3.5	Used as Vitamin I Cattle feed, and Cosmetics
4	3-Pyridine Carboxylic Acid (NIACIN)	230.4	7.68	Used as Vitamin I Cattle Feed, Cosmetics
5	4-Pyridine Carboxylic Acid (ISONIACIN)	15.36	0.51	Used in Anti-aller drugs
6	2,3 Lutidine & 3,5 Lutidine	15	0.5	Used in Anti-ulcer dru
	Total	**395.62 MT/M**	**13.19 MT/D**	

27.3.16.2 During deliberations, the EAC noted the following:-

The proposal is for setting up Bulk Drug manufacturing plant of production capacity of 395.62 TPM by M/s Sree Kartikeya Kameshwari Industries (SKKI) in a total area of 2.4 ha at Plot No.E-12, Chincholi MIDC, Taluka, Mohol, District Solapur (Maharashtra).

	The project/activity is covered under category B of item 5(f) 'Synthetic Organic Chemicals (Bulk drugs)' of the Schedule to Environmental Impact Assessment Notification, 2006. However, due to applicability of general conditions (located within 5 km of the GIB Sanctuary), the project was appraised as category A at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry. The ToR for the project was granted on 15th July, 2016 with the exemption from public hearing due to the project site located in notified industrial area as per the provisions of the EIA Notification, 2006. The project proponent has already taken up construction activities covering an area of nearly 5000 sqm against the total envisaged area of 9000 sqm with the due approval of the Maharashtra Industrial Development Corporation pursuant to the agreement dated 20th October, 2010 between the MIDC and the project proponent. As per the said agreement the project proponent was required to submit the specification, plans, elevations, sections and details of the factory building within 60 months from the date or date of possession, whichever is earlier.
27.3.16.3	*The Committee, after deliberations on the limited issue of construction already undertaken at the project site, decided for a status report in this regard from the Regional Office of this Ministry at Nagpur. That is required to ascertain the violation of the EIA Notification, 2006, if any, for further consideration of the project.*
27.3.17	**Expansion of Pigment and Intermediates manufacturing unit at SIPCOT Industrial Complex, Kudikadu Village, Cuddalore Taluk, District Cuddalore (Tamil Nadu) by M/s Clariant Chemicals India Ltd - For EC** **[IA/TN/IND2/60062/2016, J- 11011/349/2016-IA.II(I)]**
27.3.17.1	The project proponent and the accredited Consultant M/s Cholamandalm MS Risk Services Limited, Chennai made a detailed presentation on the salient features of the project and informed that: i. Environmental Clearance for expansion of Pigment and Intermediates manufacturing unit by M/s Clariant Chemicals India Limited at SIPCOT Industrial Complex, Village Kudikadu, Taluk Cuddalore, District Cuddalore (Tamil Nadu). ii. Under the provisions of the EIA Notification 2006 as amended, the Standard Terms of Reference (ToR) for the purpose of preparing Environment Impact Assessment (EIA) report and Environment Management Plan (EMP) for obtaining prior environment clearance is prescribed. The standard ToR has been issued by Ministry vide letter No. J-11011/349/2016-IA.II(I)dated 9th December 2016. iii. All Synthetic Organic Chemicals Industry are listed at S.N. 5(f) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC) iv. Ministry has issued EC earlier vide letter no. F.NO. J-11011/339/2013-IA II (I), dated 30th January 2015 for "Withdrawal of two products" i.e. Fast Colour Bases and Napthols (Not manufactured at present) and Increasing the production capacity of Blue Pigments from 150 TPM to 275 TPM and Intermediates from 85 TPM to 115 TPM v. Existing land area is 2,47,047 sqm. Additional 4,893 sqm of land will be

		used for proposed expansion.
	vi.	Industry is already developed Greenbelt in an area of 33 % i.e 20 acres (82,500 sqm) out of 61.04 acres (2,47,047 sqm) of the total area of the project.
	vii.	The estimated project cost is Rs.25 Cr including existing investment of Rs 84 crores. Total capital cost earmarked towards environmental pollution control measures is
	viii.	Rs.7 Cr and the Recurring cost (operation and maintenance) will be about Rs.4 Cr per annum
	ix.	Total Employment will be 150 persons as direct &300 persons as indirect after expansion. Industry proposes to allocate Rs. 62.5 Lakhs @ of 2.5 % towards Corporate Social Responsibility (CSR).
	x.	It is reported that as per Form-1, No national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. Uppanar River (0.1 km, East) Bay of Bengal (1.3 km, East) Gadilam River (5.25 Km, North) and Ponnaiyar River (9.0 Km, North) is flowing within 10 Km radius.
	xi.	Ambient air quality monitoring was carried out at six (6) locations during 10th January 2017 to 9th April 2017 and submitted baseline data indicates that average ranges of concentrations of PM_{10} (47.4 µg/m^3 to 63.7 µg/m^3), $PM_{2.5}$ (23.8 µg/m^{3}to 29.9 µg/m^3), SO2 (4.7 µg/m^{3}to 9.4 µg/m^3) and NO_2 (14.3 µg/m^3 to 26 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 9.50 µg/m^3, 0.318 µg/m^{3}and 0.064 µg/m^{3}with respect to PM_{10}, SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
	xii.	Total water requirement for expansion is 1436m^3/day, in which fresh water requirement of 323 m^3/dayand will be met from Ground water/SIPCOT water
	xiii.	Effluent of 1250m^3/day will be treated through existing Effluent Treatment Plant with additional waste water treatment facilities will be based on Zero Liquid discharge system.
	xiv.	Power requirement after expansion will be 3700 KVA including existing 2000 KVAand will be met from Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO). Existing unit has 3 DG sets of 200 KVA, 860 KVA & 1010 KVA capacity, are used as standby during power failure. Stack (height 4m, 6m & 8 m)will be provided as per CPCB norms.
	xv.	Existing unit has 8TPH fired boiler is installed which is used for steam generation using Bio-briquettes as fuel, 6TPH boiler which is operated as Standby uses Furnace Oil as fuel. “Hence, the boilers at the existing facility are adequate and there is no requirement of a new boiler”.
	xvi.	Details of Process emissions generation and its management :
	xvii.	There is no significant effect of air pollution in this expansion project. However, major air pollutants from the project are SO_2, NOx and Particulate Matter. The proposed expansion is having total eight stacks out of which four stacks are located in violet pigment plant, one scrubber stack in MCPA plant and three stacks in TCCPC plant.The peak predicted ground level concentrations of the PM_{10}, SO_2 and NO_x were estimated as 9.50µg/m^3, 0.318µg/m^3 and 0.064µg/m^3 respectively. Due to adoption of efficient pollution control systems, the peak predicted ground level concentrations would occur within existing plant sources. Hence the resultant post project scenario (baseline plus predicted increase) of pollutant concentration in the ambient air will be within the NAAQs.

	xviii. Spin flash driers are installed with bag filter followed by cyclone separators. The collected particulates from the bag filter and cyclone separator bottoms will be recycled back to the process. There by increasing the recycling rate and reduction in emissions. Utilization of diesel is 644 kg/day for the proposed expansion is said to be insignificant quantity. However, stack height of 20mts will be provided for all three hot air generators. Ammonia vapours are sent to the absorber where the, ammonia with oxygen are adsorbed onto the platinum surface in close proximity to each other, a reaction occurs, followed by desorption of the products. The result of this reaction produces Nitrogen and water which are having no environmental impact. The VOC emission will be controlled by using packed column in MEE process while recovery of salt from PV-23 ML and the balance will be recovered in MEE connected to RO plant xix. Details of Solid waste/ Hazardous waste generation and its management: xx. The expected solid waste generation in the proposed project are hazardous and non-hazardous in nature. The generated Municipal Solid waste will be segregated into Biodegradable, Recyclables and inert. The composted bio-degradable waste is used as manure for greenbelt development. The recyclable wastes are sold to recyclers. Chemical sludge from waste water treatment disposed to Cement industries/TSDF facilities. Used oil will be disposed to CPCB authorized recyclers. xxi. The project site is located at classified Special & Hazardous Industrial Use Zone by Directorate of Town & Country Planning, Government of Tamil Nadu. Hence, the public consultation has been exempted as per the Environmental Impact Assessment (EIA) Notification, 2006 under per section 7(i), (iii) stage (3), para (i)(b) xxii. The unit is regularly submitting the Environmental compliance report to the Regional Office of MoEF&CC and CCIL has complied with all conditions of the Environmental Clearance issued by MoEF&CC. The recent monitoring was conducted on 03.03.2017 and the certified copy of the compliance report, vide F. No.EP/12.1/2016-17/26/TN dated 07.06.2017 states that CCIL complies with all the conditions stipulated in the Environmental Clearance issued by MoEF& CC. xxiii. No Litigation Pending against the proposal, if any.
27.3.17.2	During deliberations, the EAC noted the following:- The proposal is for expansion of Pigment and Intermediates manufacturing unit promoted by M/s Clariant Chemicals India Limited in a total area of 251940 sqm (existing 247047 sqm and additional 4893 sqm) at SIPCOT Industrial Complex, Village Kudikadu, Taluk Cuddalore, District Cuddalore (Tamil Nadu). The project/activity is covered under category B of item 5(f) 'Synthetic Organic Chemicals' of the Schedule to Environmental Impact Assessment Notification, 2006. The project proponent informed that due to applicability of general conditions (located within 5 km of the Critically Polluted Area of Cuddalore), proposal was submitted to this Ministry for its appraisal as category A at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry. The standard ToR for the project was issued on 9th December, 2016 with the exemption from public hearing due to the project site located in notified industrial area as per the provisions of the EIA Notification, 2006.

	The Committee was informed that the Cuddalore is no more a CPA as of now, and as such the general conditions shall not be applicable to the proposal. Accordingly, the appraisal of the project remains the jurisdiction of the SEIAA and cannot be considered by the EAC.
27.3.17.3	*In view of the general conditions not applicable and thus the change in categorization of the project/activity from B to A not permissible, the EAC decided not to consider the proposal. The Committee further desired that the proposal may be forwarded to SEIAA for their consideration with the date of submission of the proposal being the same i.e. 18th July, 2017.*
27.3.18	**Exploratory drilling of 10 Wells at Rudrasagar, Geleki, Lakwa, Namti, Mekeypore- Santak-Nazira PML Areas in District Sivasagar (Assam) by M/s ONGC Ltd - For EC** **[IA/AS/IND2/30289/2015, J-11011/224/2015-IA II (I)]**
27.3.18.1	The project proponent and the accredited Consultant M/s Vimta Labs made a detailed presentation on the salient features of the project and informed that: i. The proposal is for exploratory drilling of 10 wells at Rudrasagar, Geleki, Lakwa, Namiti, Mekeypo-Santak-NaziraPML areas in Sivasagar district by M/s ONGC Ltd.

Sr. No.	Proposed Location	Latitude	Longitude	District	Target Depth
1	RSAL	26° 58' 37.56" N	94° 34' 52.156" E	Sivasagar, Assam	3350 m
2	RSAM	26° 56' 54.44" N	94° 31' 07.15" E	Sivasagar, Assam	3350 m
3	RSAN	26° 56' 40.44" N	94° 32' 50.51" E	Sivasagar, Assam	3350 m
4	GKBU	26° 47' 23.87" N	94° 41' 41.86" E	Sivasagar, Assam	5010 m
5	GKBV	26°47' 46.24° N	94°39' 03.55" E	Sivasagar, Assam	3400 m
6	MKAE	26°50' 54.67" N	94°45' 53.28" E	Sivasagar, Assam	3200 m
7	MKAF	26°52' 32.80" N	94°45' 35.21" E	Sivasagar, Assam	3400 m
8	LKBC	26°59' 35.44" N	94°49' 09.75" E	Sivasagar, Assam	3050 m
9	LKBD	26°59' 51 66" N	94°47' 57 28" E	Sivasagar, Assam	4875 m
10	KGAE	27°01'18.35" N	94°46'51.126' E	Sivasagar, Assam	4900 m

i. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 27th meeting held during 28-29August, 2017 and recommended Terms of Reference (ToRs) for the project. The ToR has been issued by Ministry vide letter No. J-11011/224/2015-IA.II(I) dated 28th December, 2015 .

	ii. All Offshore and onshore oil and gas exploration, development & production are listed at Schedule-1(b) of Environmental Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). iii. Land requirement for each well will be of total average 1.5-2.25 ha iv. The estimated project cost is Rs 456.20 crores. The 2% total project cost earmarked towards environmental pollution control measures. v. Total employment will be 30 persons as direct &500-600 persons indirect after expansion. The 2.5% of total project cost is allocated towards Corporate Social Responsibility. vi. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. vii. Ambient air quality monitoring was carried out at 10 locations during September 2016 to November 2016post-monsoon season and submitted baseline data indicates that ranges of concentrations of PM_{10} (42.1 to 52.4µg/m^3), $PM_{2.5}$ (11.3 to 19.5 µg/m^3), SO_2 (9.5 to 19.8 µg/m3) and NO2 (12.2 to 22.1 µg/m3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.35 µg/m^3,4.05 µg/m^3 and 9.4 µg/m^3 with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). (In case of EC Proposal) viii. Total water requirement is 25 m^3/day of which fresh water requirement of 10 m^3/day. The water requirement will be met from the local sources through water tankers. Suitable water transport arrangement will be made to transfer water for both drilling and domestic purposes. ix. Domestic waste water of 7KLD will generated from the camps would be discharged and treated in septic tanks. All wastewater streams except sewage will be directed to a 1.5 mm HDPE lined pit. Process Wastewater: Approximately 15-20 m^3/day of wastewater would be generated from the drilling operation including minor quantities from washing and cleaning of rig floor and other equipments. The wastewater will be collected in lined pits and clarified wastewater will be treated in packaged treatment plant located at the well sites to meet norms specified by CPCB and ASPCB for discharge to land and surface water bodies. x. The total power requirement at the drilling site and camp site will be 3000 KVA. The power requirement in the drilling site and the campsites will be catered through Diesel Generator (DG) sets. The power requirement will be met by 4 Nos of 750 KVA DG sets. xi. Details of Process emissions generation and its management- The incremental concentrations of $SO_2$and Oxides of Nitrogen due to the operation of DG sets and flaring will be negligible. Appropriate

	management of DG sets to achieve fuel efficiency and therefore reduce emissions.Low sulphur diesel oil will be used during drilling.Environmental monitoring during drilling and well testing will be done to ensure compliance to the standards. xii. Details of Solid waste/ Hazardous waste generation and its management- Drill cuttings -Approx. 408-430 m^3 per well- Collected in lined pits, stabilized and buried and restored with native soil Used oil -Approximately 150-200 liters/well: Disposed through ASPCB authorized waste recyclers. xiii. The public hearing was conductedby the State Pollution Control Board on 4th May, 2017 at GaurinagarCentral Public Hall, Gaurinagar. xiv. Status of Litigation Pending against the proposal, if any - Nil
27.3.18.2	During deliberations, the EAC noted the following:- The proposal is for exploratory drilling of exploratory drilling of 10 wells by M/s ONGC Ltd at Rudrasagar, Geleki, Lakwa, Namiti, Mekeypo-Santak-Nazira PML areas in District Sivasagar (Assam). The project/activity is covered under category A of item 1(b) 'Offshore and Onshore Oil and Gas Exploration, Development & Production' of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006, and requires appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry. The ToR for the project was granted on 28th December, 2015 and the public hearing was conducted by the State Pollution Control Board on 4th May, 2017. The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.
27.3.18.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of specific conditions as under:-* • *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.* • *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged to any surface water body, sea and/or on land.* • *Ambient air quality shall be monitored at the nearest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 for PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, CH_4, HC, Non-methane HC etc.* • *Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.*

	• *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.* • *Total water requirement shall not exceed the proposed and prior permission should be obtained from the concerned regulatory authority.* • *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.* • *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.* • *No effluent/drilling mud/drill cutting shall be discharged/disposed off into nearby surface water bodies.* • *Good sanitation facility shall be provided at the drilling site. Domestic sewage shall be disposed off through septic tank/ soak pit.* • *Oil spillage prevention and mitigation 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.* • *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.* • *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.* • *The company shall develop a contingency plan for H_2S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H_2S detectors in locations of high risk of exposure along with self containing breathing apparatus.* • *The Company shall carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected shall be submitted six monthly to the Ministry and Regional Office.* • *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.* • *Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.* • *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 the area in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.* • *All the commitments made to the public during public hearing/public consultation meeting on 4th May, 2017 shall be satisfactorily implemented and adequate*

	budget provision shall be made accordingly. • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.* • *Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.* • *Restoration of the project site shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office.* • *Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office.* • *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.* • *Company shall have own Environment Management Cell having qualified persons with proper background.* • *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. Remote monitoring of site should be done.* • *On completion of drilling, the company has to plug the drilled wells safely and obtain certificate from environment safety angle from the concerned authority.* • *Hazardous Waste shall be handled and disposed as per the provisions of the Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 and necessary permissions shall be obtained under the said rules.*
27.3.19	**Expansion of Distillery from 60 KLPD to 75 KLPD at Sy.Nos.529 p, 530, 531p, 532p, 536p, 557p, 560p & 564p of Peddavaram Village, Nandigama Mandal, Krishna District (Andhra Pradesh) by M/s Crux Biotech India Private Limited - For EC** **[IA/AP/IND2/60879/2016, J- 11011/359/2016-IA.II(I)]**
27.3.19.1	The project proponent and the accredited Consultant M/s Pioneer Enviro Laboratories and Consultants Private Limited, Hyderabad made a detailed presentation on the salient features of the project and informed that: i. The proposed project is for expansion of distillery plant by M/s Crux Biotech India Private Limited and located at Peddavaram Village, Nandigama Mandal, Krishna District (Andhra Pradesh). ii. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 17th meeting held during 26th December, 2016 and recommended Terms of reference for the project. The TOR has been issued by Ministry vide No. J-11011/359/2016- IA. II (I) dated 28/02/ 2017. iii. All Distillery are listed at S.N. 5(g) of schedule of Environmental Impact Assessment(EIA) Notification, under category `A` and are appraised at Central Level by Expert Appraisal Committee (EAC). iv. Ministry has issued Environmental clearance vide F.No.J.11011/579/2010-IA II (I) dated 16/10/2012 for 60 KLPD Distillery unit to M/s Crux Biotech India Private Limited. v. Existing land area is 28.98 acres. No additional is envisaged for the proposed

	expansion project. vi. Industry has already developed greenbelt in an area of 9 acres out of total area of the project. vii. The proposal is for Enhancement of distillery plant production capacity from 60 KLPD to 75 KLPD with process modifications without installing additional machinery, no additional cost for the expansion project is envisaged**.** viii. There will not be any increase in employment due to the capacity enhancement. The existing plant created employment to 150 people. Rs. 18.2 Lakhs has already been spent on CSR activities in the last 2 years. ix. There are no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. within 10 Km from the project site. Krishna river is flowing at distance of 1.3 km in West & North West direction. x. Ambient air quality monitoring has been carried out at 8 locations during 1st December, 2016 to 28th February, 2017 and the baseline data indicates the ranges of concentrations as: PM_{10} (21.0 to 56.7 $\mu g/m^3$), $PM_{2.5}$ (12.6 to 34.0 $\mu g/m^3$), SO_2 (6.9 to 12.7 $\mu g/m^3$), and NO_2 (7.8 to 14.9 $\mu g/m^3$). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs during operation of the proposed expansion project would be 0.16 $\mu g/m^3$, 2.6 $\mu g/m^3$ and 0.8 $\mu g/m^3$ with respect to PM_{10}, SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). xi. Water requirement for 60 KLPD distillery at the time of Environmental clearance in 2012 is 642 KLD. However, no increase in water requirement due to capacity enhancement and it remains 642 KLD for 75 KLPD capacity also. Water requirement for the distillery plant is being sourced from Ground water & Krishna River at a distance of 1.3 km from the plant. Permission has been obtained for drawl of 250 cum/day of ground water from State Ground Water Department, GOAP and I & CAD, GOAP has accorded permission to draw 800 KLD of water from Krishna River. Hence no separate water drawl permission is required for the 75 KLPD as the total water requirement remains 642 KLD, whereas permission obtained was 250 KLD + 800 KLD = 1050 KLD. xii. Total wastewater generation as per the existing environmental clearance is 439 KLD. No additional wastewater generation from the proposed expansion project. Thin slop generated is being concentrated in the Evaporation system up to 35% solids (w/w). This concentrated spent wash (35 % Solids) is being sent to the drier along with wet cake generated from Decanter for making DDGS with 90 % solids and the DDGS obtained is sold as cattle feed and fish feed. Due to the capacity enhancement, there will be no increase in effluent generation. Hence the existing ETP is adequate to treat the effluent from 75 KLPD capacity. The non process effluent is being treated in ETP and utilized for Process, CT makeup, greenbelt development after ensuring compliance with MoEF/SPCB norms. xiii. The power requirement for existing plant is 1.6 MW. There will be no additional power requirement for proposed expansion project. The existing plant is taking power from captive power plant. Existing unit has one DG set of 1250 KVA capacity, There are no additionally DG sets requirement for proposed expansion project. xiv. Existing unit has 25 TPH Coal/Biomass fired boiler. Bag filters with stack height of 45 m has been installed for controlling the particulate emissions. Existing 25 TPH boiler will be adequate for expansion project. xv. Details of Solid waste/Hazardous waste generation and its management.

S. No.	Solid waste/Hazardous	Total Quantity (TPD)		Disposal
		60 KLPD	**75 KLPD**	
1.	DDGS (with 90% solids)	53	58	Is being sold as cattle/poultry/fish feed
2.	Boiler Ash	27 (with 100% Biomass) (or) 45 (with 100% coal)		Ash generated is being given to brick manufacturers when biomass is used as fuel. Ash generated is being given to brick manufacturers/cement plants when coal is used as fuel.
1	Waste lube oil	0.4 KL/annum		Is being given to APPCB authorized reprocessors/recyclers.

xvi. Public Consultation was exempted under Para 7 (ii) of EIA Notification..

xvii. The proponent has obtained certified compliance report from MOEF&CC regional office Chennai on 08/06/2017 for the existing EC.

xviii. No litigation pending against the project and /or any direction /order passed by any Court of Law against the existing plant

xix. Following are the list of existing and proposed products.

S. NO.	Unit	Product /By Product	Existing Capacity	Proposed Capacity	After Expansion Capacity
1.	Distillery (with Grains)	Rectified Spirit/ENA/Ethanol	60 KLPD	15 KLPD	75 KLPD
2.	Power	Electricity	2.5 MW	---	2.5 MW
3.	$C0_2$ recovery plant	$C0_2$(By product)	45.6 TPD	9.6 TPD	55.2 TPD

27.3.19.2 During deliberations, the EAC noted the following:-

The proposal is for expansion of Grain based Distillery from 60 to 75 KLPD (Rectified Spirit/ Extra Neutral Alcohol/Absolute Alcohol) by M/s Crux Biotech India Pvt Ltd in a total area of 28.98 ha at Sy.Nos.529 p, 530, 531p, 532p, 536p, 557p, 560p & 564p of Peddavaram Village, Nandigama Mandal, Krishna District (Andhra Pradesh).

The project/activity is covered under category A of item 5(g) 'Distillery' of the Schedule to Environmental Impact Assessment Notification, 2006 and requires appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

	The ToR for the project was granted on 28th February, 2017 with the exemption from public hearing as per the provisions contained in para 7(ii) of the EIA Notification, 2006. The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. This Ministry had earlier accorded EC to the Grain Based Distillery of 60 KLPD along with Captive Power Plant of 2.5 MW vide letter dated 16th October, 2012. The monitoring report dated 8th June, 2017 (monitoring carried on 20th May, 2017) from the Regional Office at Chennai on the compliance status of EC conditions found to be satisfactory and meeting the requirements to consider the present expansion proposal.
27.3.19.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of specific/additional conditions as under:-* • *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.* • *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the standards prescribed under the Environment (Protection) Rules, 1986.* • *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.* • *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.* • *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the agro fuel fired boiler to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.* • *Solvent management shall be carried out as follows :* a. *Reactor shall be connected to chilled brine condenser system.* b. *Reactor and solvent handling pump shall have mechanical seals to prevent leakages.* c. *The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.* d. *Solvents shall be stored in a separate space specified with all safety measures.* e. *Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* f. *Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.* g. *All the solvent storage tanks shall be connected with vent condensers with*

	chilled brine circulation. • *Total fresh water requirement shall not exceed 1050 cum/day, including 250 cum/day of ground water and 800 cum/day of surface water. Prior permission for drawl of water shall be obtained from the concerned regulatory authority/CGWA.* • *Industrial/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.* • *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.* • *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.* • *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.* • *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.* • *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.* • *The company shall undertake waste minimization measures as below:-* *(a) Metering and control of quantities of active ingredients to minimize waste.* *(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* *(c) Use of automated filling to minimize spillage.* *(d) Use of Close Feed system into batch reactors.* *(e) Venting equipment through vapour recovery system.* *(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.* • *The green belt of at least 10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.* • *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.* • *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.* • *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.* • *Continuous online (24X7) monitoring system, both for emissions and the effluent, shall be installed within the plant site for measurement of discharge and*

	pollutants concentration within the plant site. Data shall be uploaded on the company's website and provided to the respective ROs of MoEF&CC, CPCB and SPCB.
27.3.20	**Manufacturing of Dyes & Dye Intermediates at Plot No.99-A, M.P. Audhyogic Kendra Vikas Nigam Ltd (AKVN), Tehsil Meghnagar, District Jhabua (MP) by M/s Riddhi Siddhi Colours - For EC** **[IA/MP/IND2/66850/2016, IA-J-11011/411/2017-IA-II(I)]**
27.3.20.1	The project proponent M/s Sri Riddhi Siddhi Colours and the accredited Consultant M/s Green Circle Inc. made a detailed presentation on the salient features of the project and informed that: i. The proposal is for Manufacturing of Dyes & Dye Intermediates at Plot No. 99-A, AKVN Industrial Area Meghnagar, District Jhabua (MP) by M/s Sri Riddhi Siddhi Colours and located at AKVN Industrial area. ii. The project proposal was considered by State Level Expert Appraisal Committee- M.P in its 282nd SEAC meeting held during 10th October, 2016 and recommended Terms of Reference (ToRs) for the project. The ToR has been issued by SEAC vide letter no. 1655/PS-MS/MPPCB/SEAC-II/ToR/(282)2016 dated 15th December, 2016. iii. All Synthetic organic chemicals industry (Dyes & Dye Intermediates) are listed at S.N. 5 (f) of Schedule of Environmental Impact Assessment (EIA) Notification under category 'B' and are appraised at Central Level by Expert Appraisal Committee (EAC). *iv.* Existing land area is 3000 m^2. v. Industry will be developed Green belt in an area of 34.4 % i.e., 1032 m^2 out of 3000 m^2 of area of the project. vi. The estimated project cost is Rs.2.0813 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 85.75 Lakhs and the Recurring cost (operation and maintenance) will be about Rs. 21.5 Lakhs per annum. vii. Total Employment will be 45 persons as direct & 10 persons as indirect. Initially CSR budget commitment will be Rs. 5 Lakhs. viii. It is reported that as per form-1 & EIA report, there are no national parks, Biosphere Reserves, Tiger/Elephant Reserves etc. present within 10 Km distance. River Negari Nadi is flowing at a distance of 3.95 km in SSE direction. ix. Ambient air quality monitoring was carried out at 8 locations during 1st October, 2016 to 31st December, 2016 and submitted baseline data indicates that ranges of concentrations of PM_{10} (53.72 to 72.13 μg/m^3), $PM_{2.5}$ (24.89 to 32.86 μg/m^3), SO_2 (7.02 to 12.98 μg/m^3) and NO_2 (13.28 to 20.79 μg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the

proposed project would be 0.8 µg/m^3, 0.8 µg/m^3 and 0.6 µg/m^3 with respect to PM10, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

x. Total water requirement is 73 m^3/day of which fresh water requirement of 45 m^3/day and will be met from AKVN water supply.

xi. Total waste water/effluent of 43.5 m^3/day generated from different processing units will be treated through ETP of capacity 50 KLD, followed by RO (Capacity: 5 KL/H) & MEE (Capacity: 2 KL/H). Plant will be based on Zero Liquid discharge system.

xii. Power requirement of proposed plant will be 200 KW which will be meet from Madhya Pradesh Electricity Board (MPEB). Additionally, 1 No. of 100 KVA D.G will be used as standby during power failure. Stack (height-10 m) will be provided as per CPCB norms to the proposed D.G set.

xiii. Coal fired boiler (2 TPH) & Thermo pack (5 Lakh Kcal, LDO/FO fired) will be installed. Multi cyclone separator followed by bag filter with common stack of height of 30 m will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm3) for Proposed 2.0 TPH coal fired boiler & LDO/FO fired Thermo pack.

xiv. Details of process gas emissions & its management: Adequate process emission control measures like Cyclone separator followed by ventury scrubber having common stack with adequate height will be provided to Spray Dryer-1 & 2 (2 nos. of spray dryers of capacity 500 L/hr. each) & Dual: Alkali + water Scrubber will be provided (1 no. of scrubber of capacity 2KL/hr.) for process gaseous emissions will be installed to control gaseous emission.

xv. Details of Solid waste/ Hazardous waste generation and its management:

xvi. Hazardous waste: ETP sludge (1 ton/month) will be disposed off to TSDF site, Used oil (200 Litres/year) will be sold to registered re-processor, Filtrate residue (1 Ton/ Month) will be sold to authorized vendor, discarded drums (100 Nos./Month) will be sale to the authorized vendor/recycler & MEE salts (25 Kg/Month) will be sent to TSDF site.

xvii. Non- hazardous waste: Paper, cardboard, HDPE bags, Metal scrap etc (2.0 MT/ Month) will be sold to registered reuser/ recyclers and Boiler Ash (1.5 MT/Month) will be sold to brick manufacturer.

xviii. There is no litigation pending against the proposal.

xix. Following are the list of existing and proposed products:

Proposed Products and their Capacities:

Group	S.No.	Name of Product	Physical Form	Qty MT/ M
A	**Synthetic organic dyes (Azo & Condensed Direct Dyes)**			

	1	Direct Yellow 27	Liquid/ Powder	125
	2	Direct Yellow 137	Liquid/ Powder	
	3	Direct Yellow 147	Liquid/ Powder	
	4	Direct Yellow 157	Liquid/ Powder	
	5	Direct Orange 102	Liquid/ Powder	
	6	Direct Red 16	Powder	
	7	Direct Red 80	Liquid/ Powder	
	8	Direct Red 81	Liquid/ Powder	
	9	Direct Red 239	Liquid/ Powder	
	10	Direct Red 253	Liquid/ Powder	
	11	Direct Blue 80	Liquid/ Powder	
	12	Direct Blue 86 Powder/ Liquid	Liquid/ Powder	
	13	Direct Blue 199 Powder/ Liquid	Liquid/ Powder	
	14	Direct Black 179	Liquid/ Powder	
B	**Synthetic organic dyes (Azo & AQ Condensed, Cyanation Disperse Dyes)**			**125**
	1	Disperse Yellow	Powder	
	2	Disperse Yellow	Powder	
	3	Disperse Yellow	Powder	
	4	Disperse Yellow	Powder	
	5	Disperse Orange	Powder	
	6	Disperse Orange	Powder	
	7	Disperse Red 54	Powder	
	8	Disperse Red	Powder	
	9	Disperse Blue 79 [	Powder	
	10	Disperse Blue 56 [	Powder	
	11	Disperse Blue 77 [Blue FBL]	Powder	
(A+B)	**Total**			**250 MT/M**

A single or group of proposed products will not exceed 125 MT/M in case of Direct Dyes & Disperse Dyes.

27.3.20.2 During deliberations, the EAC noted the following:-

The proposal is for setting up Synthetic Organic Chemicals (Dyes & Dye Intermediates) manufacturing unit of capacity 250 TPM by M/s Riddhi Siddhi Colours in a total area of 3000 sqm at Plot No.99-A, AKVN Industrial Area Meghnagar, District Jhabua (MP).

The project/activity is covered under category B of item 5(f) 'Synthetic Organic Chemicals' of the Schedule to Environmental Impact Assessment Notification, 2006. However, due to SEIAA not functional in the State, the project was appraised at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

The ToR for the project was issued by the SEAC in the State of Madhya Pradesh on 15th December, 2016 with the exemption from public hearing due to the project

	site located in notified industrial area as per the provisions of the EIA Notification, 2006. The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components.
27.3.20.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of specific/additional conditions as under:-* • *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.* • *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the standards prescribed under the Environment (Protection) Rules, 1986.* • *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and different provisions contained in the Rules shall be strictly adhered to.* • *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.* • *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler, if any, to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.* • *Solvent management shall be carried out as follows :* a. *Reactor shall be connected to chilled brine condenser system.* b. *Reactor and solvent handling pump shall have mechanical seals to prevent leakages.* c. *The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.* d. *Solvents shall be stored in a separate space specified with all safety measures.* e. *Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* f. *Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.* g. *All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.* • *Total fresh water requirement shall not exceed 45 cum/day to be met from AKVN Industrial Area water supply. No ground water shall be used without prior permission from concerned regulatory authority/CGWA.* • *Industrial/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.* • *Process effluent/any wastewater shall not be allowed to mix with storm water.*

	Storm water drain shall be passed through guard pond. • *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and solvent transfer through pumps.* • *Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.* • *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.* • *Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided.* • *The company shall undertake waste minimization measures as below:-* *(a) Metering and control of quantities of active ingredients to minimize waste.* *(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* *(c) Use of automated filling to minimize spillage.* *(d) Use of Close Feed system into batch reactors.* *(e) Venting equipment through vapour recovery system.* *(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.* • *The green belt of 5-10 m width shall be developed along the plant periphery in 33% of the total project area. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.* • *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.* • *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.* • *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.* • *Raw material storage should not exceed 3 days at any point of time*
27.3.21	**Setting up a Grass Root Rajasthan Refinery cum Petrochemical complex Project (RRPC) of 9 MMTPA at Pachpadra Tehsil, District Barmer (Rajasthan) by M/s Hindustan Petroleum Corporation Limited (HPCL) - For EC** **[IA/RJ/IND/24706/2013, J- 11011/87/2013-IA.II(I)]**
27.3.21.1	The project proponent and the accredited Consultant M/s Engineers India Limited made a detailed presentation on the salient features of the project and informed the following: (i) The proposal is for setting up Grass root Refinery cum Petrochemical Complex of 9 MMTPA at village SaajiyaliRoopjiKanthwad, Tehsil

Pachpadra, District Barmer (Rajasthan) as a Joint Venture (JV) between Hindustan Petroleum Corporation Ltd (HPCL) and the State Government of Rajasthan.

(ii) Different processing units and their capacities are proposed as under:-

Process Units	UNITS	Capacity
CDU	MMTPA	9.0
VDU	MMTPA	4.8
NHT	MMTPA	1.8
ISOM	MMTPA	0.26
CCR	MMTPA	0.3
DHDT	MMTPA	4.1
PFCC	MMTPA	2.9
DCU	MMTPA	2.4
PPU	MMTPA	2 x 0.49
Butene-1	KTPA	59
LLDPE/HDPE Swing	MMTPA	2 x 0.416
VGO HDT	MMTPA	3.5
DUEL FEED CRACKER	MMTPA	0.82
ETHLENE RECOVERY UNIT	MMTPA	0.077
BENZENE RECOVERY UNIT	MMTPA	0.096
Py gas HDT	MMTPA	0.55
BTX	MMTPA	0.55
PFCC GASOLINE DEPANTANIZER	MMTPA	0.87
GASOLINE HDT	MMTPA	0.53
FCC C5 Merox	MMTPA	0.22
SAT. LPG MEROX UNIT	KTPA	162
LPG DEPROPANIZER	KTPA	162
FG TREATING UNIT	TPD	1425
HYDROGEN GENERATION UNIT	KTPA	37
PSA (Off-gas Recovery)	KTPA	28
SWS -I (HYDRO PROCESSING)	M3/HR	100
SWS -II (NON HYDROPROCESSING)	M3/HR	250
AMINE REGENERATION UNIT	M3/HR	3x480
SULPHUR RECOVERY UNIT	TPD	2 x 243

(iii) Feed and products slates of the proposed Refinery cum Petrochemical Complex are given below:

Design Cases	Unit	1.5 MMTPA Rajasthan Crude + 7.5 MMTPA Arab Mix crude (First 8 years)	9 MMTPA Arab Mix crude (9th year onwards)
FEED			
RAJASTHAN CRUDE	MT/DAY	4504	0
ARAB HEAVY	MT/DAY	11451	13741
ARAB LIGHT	MT/DAY	11069	13283
NATURAL GAS	MT/DAY	353	578
PRODUCTS			
POLYPROPYLENE	MT/DAY	2935	2942
BUTADINE	MT/DAY	668	707
LLDPE/HDPE	MT/DAY	1161/1161	1247/1247
BENZENE	MT/DAY	276	288
TOLUNE	MT/DAY	129	228
91 RON GASOLENE, BS-VI	KL/DAY	2678	2412
95 RON GASOLENE, BS-VI	KL/DAY	2678	2412
ULS DIESEL , BS-VI	KL/DAY	13096	12951
SULPHUR	MT/DAY	355	395
PetCoke	MT/DAY	-	100
FUELS & LOSSES	MT/DAY	5764	5821

(iv) Land required for Rajasthan refinery cum petro chemical complex including marketing terminal area is 4400.40 acres. An area of 33 % of the total plot area will be developed in Greenbelt i.e. 588.39 Ha (~1454 acres) out of 1779.82 Ha (4400.40 acres) area of the project.

(v) The estimated project cost is Rs 43129 crores. Total capital cost earmarked towards pollution control measures is Rs 842 Crores and the recurring cost (operation and maintenance) will be about Rs 58 crores per annum.

(vi) Total Employment will be 1000 as direct & 200 contract persons during operation and maintenance phase

(vii) It is reported that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance. No River is present within 10 km radius from the proposed site.

(viii) Petroleum Refining Industries are listed under category A of item 4(a) of Schedule to Environmental Impact Assessment (EIA) Notification, 2006 and require appraisal are appraised at Central Level by the Expert Appraisal Committee (EAC).

(ix) The proposal was considered by the Expert Appraisal Committee (Industry-2) in its meeting held during 29-31 July, 2013, the Terms of References (TORs) for the Project was recommended for preparation of EIA/EMP reports along with public consultation. The TOR was issued by Ministry vide letter no. J-11011/87/2013-IA II (I) dated 27th September, 2013.

	(x) Total SO2 emissions from proposed Project complex is estimated to be 30 TPD from all process units, CPP block and SRU block. Fuel oil of sulfur content of 0.5 wt % and refinery fuel gas of 150 mg/nm3 H2S shall be used in fired type furnaces. SRU with Tail Gas Treating unit facilities has been considered with 99.9 % sulphur recovery. (xi) Ambient air quality monitoring was carried out at 11 locations during October to December 2013 and submitted baseline data indicates, ranges of concentrations of PM10 (59-87 µg/m3), PM2.5 (25-49 µg/m3), SO2 (6-17 µg/m3) and NOx (12-24 µg/m3) respectively. AAQ modeling study as per revised EIA/EMP report for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 34.3 µg/m3 and 35.6 µg/m3 with respect to SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). (xii) Total raw water requirement for the project is estimated to be 5300 m^3/hr for the proposed project and will be met from Indira Gandhi Canal. (xiii) Total effluent generation is estimated would be 1650 m^3/hr which will be treated in a state of the art ETP based on Zero Liquid discharge system. (xiv) Proposed refinery will have fuel based 2 boilers (1 Working +1 Standby) each of 160 TPH and CFBC type 2 boilers (DCU Coke fired) each of 400 TPH. (xv) Power requirement for the proposed project will be 211 MW to be met from Refinery Captive Power Plant consisting of 4 GTGs each of 33 MW capacity and 5 STGs each of 26 MW. (xvi) Approximately 1500T/year of non-hazardous, non-recyclable solid waste consisting of waste refractory, spent insulation, decoking solid waste from process units etc, used filter cartridges, spent charcoal; spent clay and sand will be generated. These wastes will be disposed off in secured temporary landfill inside RRP complex and further disposed of in nearby authorised landfill facility. Some of the spent catalysts will be sent back to the original supplier for reprocessing. The other catalysts are normally sent to an authorised secured landfill. (xvii) Public Hearing for the proposed project has been conducted by the Rajasthan State Pollution Control Board on 30th May, 2014 at Shree Sambhra Aashapura MatajiMandir, Sambhra, Village Sambhra, Taluka Pachpadra in District Barmer (Rajasthan). (xviii) There is no litigation pending against the proposal.
27.3.21.2	During deliberations, the EAC noted the following:- The proposal is for setting up Grass root Refinery cum Petrochemical Complex of 9 MMTPA in a total area of 4813.66 acres at village Saajiyali Roopji Kanthwad, Tehsil Pachpadra, District Barmer (Rajasthan) as a Joint Venture (JV) between Hindustan Petroleum Corporation Ltd (HPCL) and the State Government of Rajasthan. The project and/or the activities are covered under category A of item 4(a) 'Petroleum Refining Industries' and category A of item 5(c) 'Petro-chemical

	complexes' of the Schedule to Environmental Impact Assessment Notification, 2006 and require appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry. The ToR for the project was granted on 27th September, 2013 and the public hearing was conducted by the State Pollution Control Board on 30th May, 2014. The proposal for grant of EC was first submitted on 15th September, 2014 and considered by the EAC on 18th February, 2015. Meanwhile, the project was revisited in view of the reduced availability of Rajasthan Crude, requirement of BS VI specification by 2020 and change in price scenario. In view of the proposed changes and delay in submission of the revised proposal, the project proponent requested for waiver from applying for the ToR again, and also for repeating baseline data already collected and the public hearing. Permission was also sought to start the construction of boundary wall, site office, pipeline and power facilities. Considering the submissions of the project proponent, the EAC in its meeting held on 14-16 June, 2017 observed as under:- • The EIA/EMP report for pre-revised proposal was submitted within the validity of ToR recommended by the Committee. Public hearing has been conducted as per the provisions of the EIA Notification, 2006. • No change is proposed in project site and capacity of the proposed plant. The changes are proposed only in the crude mix quality. • After detailed deliberation on the Committee suggested to submit the revised EIA/EMP report characterizing the environmental risk due to proposed change in crude mix. • The EAC was also of the view that EIA Notification, 2006 permits for fencing of project cover area but no other construction is allowed before obtaining of prior environmental clearance. The revised proposal with the crude mix now proposed as 1.5 MMTPA Rajasthan Crude and 7.5 MMTPA Arab Mix Crude for first 8 years and 9 MMTPA Arab Mix Crude from 9th year onwards, was submitted on 15th July, 2017. The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent. The total land of 4813.66 acres belongs to the State Government of Rajasthan, and has been allocated to M/s HPCL for setting up the refinery project. As such, the provisions of R&R shall not be applicable. With the different fuel used namely, Fuel gas, Fuel oil & DCU Coke, total SO2 emissions would be 30 TPD. There would be minor increase in PM_{10} and $PM_{2.5}$ values. Predicted maximum GLC of SO_2 (34.3 ug/m^3), NO_x (35.6 ug/m^3) including baseline values during post project are within the standard limits, and as such no significant impact on air environment. Total water requirement is estimated to be 5300 cum/hr which is proposed to be met from Indira Gandhi Canal at Nagna through a 200 km long pipeline. Out of the

	total waste water generated of 1650 cum/hr and taken to the ETP for treatment, 1250 cum/hr of treated effluent will be recycled and nearly 400 cum/hr including rejects from RO plant will be routed to evaporation pond, horticulture etc. Solid and hazardous waste generation shall be primarily limited to spent catalyst (every 4 years) and same shall be taken back by suppliers or approved agencies for metal recovery. Bio-treatment for routing to cement kiln.
27.3.21.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of specific/additional conditions as under:-* • *Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.* • *As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. The effluent discharge, if any, shall conform to the standards prescribed under the Environment (Protection) Rules, 1986.* • *Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.* • *National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.* • *To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Multi-cyclone followed by bag filter shall be provided to the coal fired boiler (Coal content not to exceed 0.5% of Sulphur) to control particulate emissions within permissible limit. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.* • *Total fresh water requirement shall not exceed 5300 cum/hr to be met from Indira Gandhi Canal. Necessary permission in this regard shall be obtained from the concerned regulatory authority. No ground water shall be used without prior permission from the CGWA.* • *Industrial/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.* • *Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.* • *Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.* • *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.* • *The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.* • *Fly ash should be stored separately as per CPCB guidelines so that it should not*

	adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided. • *The company shall undertake waste minimization measures as below:-* *(a) Metering and control of quantities of active ingredients to minimize waste.* *(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* *(c) Use of automated filling to minimize spillage.* *(d) Use of Close Feed system into batch reactors.* *(e) Venting equipment through vapour recovery system.* *(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.* • *The green belt of at least 10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. As many as 25000 trees to be planted per year during first five years. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.* • *All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 30th May, 2014 shall be satisfactorily implemented.* • *At least 5% of the total project cost shall be allocated for Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.* • *For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.* • *The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.* • *Continuous online (24X7) monitoring system, both for emissions and the effluent, shall be installed within the plant site for measurement of discharge and pollutants concentration. Data shall be uploaded on the company's website and provided to the respective ROs of MoEF&CC, CPCB and SPCB.* • *Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.* • *Wetland habitat shall be provided for migratory bird namely, Demoiselle crane, at the reservoir and green belt areas.* • *At least 10 natural surface water bodies shall be rejuvenated and developed as complete eco-system with the tree plantation development and growth using satellite imageries.* • *The international boundary is reportedly at a distance of 100-150 km from the project site. In view of the security apprehensions, necessary permission required, if any, shall be obtained from the Ministry of Defence and/or Ministry of Home Affairs.*

27.4 Terms of Reference

27.4.1	**Setting up 5000 TCD Sugar Cane crushing unit, Cogeneration Plant of 30 MW and Molasses based Distillery of 60 KLPD at Shirur village, Taluk and Disrict Bagalkot (Karnataka) by M/s Mellbro Sugar Pvt Ltd - ToR** **[IA/KA/IND2/66256/2017, J-11011/380/2017-IA II (I)]**

27.4.1.1	The project involves setting up 5000 TCD Sugar Cane crushing unit, Cogeneration Plant of 30 MW and Molasses based Distillery of 60 KLPD by M/s Mellbro Sugar Pvt Ltd in an area of 40.87 ha at Shirur village, Taluk and Disrict Bagalkot (Karnataka). The project/activity is covered under category A of item 5(g) 'Distillery' and category B of item 5(j) 'Sugar Industry' of the Schedule to Environmental Impact Assessment Notification, 2006 and requires appraisal at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.
27.4.1.2	*The EAC, after deliberations, recommended the proposal for grant of ToR for preparation of EIA/EMP reports for consideration of environmental clearance to the project 'Setting up 5000 TCD Sugar Cane crushing unit, Cogeneration Plant of 30 MW and Molasses based Distillery of 60 KLPD' by M/s Mellbro Sugar Pvt Ltd at Shirur village, Taluk and Disrict Bagalkot (Karnataka).* *The ToR shall include the standard ToR as specified/notified applicable for such project/activity, and the additional terms and conditions as under:* • *Public consultation shall be conducted as per EIA Notification, 2006.* • *For ground water abstraction, permission from the concerned regulatory authority/CGWA shall be obtained.* • *ESR plan for 5 years @5% of the project cost in consultation with nearby villagers to be submitted.* • *Layout plan earmarking space for development of green belt of 5 m width along the plant periphery, and also ensuring 33% of the project area to be developed as green area with native species plantation.* • *Compliance report for the existing environmental clearance, if any, duly certified by the concerned Regional Office of the Ministry to be submitted.*
27.4.2	**Polymer Modified Bitumen Plant & Polyvinyl Chloride Plant at village Dighi, Taluka Shrivardhan, District Raigad (Maharashtra) by M/s Veritas Polychem Pvt Ltd – ToR - [IA/MH/IND2/65968/2017, J-11011/365/2017-IA II (I)]**
27.4.2.1	The project involves manufacturing of PVC and Polymer Modified Bitumen, setting up gas based power plant, gas storage, LPG bottling plant and gas pipelines (2200 m) from jetty to different processing units by M/s Veritas Polychem Pvt Ltd, in a total area of 15.9440 ha at Dighi Port limits, village Dighi, Taluka Shrivardhan, District Raigad (Maharashtra).
27.4.2.2	During deliberations, the EAC desired for a clarity on different products proposed to be manufactured, their categorization vis-à-vis the provisions of the EIA Notification, 2006 and also the applicability of the said Notification. The Committee also asked for clarification through MCZMA regarding applicability of the CRZ Notification, 2011. *The proposal was, therefore, deferred for the required inputs/clarifications.*
27.4.3	**Installation of Ligno-Cellulosic 100 KLPD 2G Ethanol Project by M/s BPCL at village Agasode, Tehsil Bina in District Sagar (MP) - For ToR** **[IA/MP/IND2/65845/2017, J-11011/352/2017-IA II (I)]**
27.4.3.1	The project involves setting up Ligno-Cellulosic based 2G Ethanol Project of 100

	KLPD by M/s BPCL at village Agasode, Tehsil Bina in District Sagar (MP) in the Bina Refinery complex. The Ethanol so produced would be blended with the petroleum products (10:90) for further usages. In the background of the amended provisions [para 7(ii)(c)] vide Notification dated 23rd November, 2016 of para 7(ii) of the Principal EIA Notification, 2006, it was informed by the project proponent that there shall be no increase in production capacity of the refinery and also no increase in the pollution load due to setting up the Ethanol plant.
27.4.3.2	*The project proponent preferred to withdraw the proposal, and to examine the alternatives in view of the above referred Notification dated 23rd November, 2016.*
27.4.4	**Polymer Modified Bitumen Plant & Polyvinyl Chloride Plant at village Dighi, Taluka Shrivardhan, District Raigad (Maharashtra) by M/s Veritas Polychem Pvt Ltd - For ToR** **[IA/MH/IND2/64291/2017, J-11011/213/2017-IA II (I)]**
27.4.4.1	The project proponent informed the Committee that the same proposal was already submitted earlier also, and as such, the present proposal was being withdrawn. *The Committee agreed to the request of the project proponent.*

Members of the EAC (Industry-2) present during 27th meeting held on 28-29 August, 2017 at MoEF&CC, New Delhi

1.	Dr. J. P. Gupta	Chairman
2.	Sh. R. K. Singh	Member
3.	Dr. Ahmed Kamal*	Member
4.	Prof. J.R. Mudakavi	Member
5.	Dr. N. Nandini	Member
6.	Prof. (Dr.) H.R.V. Reddy	Member
7.	Ms. Saloni Goel	Member
8.	Shri Suhas Ramchandra Pharande	Member
9.	Shri Sanjay Bist	Member
10.	Sh. Paritosh Kumar	Member
11.	Prof. (Dr.) Y.V. Rami Reddy*	Member
12.	Shri S.K. Srivastava	Member Secretary

** Present only 2nd day of the meeting i.e.29th August, 2017.*