Minutes of 28th meeting of Expert Appraisal Committee held on 18-20 September, 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: 18th September, 2017

1. Opening remarks by the Chairman

2. Confirmation of the minutes of the 27th meeting held on 28-29 August, 2017 at N Delhi

The EAC, having taken note that no comments were offered on the minutes of its 27th meeting held on 28-29 August, 2017 at New Delhi, confirmed the same.

3. Consideration of proposals

28.3 (Environmental Clearance)

28.3.1	**Enhancement of existing molasses based distillery unit from 30 KLPD to 60 KLPD at Nasik Babhulgaon, Post Rakshi, Taluka Shevgaon, District Ahmednagar (Maharashtra) by M/s Gangamai Industries and Constructions Ltd (GIACL) -For reconsideration of EC** **[IA/MH/IND2/55812/2014, J-11011/14/2015/IA II (I)]**
28.3.1.1	The project proponent and the accredited Consultant M/s Equinox Environments (I) Pvt Ltd gave a detailed presentation on the salient features of the project and informed that: (i) The proposal is for expansion of molasses based distillery from 30 KLPD to 60 KLPD by M/s Gangamai Industries and Constructions Ltd (GIACL) located at Najik Babulgaon, Post Rakshi, Tehsil Shevgaon, District Ahmednagar (Maharashtra). (ii) All molasses based distilleries are listed at S.N. 5 (g) (i) of the Schedule to the Environment Impact Assessment (EIA) Notification, 2006 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). (iii) Earlier, the Ministry was issued EC vide letter No. J-11011/598/2010-IA-II (I)dated 2nd September, 2014 for 30 KLPD molasses based distillery unit to M/s Gangamai Industries and Constructions Ltd(GIACL) at District Ahmednagar (Maharashtra). (iv) The proposal was considered by the EAC (Industry-2) in its 34th meeting held during 17-19 February 2015 and recommended for grant of ToR. The ToR was issued by Ministry vide letter No. J-11011/14/2015/IA-II (I) dated 30th April 2015. (v) Details of existing and proposed products of the Distillery are as under:

Industrial Unit	**Product**	**Quantity**		
		Existing (30 KLPD)	**Expansion** (30 KLPD)	**After Expansion**(60 KLPD)
Distillery	Ethanol	900 KL/ M	900 KL/ M	1800 KL/M

Rectified Spirit	900 KL/ M	900 KL/ M	1800 KL/M
Extra Neutral Alcohol	335 KL/ M	900 KL/ M	1235 KL/M
By-product			
Fusel Oil	1.8 KL/M	1.8 KL/M	3.7 KL/M
CO_2 Gas	690 MT/M	690 MT/M	1,380 MT/M
Compost (from Spentwash treatment)	16,700 MT / Season	----	20,935 MT/ Season

(vi) Total plot area acquired by industry is 27.06 ha. Existing built up area of industry is 17.44 ha. After expansion of distillery, 0.5 ha built-up area will be increased.

(vii) Green belt will be developed in an area 10.17 ha. Total green belt will be 37.5% of total plot area.

(viii) The estimated cost for expansion of distillery is Rs.41.00 Crores and that of existing unit of Rs.14.93 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 27.82 Crores and the Recurring cost (operation and maintenance) will be about Rs. 2.30 Crores per annum.

(ix) Under proposed expansion of distillery, no new workers will be employed. Under existing 30KLPD distillery 30 workers are employed. Industry proposes to allocate Rs.2.25 Crores @ of 5.48 % towards Corporate Social Responsibility.

(x) It is reported that Jayakwadi Bird Sanctuary lies within 5.51 km distance of the project. River/ waterbody Godavari is flowing at a distance a distance of 13 km in East direction.

(xi) Ambient air quality monitoring was carried out at 6 locations during March to May 2015 and submitted baseline data indicates that ranges of concentrations of PM_{10} (51.73 – 63.65µg/m^3), $PM_{2.5}$(14.92 – 18.75 µg/m^3), SO_2 (8.25 – 11.87 µg/m^3) and NO_2 (12.80 – 18.77µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.22 µg/m^3 with respect to SO_2. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xii) Total water requirement after expansion during sugar crushing season (210days) would be 652 M^3/day. Out of the total water requirement, 150 M^3/day (23%) would be the fresh water (2.5 KL/KL of Alcohol) while 502 M^3/day (77%) would be condensate water recycle from Cane and treated effluent from CPU. On the other hand, during non-crushing season (60 days); out of total water requirement of 652 M^3/day, 300 M^3/day (46%) would be the fresh water (5.0 KL/KL of Alcohol) while 352 M^3/day (54%) would be treated effluent from CPU.

(xiii) The effluent generated from 60 KLPD molasses based distillery comprises of raw spentwash 480 CMD, Spent lees 120 CMD, cooling blow downs and effluent from lab & washing to the tune of 16.25 CMD. After expansion of distillery total spent wash will be primarily treated in bio-methanation plant followed by concentration in Multiple Effect Evaporator (MEE). Concentrated spent wash to the tune of 150 CMD will be forwarded for bio-composting along with filler material such as press mud, boiler ash & yeast sludge. Other effluents viz. cooling blow down, effluents from lab & washing will be treated in proposed Condensate Polishing Unit (CPU) along with MEE condensate. Treated water from CPU will be recycled in process for dilution of molasses. This achieves Zero Liquid Discharge (ZLD).

(xiv) Industry has its own 32 MW co-gen plant. Electricity requirement of distillery if 1 MW which fulfilled by co-gen plant. Existing 30 KLPD distillery has one DG sets of 900 kVA capacity, no new DG will be installed during proposed expansion. DG sets are used as standby during power failure. Stack (height 5.5 M.) is provided as per CPCB norms to the existing DG set.

(xv) No new boiler would be installed under expansion project. Details of Boilers are follows:

S.No	Fuel Consumption	Existing Boiler		Existing D.G. Set
		Biogas	Furnace Oil	
1	Capacity	8 TPH		900 kVA
2	Fuel type	Biogas/Furnace Oil		Diesel
3	Fuel quantity	675 M^3/Hr or 502 Kg /Hr		200 Lit / Hr.
4	Stack Height (AGL)	45 M		5.5 M
5	APC Equipment	--		Silencers

(xvi) Details of process emissions generation and its management is follows:

Process Emissions	Existing Quantity	After Expansion Quantity	Disposal
Carbon Dioxide	23 MT/D	46 MT/D	Compressed & Bottled in future

(xvii) Details of Solid waste/ Hazardous waste generation and its management is follows:

Solid Waste Type	Existing Quantity	After Expansion Quantity	Disposal
Yeast Sludge	7.3 MT/D	15 MT/D	Used for compostin g.

Details of Hazardous waste generated & its management

Hazardous Waste Category	Existing Quantity	After Expansion Quantity	Disposal
Used Oil (Cat. No. 5.1)	1 MT/Year	2 MT/Year	Authorized Reprocessor

xviii) Public hearing for the project was conducted by the Maharashtra Pollution Control Board (MPCB) on 16th January 2016.

(xix) Details of certified compliance report submitted by RO, MoEF& CC.

Date	Description
24.06.2015	Report on Compliance of earlier EC conditions submitted to RO; MoEFCC, Bhopal.
12.04.2016	Visit of RO; MoEFCC, Nagpur for inspection of Compliance

	in previous EC of 30 KLPD Distillery by GIACL, Ahamednagar, MS.
11.05.2016	Receipt of RO; MoEFCC, Nagpur report.
21.11.2016	Submission of compliance, on non-complied/partly complied EC conditions observed during RO visit on 12.04.2016.
23.02.2017	Visit of RO; MoEFCC, Nagpur to GIACL for verification of compliance
14.03.2017	Receipt of RO; MoEFCC, Nagpur re-certified report
17.03.2017	Submission of certified report of RO; MoEFCC, Nagpur to MoEFCC; New Delhi.
22.07.2017	Visit of RO; MoEFCC, Nagpur for Recertification of Non-Complied points observed during visit dated 14.03.2017.
25.07.2017	Receipt of RO; MoEFCC, Nagpur report.

28.3.1.2 The proposal for grant of environmental clearance was earlier discussed in the 12th EAC meeting held during 23-24 August 2016, 17th meeting held during 26-29 December, 2016 and 22nd meeting held during 17-18 April, 2017.

The EAC in its 22nd meeting held on 17-18 April, 2017 noted that as per the latest certified monitoring report submitted by the project proponent, the compliance of EC conditions was still under process. EAC desired that the project proponent need to submit the latest certified compliance report w.r.t. completion of road and rain water harvesting works. The EAC also suggested to submit five-year CSR plan @ 5% with the consultation of BDO. In view of the same, the EAC decided to defer the proposal for want of above additional information.

As desired by the EAC, the project proponent has submitted the latest certified monitoring report from the Regional Office of Ministry issued vide letter dated 25th July, 2017 and the CSR plan for five years.

28.3.1.3 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the project 'Expansion of Molasses based Distillery from 30 KLPD to 60 KLPD' by M/s Gangamai Industries and Constructions Ltd in a total area of 27.06 ha at Nasik Babhulgaon, Taluka Shevgaon, District Ahmednagar (Maharashtra).

The project/activity is covered under category A of item 5(g) 'Distillery' of the Schedule to EIA Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

The ToR for the project was granted on30th April 2015. Public hearing was conducted by the SPCB on 16th January 2016.

Total water requirement after expansion would be 652 cum/day. During crushing season, 150 cum/day shall be the fresh water (2.5 KL/KL of Alcohol) and 502 cum/day would be condensate water recycle from Cane and treated effluent from CPU. On the other hand, during non-crushing season, 300 cum/day would be the fresh water (5.0 KL/KL of Alcohol) while 352 cum/day shall be the treated effluent from CPU. Jayakwadi Irrigation Division of the State Government of Maharashtra has already granted permission to draw 0.071 Mm^3 of water per year from Gayakwadi Reservoir for

	industrial use, as per the agreement dated 4th December, 2014 between the State Government and the project proponent. 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. Consent to Operate for the present capacity of 30 KLPD has been obtained from the Maharashtra State Pollution Control Board, which is presently valid up to 31st August, 2017. The unit has applied for the renewal of the same. Earlier, the Ministry had issued environmental clearance on 2nd September, 2014 for the distillery of capacity 30 KLPD. The last monitoring report of the Ministry's Regional Office at Nagpur on compliance status of EC conditions, forwarded vide their letter dated 25th July, 2017 is found to be satisfactory. In case of some of the conditions partially complied or not-complied, the action plan submitted by the project proponent has been found to be adequately addressing the same. The proposal was last considered by the EAC in its meeting held on 22-23 April, 2017, wherein the Committee had desired for the latest certified compliance report w.r.t. completion of road and rain water harvesting works. The Committee had also suggested for submitting five-year CSR plan @ 5% with the consultation of BDO. In response to the above observations of the Committee, the project proponent has submitted the latest certified monitoring report from the Regional Office of Ministry issued vide letter dated 25th July, 2017 and the CSR plan for five years. The submissions and the clarifications provided by the project proponent were examined and found to be in order. The project site is reported to be at a distance of 5.6 km from the Jayakwadi Bird Sanctuary, for which the ESZ is yet to be notified. Project proponent has applied for clearance from the Standing Committee of NBWL on 17th May, 2016.
28.3.1.4	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to the compliance of terms and conditions as under:-* • *The environmental clearance is subject to obtaining prior clearance from the wildlife angle including clearance from the Standing Committee of the National Board for Wildlife as applicable. Grant of environmental clearance does not necessarily implies that Wildlife Clearance shall be granted to the project and that their proposals for Wildlife Clearance will be considered by the respective authorities on their merits and decision taken. The investment made in the project, if any, based on environmental clearance so granted, in anticipation of the clearance from wildlife angle shall be entirely at the cost and risk of the project proponent and Ministry of Environment, Forest & Climate Change shall not be responsible in this regard in any manner.* • *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. • *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. 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 300 cum/day. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.* • *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.* • *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 January, 2016 shall be satisfactorily implemented.* • *At least 2.5% 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 ROs of MoEF&CC, CPCB and SPCB.*
28.3.2	**Expansion of Pharma Intermediate & Bulk Drugsfrom 8.71 MTPM to 26 MTPMat Plot No.911, 912 & 922 GIDC, Phase-III, Tehsil Vapi, District Valsad (Gujarat) by M/s Megafine Pharma Pvt Ltd - For reconsideration of EC** **[IA/GJ/IND2/50238/2016, J-11011/72/2016- IA II(I)]**
28.3.2.1	The project proponent and the accredited Consultant M/s Unistar Environment and Research Labs Pvt Ltd, Vapi made a detailed Presentation on the salient features of the project and informed that: (i) The proposal is for manufacturing of Pharma Intermediates and APIs at the rate of 26.71MT/month from the existing of 8.71MT/Month by M/s Megafine Pharma (P) Ltd, located at Plot no. 911-912, 922 GIDC, Phase-III, Vapi, District Valsad (Gujarat). (ii) All Products are listed at S.N. 5(f)- Synthetic Organic Chemicals of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006 Under category 'B' but are appraised as Category-A at Central Level by Expert Appraisal Committee (EAC) due to applicability of General condition. (iii) The proposal was considered by the EAC (Industry-2) in its 9th meeting held during 27th June, 2016 and recommended for grant ofToR for the project. The ToR was issued by Ministry vide letter No. J-11011/72//2016-IA II(I)dated 2nd August 2016. (iv) The existing unit was established in 1980 before the implementation of EIA Notification, 2006. (v) Existing land area is 3992 sqm. No additional land will be used for proposed expansion. (vi) Details of existing and proposed products are as under: **Existing Product**

S. No.	PRODUCTS	CAS No.	Quantity (TPA)
1.	N-Methyl-3-phenyl piperazine*	5271-27-2	35.0
2.	1-(3-Hydroxymethyl pyridyl-2)-2-phenyl-4-methylpiperazine *	61337-89-1	
3.	1-[2-(Amino)-1-(4-methoxyphenyl ethyl)] cyclohexanolHCl*	149289-31-6	4.0
4.	Dibenzo-[b,f][1,4]-thiazepine-11(10H)-one*	3159-07-7	47.0
5.	N-[Dibenzo-[b,f][1,4]-thiazepine-11-yl] piperazinedihydrochloride*	111974-74-4	
6.	1-(2-(2-Hydroxyethoxy)-ethyl) piperazine*	13349-82-1	
7.	Piperazinedihydrochloride*	207605-49-0	
8.	N-Phenyl Piperazine*	92-54-6	5.0
9.	2,3,4,5-Bis-o-(1-methylethylidine)-B-D-Fructopyranose *	20880-92-6	1.0
10.	N-ethoxy carbonyl Piperazine *	120-43-4	2.0
11.	4,6-Dichloro-5-(2-methoxyphenoxy)-2,2'-bipyrimidine*	150728-13-5	1.0
12.	4-(4-Aminophenyl)-3-morpholinone*	438056-69-0	2.0
13.	2-[(S)-2-Oxiranylmethyl]-1H-isoindole-1,3-(2H)-dione*	161596-47-0	
14.	5-(4-Bromophenyl)-4,6-dichloropyrimidine*	146533-41-7	0.5
15.	Ethyl chloro [(4-ethoxyphenyl)hydrazono]acetate*	27143-07-3	1.0
16.	Ethyl 5-piperazin-1-yl-1-benzofuran-2-carboxylate*	163521-20-8	1.02
17.	3-(4-Chlorobutyl)-1H-indole-5-carbonitrile*	143612-79-7	
18.	6-Chloro-2-oxindole*	56341-37-8	2.0
19.	1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridine-3-carbonitrile*	256499-19-1	0.5
20.	3-(2-Chloroethyl)-9-hydroxy-2-methyl-6,7,8,9-tetrahydro-4H-pyrido-[1,2-a]pyrimidin-4-one*	130049-82-0	0.5
21.	(S)-N-{(3, 4-Dimethoxybenzocyclobut-1-yl)}-N-(methyl)]-N-(methyl) amine HCl*	866783-13-3	1.0
22.	2-(4-Nitrophenyl) ethanamine HCl*	29968-78-3	1.0
Production Capacity per Year		**--**	**104.52**
Production Capacity per Month			**8.71**
23.	Multi milling, Blending, Packing, Labeling of Bulk Drugs and Intermediates like,: All types of Piperazine derivatives like, Pharma Intermediates and products like, Anthelmentic intermediates and products	--	**600.00**
Multi milling, Blending, Packing & Labeling Capacity per Month		--	**50.00**

Proposed products and their capacities (after Expansion)

S. No	PRODUCTS	CAS No.	Quantity (TPA)		
			Existing	Proposed	Total
1.	**Mirtazapine:** *(±)-2-methyl-1,2,3,4,10,14b-hexahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepine*	61337-67-5	35.0	19.0	54.0

		a) N-Methyl-3-phenyl piperazine*	5271-27-2			
		b) 1-(3-Hydroxymethyl pyridyl-2)-2-phenyl-4-methylpiperazine *	61337-89-1			
		c) 1-(3-Carboxy Pyridyl-2)-2-Phenyl-4-Methyl Piperazine *	61338-13-4			
	2.	**VenlafaxineHydrochloride;** *(RS) -1-[2-dimethylamino-1-(4-methoxyphenyl)-ethyl]cyclohexanol*	508233-74-7	4.0	8.5	12.5
		a) 1-[2-(Amino)-1-(4-methoxyphenyl ethyl)] cyclohexanolHCl*	149289-31-6			
	3.	**Desvenlafaxine Succinate***; 4-[2-dimethylamino-1-(1-hydroxycyclohexyl)ethyl]phenol*	93413-62-8			
	4.	**Quetiapine Hemifumarate;** *2-[2-(4-Dibenzo[b,f][1,4]thiazepin-11-yl-1-piperazinyl)ethoxy]ethanol hemifumarate*	111974-69-7	47.0	51.0	98.0
		a) Dibenzo-[b,f][1,4]-thiazepine-11(10H)-one*	3159-07-7			
		b) N-[Dibenzo-[b,f][1,4]-thiazepine-11-yl] piperazinedihydrochloride*	111974-74-4			
		c) 1-(2-(2-Hydroxyethoxy)-ethyl) piperazine*	13349-82-1			
		d) Piperazinedihydrochloride*	207605-49-0			
	5.	N-Phenyl Piperazine*	92-54-6	5.0	5.0	10.0
	6.	2,3,4,5-Bis-o-(1-methylethylidine)-B-D-Fructopyranose *	20880-92-6	1.0	0	1.0
	7.	N-ethoxy carbonyl Piperazine *	120-43-4	2.0	1.0	3.0
	8.	**BosentanMonohydrate;** *4-tert-butyl-N-[6-(2-hydroxyethoxy)-5-(2-methoxyphenoxy)-2-(pyrimidin-2-yl)pyrimidin-4-yl]benzene-1-sulfonamide*	147536-97-8	1.0	3.5	4.5
		a) 4,6-Dichloro-5-(2-methoxyphenoxy)-2,2'-bipyrimidine	150728-13-5			
	9.	**Rivaroxaban**;*5-chloro-N-({(5S)-2-oxo-3-[4-(3-oxomorpholin-4-yl)phenyl]-1,3-oxazolidin-5-yl} methyl)thiophene-2-carboxamide*	366789-02-8	2.0	6.0	8.0
		a) 4-(4-Aminophenyl)-3-morpholinone*	438056-69-0			
		b) 2-({(5S)-2-Oxo-3-[4-(3-oxomorpholin-4-yl)phenyl]-1,3-	446292-08-6			

		oxazolidin-5-yl}methyl)-1H-isoindole-1,3(2H)-dione				
		c) 4-{4-[(5S)-5-(Amino methyl)-2-oxo-1,3-oxazolidin-3-yl] phenyl}morpholin-3-one HCl*	898543-06-1			
		d) 2-[(S)-2-Oxiranylmethyl]-1H-isoindole-1,3-(2H)-dione*	161596-47-0			
	10.	**Macitentan**;*N-[5-(4-bromophenyl)-6-[2-[5-bromo-2-pyrimidinyl)oxy]-ethoxy]-4-pyrimidinyl]-N-propylsulfamide*	441798-33-0	0.5	5.0	5.5
		a) 5-(4-Bromophenyl)-4,6-dichloropyrimidine*	146533-41-7			
	11.	**Apixaban;** *1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxopiperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide*	503612-47-3	1.0	4.0	5.0
		a) Ethyl chloro [(4-ethoxyphenyl)hydrazono]acetate *	27143-07-3			
		b) 3, 3-Dichloro-1-(4-nitrophenyl) piperdin-2-one	881386-01-2			
		c) 1-(4-Nitrophenyl)-3-morpholin-4-yl-5,6-dihydropyridin-2(1H)-one	503615-03-0			
		d) Ethyl 6-(4-nitrophenyl)-1-(4-methoxyphenyl)-7-oxo-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxylicacid ethyl ester	536759-91-8			
	12.	**Vilazodone** Hydrochloride;*5-(4-(4-(5-cyano-1H-indol-3-yl) butyl) piperazin-1-yl) benzofuran-2-carboxamide Hydrochloride*	163521-12-8	1.02	0.78	1.8
		a) Ethyl 5-piperazin-1-yl-1-benzofuran-2-carboxylate*	163521-20-8			
		b) 3-(4-Chlorobutyl)-1H-indole-5-carbonitrile*	143612-79-7			
	13.	**Ziprasidone***Hydrochloride; 5-[2-[4-(1,2-Benzisothiazol-3-yl)-1-piperazinyl]ethyl]-6-chloro-1,3-dihydro-2H-indol-2-one hydrochloride monohydrate*	146939-27-7	2.0	2.25	4.25
		a) 6-Chloro-2-oxindole*	56341-37-8			
		b) 6-Chloro-5-(chloroethyl)-1,3-dihydro-2H-indole-2-one	118289-55-7			
		c) 3-Piperazin-1-yl-1,2-benzisothiazole HCl	87691-88-1			
	14.	**Riociguat;***methyl {4,6-diamino-2-[1-(2-fluorobenzyl)-1H-*	625115-55-1	0.5	4.5	5.0

		pyrazolo[3,4-b]pyridin-3-yl]pyrimidin-5-yl}methylcarbamate				
		a) 1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridine-3-carbonitrile*	256499-19-1			
		b) 1-(2-Fluorobenzyl)-1H-pyrazolo [3,4-b]pyridine-3-carboximidamide]	256499-19-1			
		c) [(E)-Phenyl diazenyl] Malononitrile	6017-21-6			
	15.	**Paliperidone***(RS)-3-[2-[4-(6-fluoro-1,2-benzoxazol-3-yl)piperidin-1-yl]ethyl]-9-hydroxy-2-methyl-6,7,8,9-tetrahydropyrido[1,2-a]pyrimidin-4-one*	144598-75-4	0.5	1.0	1.5
		a) 3-(2-Chloroethyl)-9-hydroxy-2-methyl-6,7,8,9-tetrahydro-4H-pyrido-[1,2-a]pyrimidin-4-one*	130049-82-0			
	16.	**Paliperidone Palmitate**; *(9RS)-3-[2-[4(6-Fluoro-1,2-benzisoxazol-3-yl)piperidin-1-yl]ethyl]-2-methyl-4-oxo-6,7,8,9-tetrahydro-4Hpyrido[1,2-a]pyrimadin-9-yl hexadecanoate.*	144598-75-4			
	17.	**Ivabradine**;*3-(3-{[((7S)-3,4-Dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl) methyl] methyl amino}propyl)-1,3,4,5-tetrahydro-7,8-dimethoxy-2H-3-benzazepin-2-one hydrochloride*	155974-00-8	1.0	0.5	1.5
		a) (S)-N-{(3, 4-Dimethoxybenzocyclobut-1-yl)}-N-(methyl)]-N-(methyl) amine HCl*	866783-13-3			
	18.	**Mirabegron**;*2-(2-Amino-1,3-thiazole-4-yl)-N-[4-(2-{[(2R)-2-hydroxy-2-phenylethyl] amino}ethyl) phenyl] acetamide*	223673-61-8	1.0	5.5	6.5
		a) 2-(4-Nitrophenyl) ethanamineHCl*	29968-78-3			
		b) (R)-2-Hydroxy-N-[2-(4-nitrophenyl)ethyl]-2-phenylacetamide	521284-19-5			
		c) (R)-2-[2'-(4-Nitrophenyl)ethyl]amino]-1-phenylethanol HCl	521284-21-9			
		d) (R)-2-[[2-(4-Aminophenyl)ethyl]-amino]-1-phenylethanol HCl	521284-22-0			
	19.	**Edoxaban** ; *N'-(5-chloropyridin-*	480449-	0	2.5	2.5

		2-yl)-N-[(1S,2R,4S)-4-(dimethylcarbamoyl)-2-[(5-methyl-6,7-dihydro-4H-[1,3]thiazolo[5,4-c]pyridine-2-carbonyl)amino]cyclohexyl]oxamide	70-5			
		a) 2-[(5-Chloropyridin-2-yl)-2-oxoacetic acid	480450-83-7			
		b) 5-Methyl-4,5,6,7-tetrahydro thiazolo[5,4-c] pyridine-2-carbixylic Acid hydrochloride	720720-96-7			
		c) Tert-Butyl(1R,2S,5S)-2-azido-5-[(dimethylamino) carbonyl] cyclohexylcarbamate	365998-36-3			
	20.	**Dabigatran**;*Ethyl-3-{[(2-{[(4-{N'hexyloxycarbonylcarbamimidoyl}phenyl)amino]methyl}-1-methyl-1H-benzimidazol-5-yl)carbonyl] (pyridin-2-yl-amino)propanoate*	211915-06-9	0	3.0	3.0
		a) Ethyl 3-(4-(methylamino)-3-nitro-N-(pyridin-2-yl)benzamido)propanoate	429659-01-8			
		b) 3-[(3-Amino-4-methylaminobenzoyl)pyridin-2-ylamino]propionic acid ethyl ester	212322-56-0			
		c) 3-[[[2-[[(4-Cyanophenyl)amino]methyl]-1-methyl-1H-benzimidazol-5-yl] carbonyl]Pyridine-2-ylamino]propionic acid ethyl ester	211915-84-3			
		d) Ethyl 3-(2-((4-carbamimidoyl-phenylamino)methyl)-1-methyl-N-(pyridin-2-yl)-1H-benzo[d]imidazole-5-carboxamido) propanoateHCl	429658-95-7			
	21.	**Vortioxetine;** *1-[2-(2,4-Dimethyl-phenylsulfanyl)-phenyl]piperazine*	508233-74-7	0	3.5	3.5
		a) 2,4-Dimethyl-1-[(2-itrophenyl)thio] benzene	1610527-49-5			
		b) 2,4-Dimethyl benzenethiol	13616-82-5			
	22.	**Donepezil**Hydrochloride*; (RS)-2-[(1-benzyl-4-piperidyl)methyl]-5,6-dimethoxy-2,3-dihydroinden-1-one*	120014-06-4	0	6.5	6.5
		a) 1-Benzyl piperidine-4-carbaldehyde	22065-85-6			
		b) 1-Benzyl-4-[(5,6-	120014-			

			dimethoxy indanon)-2-ylidenyl] methylpiperidine	07-5			
			c) 5,6-Dimethoxy-2-(pyridin-4-yl methylene)-indan-1-one	4803-74-1			
			d) 2-(1-benzyl-1,2,3,6-tetrahydro-pyridine-4yl)methylene-5,6-dimethoxy indan-1-one hydrochloride	694-05-3			
		23.	**Memamtine** Hydrochloride; *3,5-dimethyltricyclo[3.3.1.13,7]decan-1amine or 3,5-dimethyladamantan-1-amine*	41100-52-1	0	5.0	5.0
			a) N-(3,5-dimethyl-1-adamantyl)acetamide	19982-07-1			
		24.	**Ambrisentan**; *(+)-(2S)-2-[(4,6-dimethylpyrimidin-2-yl)oxy]-3-methoxy-3,3-diphenylpropanoic acid*	177036-94-1	0	1.05	1.05
			a) 2-Hydroxy-3-methoxy-3,3-iphenylpropanoic acid	178306-51-9			
			b) (2S)-2-Hydroxy-3-methoxy-3,3-diphenyl propanoic acid	178306-52-0			
		25.	Ammonium benzene sulfonate	19402-64-3	0	1.0	1.0
		26.	**Selexipag** ;*2-{4-[(5,6-diphenylpyrazin-2-yl)(propan-2-yl)amino]butoxy}-N-(methanesulfonyl)acetamide*	475086-01-2	0	8.0	8.0
			a) 4-Hydroxybutyl(isopropyl)amine	42042-71-7			
			b) 5-Chloro-2,3-diphenylpiprazine	41270-66-0			
			c) 2-Ethoxy-5-(4-Methyl Piperazinyl Sulfonyl) Benzoic Acid	194602-23-8	0	2.0	2.0
			d) 4-amino-1-Methyl-3-n-propyl-5-pyrazolecarboxamide hydrochloride(MPC-VII)	139756-02-8			
		27.	**Asenapine** Maleate*; (3aRS,12bRS)-rel-5-Chloro-2,3,3a,12b-tetrahydro-2-methyl-1H-dibenz[2,3:6,7]oxepino[4,5-c]pyrrole*	65576-45-6	0	0.2	0.2
			a) 11-Chloro-2,3-dihydro-2-methyl-1H-dibenz[2,3:6,7] oxepino[4,5-c]pyrrol-1-one	1012884-46-6			
			b) Trans-11-Chloro-2,3,3a, 12b-tetrahydro-2-methyl-1H-dibenz [2, 3:6, 7] oxepino [4,5-c]pyrrol-1-one	129385-59-7			

	28.	**Iloperidone;** *1-[4-[3-[4-(6-fluoro-1,2-benzoxazol-3-yl)piperidin-1-yl]propoxy]-3-methoxyphenyl]ethanone*	133454-47-4	0	1.0	1.0
		a) 1-[4-(3-Chloropropoxy)-3-methoxyphenyl]ethanone	58113-30-7			
	29.	**Lurasidone**Hydrochloride*; (3aR,4S,7R,7aS)-2-{(1R,2R)-2-[4-(1,2-benzisothiazol-3-yl)piperazin-1-ylmethyl] cyclohexylmethyl}hexahydro-4,7-methano-2H-isoindole-1,3-dione*	367514-87-2	0	5.5	5.5
		a) (1R,2R)-Cyclohexane-1,2-diyldimethanol	65376-05-8			
		b) 3-Piperazin-1-yl-1,2-benzisothiazole	87691-87-0			
		c) (3aR,4S,7R,7aS)-Hexahydro-4,7-methano-2H-isoindole-1,3-dione	14805-29-9			
	30.	**Brexpiprazole;** *7-{4-[4-(1-benzothiophen-4-yl)piperazin-1-yl]butoxy}quinolin-2(1H)-one*	913611-97-9	0	5.0	5.0
		a) 1-(1-Benzothiophen-4-yl)piperazine hydrochloride	913614-18-3			
	31.	**Cariprazine;** *N-[trans-4-[2-[4-(2,3-dichlorophenyl)-1-piperazinyl]-ethyl]-cyclohexyl]-N,N-dimethyl urea monohydrochloride*	839712-12-8	0	1.55	1.55
		a) N-[trans-4-(2-oxoethyl) cyclohexyl]-, 1,1-dimethylethyl ester	215790-29-7			
		b) Trans-(4-amino-cyclohexyl)-acetic Acid	2952-00-3			
	32.	**Solifenacin***Succinate; 1-azabicyclo[2.2.2]oct-3-yl (1R)-1-phenyl-3,4-dihydro-1H-isoquinoline-2-carboxylate*	242478-37-1	0	3.0	3.0
		a) (1S)-1-Phenyl-1,2,3,4-tetra hydro isoquinoline	118864-75-8			
	33.	**Darifenacin** Hydrobromide; *(S)-2-[1-[2-(2,3-dihydrobenzofuran-5-yl)ethyl] pyrrolidin-3-yl] -2,2-diphenyl-acetamide*	133099-04-4	0	1.0	1.0
		a) (S)-2,2-Diphenyl-2-(pyrrolidin-3-yl)acetamide tartrate	134002-26-9			
	34.	**Teriflunomide***;(Z)-2-Cyano-3-hydroxy-but-2-enoic acid-(4-trifluoromethylphenyl)amide*	163451-81-8	0	1.5	1.5
		i. 5-Methylisoxazole-4-carboxylic acid	42831-50-5			
	35.	**Ticagrelore;** *(1S,2S,3R,5S)-3-[7-*		0	0.4	0.4

		[(1R,2S)-2-(3,4-Difluorophenyl)cyclopropylamino] -5-(propylthio)- 3H-[1,2,3]triazolo[4,5-d]pyrimidin-3-yl]-5-(2-hydroxyethoxy)cyclopentane-1,2-diol	274693-27-5			
		a) 4,6-Dichloro-2-(propylthio)pyrimidin-5-amine	145783-15-9			
	36.	**Apremilast**;N-{2-[(1S)-1-(3-Ethoxy-4-methoxyphenyl)-2-(methylsulfonyl)ethyl]-1,3-dioxo-2,3-dihydro-1H-isoindol-4-yl}acetamide	608141-41-9	0	6.5	6.5
		a) 3-Acetamidophthalic anhydride	6296-53-3			
		b) (S)-1-(3-Ethoxy-4-methoxyphenyl)-2-(methylsulfonyl)ethylamine	608141-42-0			
	37.	**Ivacaftor***N-(2,4-Di-tert-butyl-5-hydroxyphenyl)-4-oxo-1,4-dihydroquinoline-3-carboxamide*	873054-44-5	0	6.0	6.0
		a) 4-Oxo-1,4-dihydroquinoline-3-carboxylic acid ethyl ester	52980-28-6			
		b) 5-Amino-2,4-di-tert-butylphenol	873055-58-4			
	38.	**Lumacaftor**;*3-(6-(1-(2,2-difluorobenzo[d][1,3]dioxol-5-yl) cyclopropanecarboxamido)-3-methylpyridine-2-yl)benzoic acid*	936727-05-8	0	0.7	0.7
	39.	**Suvorexant;***[(7R)-4-(5-chloro-1,3-benzoxazol-2-yl)-7-methyl-1,4-diazepan-1-yl][5-methyl-2-(2H-1,2,3-triazol-2-yl)phenyl]methanone*	1030377-33-3	0	1.25	1.25
		a) Benzyl (5R)-5-methyl-1,4-diazepane-1-carboxylate hydrochloride	1030377-27-5			
	40.	**Netupitant;***2-[3,5-Bis(trifluoromethyl)phenyl]-N,2-dimethyl-N-[4-(2-methylphenyl)-6-(4-methyl-1-piperazinyl)-3-pyridinyl]propanamide*	290297-26-6	0	0.3	0.3
	41.	**Vildagliptine**;(*2S)-1-[(3-hydroxy-1-adamantyl) amino] acetyl-2-cyanopyrrolidine*	274901-16-5	0	3.5	3.5
		a) 3-Aminoadamantan-1-ol	702-82-9			
		b) (2S)-1-(Chloroacetyl) pyrrolidine-2-carbonitrile	207557-35-5			
	42.	**Cinacalcet hydrochloride ;***(R)-N-[1-(1-naphthyl)ethyl]-3-*	226256-56-0	0	3.5	3.5

		[3-(trifluoromethyl)phenyl]propan-1-amine				
		a) (R)-(+)-1-(1-Naphthyl) ethylamine HCl	82572-04-1			
		b) 3-[3-(Trifluoromethyl) phenyl] propanol	78573-45-2			
		c) 1-(3-Bromopropyl)-3-(trifluoromethyl) benzene	129254-76-8			
	43.	**Prasugrel** Hydrochloride; *(RS)-5-[2-Cyclopropyl-1-(2-fluorophenyl)-2-oxoethyl]-4,5,6,7-tetrahydrothieno[3,2-c]pyridin-2-yl acetate*	150322-43-3	0	1.5	1.5
		a) Prasugrel free base	150322-43-3			
	44.	**PyrantelPamoate/Embonate**; *4-[(3-Carboxy-2-hydroxynaphthalen-1-yl)methyl]-3-hydroxynaphthalene-2-carboxylic acid; 1-methyl-2-[(E)-2-thiophen-2-ylethenyl]-5,6-dihydro-4H-pyrimidine*	15686-83-6	0	3.5	3.5
		a) Disodium pamoate	6640-22-8			
		b) Pamoic acid	130-85-8			
		c) 1,2-Dimethyl-1,4,5,6-tetrahydropyrimidine	4271-96-9			
	45.	**Pyrantel tartarate**/*Zeolex;1-Methyl-2-(2-[2-thienyl]ethenyl)-1,4,5,6-tetrahydropyrimidine*	33401-94-4	0	3.0	3.0
	46.	**OxantelPamoate**	68813-55-8	0	2.0	2.0
	47.	**Morantel Citrate**	69525-81-1	0	2	2
		a) Thiophene-2- Aldehyde	98-03-3			
		b) 3-Methylthiophene -2-Aldehyde	616-44-4			
	48.	**Morantel Tartarate**	26155-31-7	0	1.0	1.0
	49.	**Brinzolamide***;(R)-3,4-Dihydro-4-(ethylamino)-2-(3-methoxypropyl)-2H-thieno[3,2-e][1,2]thiazine-6-sulfonamide-1,1-dioxide*	138890-62-7	0	0.5	0.5
	50.	**Rolapitant;***(5S ,8S)-8-[[(1R)-1-[3 ,5-Bis(trifluoromethyl)phenyl] ethoxy] methyl]-8-phenyl-1,7-diazaspiro [4.5]decan-2-one hydrochloride monohydrate*	552292-08-7	0	0.5	0.5

51.	**Neostigmine**;*3-{[(dimethylamino)carbonyl]oxy}-N,N,N-trimethylbenzenaminium*	59-59-4	0	0.5	0.5
52.	**Blonanserin;***2-(4-ethylpiperazin-1-yl)-4-(4-fluorophenyl)-5,6,7,8,9,10-hexahydrocycloocta[b]pyridine*	• 132810-10-7	0	0.4	0.4
53.	(+)-(2-chlorophenyl) (6,7-dihydro4H-thieno [3,4-C] pyridine -5yl) acetic acid methyl ester (-) camphor sulphonic acid salt	120202-66-6	0	0.1	0.1
54.	1-(2,4-Difluorophenyl)-2-(1H 1,2,4-triazol-1-yl)-1-ethanone	86404-63-9	0	0.25	0.25
55.	**Duloxetine** Hydrochloride*;(3S)-N-Methyl-3-(naphthalen-1-yloxy)-3-(thiophen-2-yl)propan-1-amine Hydrochloride,*	136434-34-9	0	0.25	0.25
56.	**Pilot Plant Capacity (API & Intermediates under R&D)**	--	0.0	1.0	1.0
Production Capacity per Year		**--**	**104.52**	**207.48**	**312.00**
Production Capacity per month		**--**	**8.71**	**17.29**	**26.00**
57	**Multi milling, Blending, Packing, Labelling of Bulk Drugs and Intermediates like**,: All types of Piperazine derivatives like, Pharma Intermediates and products like, Anthelmentic intermediates and products		**600.00**	**0.00**	**600.00**

#The Quantity of Products Includes Cumulative of API & its Intermediates. Unit will manufacture campaign based products as per market demand. Company will either manufacture one product or all products as listed and the Total manufacturing quantity will be within 26 MT/Month.*Marked indicates existing products of our unit as per the CC&A issued by GPCB. We have GPCB issued CC&A for Cumulative Production Capacity @8.71 MT/Month (104.52 MT/Year) for Intermediates and additionally @50 MT/Month (600 MT/Year) for Multi milling, Blending, Packing, Labeling of pharma products.

(vii) Industry has already developed greenbelt in area of 15% i.e., 598.80 sqm out of 3992.00 sqm of area of the project. Company is always involved in green belt developing activity with local NGOS like VIA, Lions club, Rotary clubs, schools etc. Further the company has procured a plot and area for the green belt development from the notified office and VIA (Vapi Industrial Association).

(viii) The estimated project cost is Rs.24 Crores including existing investment of Rs.15.15 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 0.98 Crores and the Recurring cost (operation and maintenance) will be about Rs. 41.80 Lakhs per annum.

(ix) Total employment will be 208 persons as direct & considerable number persons indirect after expansion. Industry proposes to allocate Rs. 0.48 Crores @ of 2 % towards Corporate Social Responsibility.

(x) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc. within 10 km distance of the project.

Damanganga River is flowing at a distance of 7 km in South West direction.

(xi) Ambient air quality monitoring was carried out at 6 Locations during October2016 to December,2016 and submitted baseline data indicates that ranges of concentrations of PM10 (40-96ug/m3), PM2.5 (15- 39ug/m3), SO2 (14-29.3 ug/m3), NO2 (14.4– 27.5 ug/m3) and CO (1.0– 2.0 mg/m3) respectively. VOC is BDL (Detection limit is 0.1 ppm) at all monitoring stations. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.00445 ug/m^3, 0.01843 ug/m^3 and 0.13559 ug/m^3 with respect to PM_{10}, $SO_x$and NO_X. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xii) Total water requirement is 82.18 KL/day of which fresh water requirement of 82.18 KL/day and will be met from GIDC Water Supply Dept. Vapi.

(xiii) The domestic waste water generated after proposed expansion @12 KL/day (Existing- 6 KL/day and Additional- 6 KL/day) will be treated in adequate STP. The treated sewage will be utilised as irrigation water.

(xiv) After, expansion the waste water generated from industrial activity will be 28.35 KL/day (Existing- 8.15 KL/day and Additional- 20.02 KL/day). Of which the dilute effluent stream of 4.15 KL/day will be treated using adequate in-house ETP then, will be disposed off through underground drainage to CETP, Vapi. The 24.2 KL/day concentrated streams will be sent to CETP for CMEE through tankers with required manifest.

(xv) The company has obtained membership and NOC for common effluent treatment plant by VGEL for CMEE, Vapi. The CMEE is recovering the condensate which is being reused in CETP for various usages.

(xvi) Power requirement after expansion will be 1000 HP including existing 300 HP and will be met from Dakshin Gujarat Vij Co. Ltd. Existing unit has two DG sets of 250 & 25 KVA capacity and additionally One DG set of 250 kVA is proposed which will be used as standby during power failure. Stack (height 6 m) will be provided as per CPCB norms to the proposed DG sets of 250 kVA in addition to the existing DG sets of 250 & 25 kVA.

(xvii) Existing unit has 2 nos. of boilers with capacity 1120 kg/day & 850 kg/day running on PNG/LDO. Stack height of 11 m will be installed for controlling the Particulate emissions (within statutory limit of 15 mg/Nm^3) for proposed PNG fired boilers of capacity 1120 kgs/day.

(xviii) Existing unit has one Thermic Fluid heater (Capacity- 4 lac Kcal/hr) PNG/LDO fired with stack height of 11 m. Additional one Thermic Fluid heater (Capacity- 4 lac Kcal/hr) PNG/LDO fired with stack height of 11 m will be installed.

(xix) One pulverizer is attached to dust collector with a stack height of 9 m, used as an air pollution control system.

(xx) Details of hazardous and solid wastes are as under:

S. No.	Name of the Waste	Source	HW Sch. Category	Quantity Existing	Total Quantity after proposed change	Method of Disposal
1.	ETP Waste	Effluent Treatment Plant	35.3	15 MT/Year	15 MT/Year	Collection, Storage at designated place, Transportation, Disposal at TSDF, Vapi

	2.	Used Oil	Machinery	5.1	120 Lit/Year	500 Lit/Year	Collection, Storage closed containers, Transportation, disposal by selling to registered recyclers.
	3.	Discharged Container/Bags/Liners	Raw Materials	33.1	1800 Nos./Year	8000 Nos./Year Min./as generated	Collection, Storage, Decontamination, Disposal by selling to registered vendor.
	4.	Used Filter Cloth	Mfg. Process	32.2	0.06 MT/Year	0.50 MT/Year	Collection, Storage, transportation, Disposal at TSDF.
	5.	Spent Solvent	Mfg. Process	28.6	15 MT/Month	75 MT/Month	Storage and reuse within premises or sale to registered spent solvent distillation facilities.
	6.	Distillation Residue	Mfg. Process	28.1	18 MT/Year	100 MT/Year	Collection, storage, transportation, disposal at TSDF of SEPPL-Kutch or by Co-processing in Cement industry.
	7.	Spent Carbon	Mfg. Process	28.3	2 MT/Year	6 MT/Year	Collection, storage, transportation, disposal at TSDF of SEPPL-Kutch or by Co-processing in Cement industry.

(xxi) Public hearing for the proposed 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 of GIDC, Vapi.

(xxii) There is no litigation pending against the proposal.

28.3.2.2 The proposal was earlier considered by the EAC in its 25th meeting held during 5-7 July, 2017. The Committee had noted that the project proponent has not mentioned the CAS number and specific quantity of each product in the proposed product list. The EAC also noted that the project proponent has done the monitoring of only one river from one location instead of two rivers. The EAC after detailed deliberation deferred the proposal for want of following information/documents:

- Specific quantity of each product with CAS number to be submitted.
- Surface water quality monitoring report of Rati River to be submitted.
- Ground water monitoring report for another 2 or 3 locations to be submitted.
- Commitment to adopt ZLD.
- Commitment to use 50% power from solar power only.

The project proponent vide letter dated 1st August, 2017, has submitted the specific

	quantity of each product with CAS number, surface water quality monitoring report of Rati river and ground water monitoring report for 3 more locations. The project proponent has informed that complete adoption of ZLD is not feasible. The company has obtained membership and NOC for common effluent treatment plant by VGEL for CMEE/CETP. They have also committed to use 50% of power requirement through solar power supply.
28.3.2.3	During deliberations, the EAC noted the following:- The proposal is for environmental clearance to the expansion project of manufacturing Pharma Intermediates and APIs from 8.71 TPM to 26 TPM by M/s Megafine Pharma (P) Ltd in a total area of 3992 sqm located at Plot no. 911-912, 922 GIDC, Phase-III, Vapi, District Valsad (Gujarat). The project/activity is covered under category B of item 5(f) 'Drugs & Drug Intermediates' of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at the State level by the SEIAA. 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 2nd August, 2016 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 project is reported to be established before 1980, and thus not requiring/having any prior EC. As such, there is no requirement of the compliance monitoring report for the EC conditions. The proposal was last considered by the EAC in its meeting held on 5-7 July, 2017, wherein the Committee had asked for more information stated in the above para. In response, the submissions and the clarifications provided by the project proponent were examined and found to be in order. Consent to Operate for the presently manufactured products has been obtained from the State Pollution Control Board, which is presently valid up to 30th September, 2018. The unit has applied for the renewal of the same.
28.3.2.4	*The EAC, after deliberations, again recommended the project for grant of environmental clearance, subject to compliance of terms and 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.* • *Total effluent generated of 4.15 KLPD of low TDS due to industrial operations shall be taken to the CETP after in-house primary treatment and meeting the CETP inlet norms. Whereas, the effluent of 24.20 KLPD of High TDS shall be taken to CMEE, facility operated by M/s Vapi Green Enviro Ltd (VGEL). The treated effluent from the STP shall be utilized in-house for gardening. The effluent discharge 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. 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 82.18 cum/day to be met from GIDC water supply, and no ground water shall be used. Prior permission in this regard shall be obtained from the concerned regulatory authority.* • *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.* • *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 nearly 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 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*
28.3.3	**Proposed to set up a 200,000 KLPA capacity Plant for Paint Manufacturing Facilities at villages Toranagallu & Musenayakana Halli, District Ballari (Karnataka) by M/s JSW Paints Pvt Ltd - For reconsideration of EC** **[IA/KA/IND2/60157 /2016,J-11011/313 /2016- IA II(I)]-**
28.3.3.1	The project proponent and the accredited Consultant M/s Kadam Environmental consultants, made a detailed presentation on the salient features of the project and informed that: (i) The proposal is for setting up a 200000 KLPA capacity water based decorative paint with 40000 TSRPA emulsion copolymer manufacturing plant by M/s JSW Paints Private Ltd located at Toranagallu & Musenayakanahalli villages, District Ballari, Karnataka. (ii) All Integrated Paint Industry projects are listed at 5 (h) of the Schedule to the Environment Impact Assessment (EIA) Notification, 2006 under category 'B'. However, due to SEIAA not functional in the State, the project is considered and appraised at Central Level by Expert Appraisal Committee (EAC). (iii) The project was considered by the EAC (Industry-2) in its 17th meeting held during 26-29 December 2016 and recommended for grant of ToR. The ToR was issued by Ministry vide letter dated 28th February, 2017. (iv) Industry will develop greenbelt in an area of 33 % i.e., 90000 m^2 out of 271139 m^2 area of the project. The estimated project cost is Rs. 600 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 17 Crores and the Recurring cost (operation and maintenance) will be about Rs. 2.5 Crores per annum. Total Employment will be 400 persons as direct & 200 persons indirect after expansion. Industry proposes to allocate Rs. 15 Crores towards Corporate Social Responsibility. (v) Details of the proposed products and their capacities are as under: **Sl. No** | **Products** | **Quantity** 1 | Water based decorative paints | 200000 KLPA 2 | Water based emulsion copolymer | 40000 TSRPA (vi) It is noted that Daroji Bear Sanctuary lies within 10 km distance from the project site.

(vii) Ambient air quality monitoring was carried out at 9 locations during Dec 2016 to Feb 2017 and the baseline data indicates that ranges of concentrations of PM10 (45.5 – 68.9 µg/m^3), PM2.5 (11.7 - 22.6 µg/m^3), SO2 (9.9 – 16.7 µg/m^3) and NO2 (<10 – 11.5 µg/m^3) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.059 µg/m^3,0.08 µg/m^3, 0.4 µg/m^3 and 2.36 µg/m^3 with respect to PM10 from flue gas stacks, PM10 from dust collector attached to RM Silos, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(viii) Total water requirement is 629 m^3/day of which fresh water requirement of 530 m^3/day and will be met from existing allocation of JSW Steel Ltd and allowed by Government of Karnataka vide GO No. CI 270 SPI 2016, Bengaluru dated 20th October, 2016.

(ix) Effluent of 109 m^3 will be treated through ETP/STP followed by RO. Plant will be based on Zero Liquid discharge system.

(x) Power requirement of 5.5MW will be met from JSW Energy Ltd. Additionally 500 kVA DG sets will be used as standby during power failure. Stack (height 30 mtr) will be provided as per CPCB norms to the proposed DG sets. 3 TPH mixed fuel (mixed gas/HSD) fired boilers are proposed.

(xi) Details of process emissions generation and its management.

- PM10 - 0.059 µg/m3 through flue gas stack and 0.08 µg/m3 through vents of RM Silo
- SO2 - 0.4 µg/m3 through flue gas stack
- Nox - 2.36 µg/m3 through flue gas stack
- VOC - 0.01 µg/m3 through process vents

The predicted impact levels are within the Permissible limits. No adverse effect on vegetation and settlements in the vicinity

Mitigation measures

- Closed loop system for handling raw materials
- Attenuation of pollution through greenbelt.
- Dust collectors and wet scrubbers
- Regular air quality monitoring
- All trucks shall be PUC Certified
- DG Sets to run only during power failure.

(xii) Details of Solid waste/ Hazardous waste generation and its management are as under.

S. No.	Waste Description	Generation Per annum	Unit	Disposal Method
1	Oil contaminated with wash water & sludge	8	MT	Co-processing/Incinerator/TSDF
2	Sludge and filters contaminated with oil	8	MT	Co-processing/Incinerator/TSDF
3	Used / Spent Oil	20	MT	Sale to authorizer recycler
4	Contaminated aromatic, aliphatic or naphthenic solvents, may or may not be fit	100	MT	Co-processing/ Sale to authorized recyclers/ Incineration at TSDF

	for reuse			
5	Distillation Residues	40	MT	Co-Processing/Incinerator/TSDF
6	Process Waste	500	MT	Co-processing/ Sale to authorized recycler/ Incineration/ TSDF
7	Wastes / residues	70	MT	Co-processing/ Sale to authorized recycler/ Incineration/ TSDF
8	Wastes / residues such as filter aids	15	MT	Co-processing/Incineration/TSDF
9	Chemical containing residue arising from decontamination	15	MT	Processing/Incineration/TSDF
10	Discarded containers / barrels /liners contaminated with hazardous wastes / chemicals (Liners)	5	MT	Sale to authorized recycler/Coprocessing/TSDF
11	Discarded containers / barrels /liners contaminated with hazardous wastes / chemicals (Packing material and sample containers)	30	MT	Sale to authorized recycler/Co processing/TSDF
12	Discarded containers/ barrels/liners contaminated with hazardous wastes/ chemicals (Barrels/ Carboys/Drums/Totes/IBC's)	25000	Numbers	Sale to Authorized vendors
13	Flue gas cleaning residue	2	MT	Incineration at TSDF/ Co-processing/ Secured Landfill at TSDF
14	Spent Ion Exchange Resin containing toxic metals	8	MT	Co-processing/Incineration/ Secured Landfill at TSDF/Authorized recycler
15	Chemical sludge from waste-water treatment (dry basis)	400	MT	Co-processing/Incineration/TSDF
16	Oil and Grease skimming residue	10	MT	Co-processing/Incineration/TSDF
17	Ash from incineration of hazardous waste	50	MT	Co-processing/ Secured Landfill at TSDF
18	Lead Acid Batteries	400	Numbers	Sale back to supplier
19	Spent Carbon	4	MT	Return to supplier for

					regeneration/ Incineration- In house / Co-processing

(xiii) Public hearing was conducted by the State Pollution Control Board on 23rd May 2017.

(xiv) No litigation is pending against the project.

28.3.3.2 The proposal was earlier considered by the EAC in its 26th meeting held during 27-28 July, 2017 wherein the Committee deferred the proposal for want of following additional information:

- Status of Eco-Sensitive Zone around Daroji Bear Sanctuary (whether notified or 10 km radius), and the required wildlife clearance from the Standing Committee of NBWL,
- Firm commitment for meeting the water requirement of 629 cum/day. In case of ground water abstraction, permission from the concerned regulatory authority/CGWA,
- Water balance,
- Details of TSDF for disposal of hazardous waste to be generated from the unit,
- Details of the ETP and its adequacy for treatment of the waste water generated to ensure water recycling and the Zero Liquid Discharge.

In response, the proponent has informed the following:

- The draft notification for ESZ was published and it varies from 150 m to 4.7 km. The project site is located at a distance of 9.5 km from the boundary of the sanctuary. An application for clearance from the SC NBWL has been submitted on 1st August, 2017.
- The water will be sourced from the existing allocation of M/s JSW Steel Ltd.
- The water balance has been submitted.
- About 3-4 tons/day hazardous waste will be generated and sent to authorized TSDF sites (M/s Mother Earth Environ Tech Pvt Ltd/Ms Ramky Enviro Engineers Ltd) for disposal.
- The details of the ETP and its adequacy for treating the waste water has been submitted. The unit will ensure Zero Liquid Discharge.

28.3.3.3 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the project '*Setting up a 200000 KLPA capacity water based decorative paint with 40000 TSRPA emulsion copolymer manufacturing plant*' by M/s JSW Paints Private Ltd in a total area of 271139 sqm located at Toranagallu & Musenayakanahalli villages, District Ballari (Karnataka).

The project/activity is covered under category B of item 5(h) 'Integrated Paint Industry' of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at State level by the SEAC/SEIAA in the Ministry. However, due to SEIAA not functional at the time of applying for EC (23rd June, 2017), 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 28th February, 2017, and the public hearing was conducted by the SPCB on 23rd May, 2017.

	Total water requirement is 629 cum/day, of which fresh water requirement of 530 m^3/day is to be met from the existing allocation of M/s JSW Steel Ltd allowed by Government of Karnataka vide GO No.CI 270 SPI 2016, Bengaluru dated 20th October, 2016. It was informed that the State Government of Karnataka has made total allocation of 30 MGD to meet the water requirement of M/s JSW Steel Ltd for their 12 MTPA steel plant and also for the industrial operations of M/s JSW Power & Energy Ltd. The fresh water requirement of 530 cum/day will be out of the present allocation only. 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 proposal was last considered by the EAC in its meeting held on 27-28 July, 2017, wherein the Committee had asked for more details in respect of water requirement, water balance, clearance from the Standing Committee of NBWL, effluent treatment and the hazardous waste disposal. In response to the above observations of the Committee, the submissions and the clarifications provided by the project proponent were examined and found to be in order.
28.3.3.4	*The EAC, after deliberations, again recommended the project for grant of environmental clearance, subject to compliance of terms and 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.* • *Only water based paint shall be manufactured, and no solvent based paint to be manufactured without prior permission from Ministry.* • *No Lead and Chromium based paint shall be manufactured.* • *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. 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 530 cum/day to be met from the present allocation for M/s JSW Steel Ltd. Prior permission in this regard shall be obtained from the concerned regulatory authority.* • *Industrial/trade effluent shall be treated in ETP followed by RO. Domestic waste water shall be treated through STP and treated water shall be used for gardening.* • *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.* • *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 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 in consultation with the State Forest Department.* • *All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 23rd May, 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.* • *Raw material storage should not exceed 3 days at any point of time*
28.3.4	**Augmentation of Koyali - Sanganer Pipeline by augmenting pumping station at Vadodara, Pali (Gujarat) by M/s IOCL - For reconsideration of EC** **[IA/GJ/IND2/33820/2015, J-11011/02/2016-IA II (I)]**

28.3.4.1	The project proponent and the accredited consultant M/s Mantec Consultants Pvt Ltd, New Delhi gave a detailed presentation on the salient features of the project and informed that: (i) The project proposal is for augmentation of Koyali- Sanganer Pipeline by augmenting pumping station at Vadodara, Pali (4.6 MMTPA to 6.0 MMTPA) by M/s Indian Oil Corporation Ltd (IOCL). (ii) All oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/sanctuaries/coral reefs/ecologically sensitive areas including LNG Terminal are listed at S.N. 6(a) of Schedule of the Environmental Impact Assessment (EIA) Notification, 2006 under Category 'A' and is appraised at Central Level by Expert Appraisal Committee (EAC). (iii) Earlier, the project proponent has obtained EC for the existing unit vide letter No. J-11011/66/2001-IA.II(I) dated 23rd December, 2002. (iv) The proposal was considered by the EAC (Industry-2) in its 15th meeting held on 10th December, 2016 and recommended for grant of ToR. The ToR was issued by Ministry vide letter dated 31st January, 2017. (v) The project involves to augment Koyali-Sanganer Pipeline (KSPL) by augmenting pumping stations at Vadodara, Pali and other allied facilities for enhancing the capacity of KSPL upto 6.0 MMTPA through delivery at various ToPs up to Sanagner and further by pumping Naphtha from Sanganer to Panipat. (vi) In KSPL augmentation capacity of the system would be changed and enhanced up to 6 MMTPA from existing 4.6 MMTPA. (vii) Naphtha will be required for the Naphtha Cracker Plant. The pre-treated naphtha will be utilized as feed for both Paraxylene (PX) and Naphtha Cracker Plant at Panipat Refinery. The annual requirement of naphtha at Panipat refinery for Paraxylene (PX) unit and Panipat Naphtha Cracker Plant (PNCP) is about 500 TMT and 2300 TMT respectively. The demand and supply of Naphtha in Panipat refinery has increased for the Panipat Naphtha Cracker Plant (PNCP) is 800 TMT. (viii) All the existing facilities of pumping station like fire fighting, electrical system, Pump house, Pipeline etc. would comply with national, international standards and M.B. Lal committee recommendations. In KSPL augmentation capacity of the system would be changed from 4.6 MMTPA to 6 MMTPA with use of Drag Reducing Agent (DRA). (ix) With the proposed project the following facilities will be made: • Replacement of 1 existing motor driven MLPU (Main Line Pumping Unit) at Koyali with new MLPU of adequate capacity. • Replacement of two existing mainline pumps at Koyali with new pumps of adequate capacity. Installation of 3 (2+1) motor driven MLPU's of adequate capacity at Viramgam for Pumping in Viramgam-Sidhpur section. • Replacement of all existing engine/motor driven MLPU's at Sidhpur and Kot with new MLPU's of adequate capacity. • 1 LBT of 10,000 KL nominal capacity at Kot. • No work is involved in Right of User (RoU) for mainline. Only work at existing station is envisaged. (x) With the Augmentation of KSPL, Viramgam-Mohanpura section of KSPL will receive product from one source at a time i.e. either from Koyali refinery through Koyali-Viramgam section of KSPL or from Kandla port. Naphtha from Koyali refinery would be transported upto Jaipur through existing KSPL. While other products ex-Koyali refinery viz. MS, SKO and HSD would be delivered at ToPs en route KSPL, Naphtha would be transported further to Panipat through new Jaipur-

	Panipat Naphtha Pipeline. (xi) The facilities required for operation of the project, viz., pumping units and booster shed to accommodate the pumping units with associated facilities have been planned to be steel structure. Other facilities like RCC civil structure have been planned to accommodate control panels, HT/LT panels, Batteries etc. all the safety factors like wind load, seismic load, soil bearing capacity etc have been taken into account while designing the civil structures. (xii) The baseline environmental studies for the proposed project are carried out at 30 locations during December, 2016 to January, 2017. Study area for the baseline data generation and collection is the area falling within 10 km radius from the Terminal/station and 500 m along the pipeline. Ambient air quality data indicates the ranges of concentration as: RPM (61µg/m^3- 82µg/m^3), SO_2 (11µg/m^3- 38 µg/m^3) NOx (17µg/m^3- 43µg/m^3) and CO (0.54 µg/m^3- 0.85 µg/m^3). The concentrations are well within the National Ambient Air Quality Standards for industrial areas as well as residential/rural area. (xiii) It is reported that no additional land is required. No work is envisaged in right of way as augmentation work is involved in stations only. No work is involved in pipeline route as augmentation is only at existing stations. (xiv) The capital cost of the project is Rs. 273.23 crore. (xv) A detailed hazard identification and risk analysis study was carried out for the proposed project. Risk from the pipeline is below the ALARP region i.e 10-6 per year (one in 1 million/years). (xvi) Public hearing for the proposed project has been exempted under para 7 (ii) of the EIA Notification, 2006.
28.3.4.2	The proposal was earlier considered by the EAC in its 21st meeting held on 28th March, 2017. The EAC had deferred the proposal for want of Certified Compliance Report from the Regional Office of the Ministry for the existing EC. The proponent has now submitted the certified compliance report dated 11th August, 2017 from the Ministry's Regional Office at Bhopal. The proponent has also submitted the ATR dated 6th September, 2017 on the non- complied points.
28.3.4.3	During deliberations, the EAC noted the following:- The proposal is for environmental clearance to the project '*Augmentation of Koyali - Sanganer Pipeline from 4.6 MMTPA to 6.0 MMTPA*' by augmenting pumping stations at Vadodara, Pali and other allied facilities through delivery at various ToPs up to Sanagner and further by pumping Naphtha from Sanganer to Panipat, promoted by M/s Indian Oil Corporation Ltd (IOCL). All oil & gas transportation pipeline (crude and refinery/petrochemical products), passing through national parks/sanctuaries/coral reefs/ecologically sensitive areas including LNG Terminal are covered under category A of item 6(a) of the Schedule to the EIA Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry. The instant proposal involves only augmentation of the pipeline, not passing through any National Park/Sanctuary/Coral-reef/Ecologically Sensitive Areas, and should be exempted from the requirement of prior EC and thus out of the ambit of the EIA Notification, 2006. The Committee was informed that similar proposal for grant of ToR is presently under consideration on these lines. The ToR for the project was granted on 31st January, 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. Issues raised during the public hearing have been duly addressed by the project proponent. Earlier, the Ministry had issued environmental clearance on 23rd December, 2002 under the EIA Notification, 1994 for Koyali Sanganer Pipeline Project. The monitoring report of the Ministry's Regional Office at Bhopal on compliance status of EC conditions is found to be satisfactory. In case of some of the conditions partially complied or not-complied, the action plan submitted by the project proponent has been found to be adequately addressing the same. The proposal was earlier considered by the EAC in its 21st meeting held on 28th March, 2017, wherein the Committee asked for the Certified Compliance Report from the Regional Office of the Ministry for the existing EC. In response to the above observations of the Committee, the certified compliance report dated 11th August, 2017 from the Ministry's Regional Office at Bhopal and the ATR dated 6th September, 2017 on the non- complied points were examined and found to be in order.
28.3.4.4	*The EAC, after detailed deliberations on the proposal, opined that the 'Oil & gas transportation pipeline (crude and refinery/petrochemical products)' passing through national parks/sanctuaries/coral reefs/ecologically sensitive areas including LNG Terminal are covered under category A of item 6(a) of the Schedule to the EIA Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry. As such, the instant proposal involving only augmentation of the pipeline, not passing through any National Park/Sanctuary/Coral-reef/Ecologically Sensitive Areas, should be exempted from the requirement of prior EC.* *For the present, the EAC decided that in view of the ToR for the project already issued by the Ministry, EIA/EMP report submitted accordingly by the project proponent, and the monitoring report from the RO on compliance status of EC conditions, the proposal could be taken forward based on merits to avoid any further delay.* *The EAC recommended the project for grant of environmental clearance subject to compliance of the terms and conditions stipulated in the earlier EC dated 23rd December, 2002 and the extant statutory/regulatory provisions under the Environment (Protection) Act, 1986, the Air Act, 1981 and the Water Act, 1974, as applicable.*
28.3.5	**Expansion of Synthetic Organic Chemicals Manufacturing Unit at SF No.534, 535, 536, 757, 759, 768, 769, 770, Village Sinagadibakkam, Taluka and District Kanchipuram (Tamil Nadu) by M/s Stahl India Pvt Ltd - For reconsideration of EC** **[IA/TN/IND2/34271/2015, J-11011/05/2016-IA II (I)]**
28.3.5.1	The project proponent of the project is M/s Stahl India Pvt Ltd and the accredited Consultant M/s Perfact Envirosolutions Pvt Ltd, New Delhi; gave a detailed presentation on the salient features of the project and informed that: (i) The proposal is for environmental clearance to the expansion project of Synthetic Organic Chemicals Manufacturing Unit by M/s Stahl India Pvt Ltd located at SF No. 534, 535, 536, 757, 759, 768, 769, 770 of Singadivakkam, Attuputhur Post,

Village Singadivakkam, Taluk and District Kanchipuram (Tamil Nadu).

(ii) All project outside notified industrial area listed at S. No.5(f) of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iii) Earlier, the Ministry issued EC vide letter No. J-11011/167/2009-IA-II (I) dated 3rd June, 2009 for Chemical Manufacturing unit to M/s Clariant Chemicals (India) Limited.

(iv) The project was considered by the EAC (Industry-2) in its 4th meeting held during 11-12 February, 2016 and recommended for grant of ToR. The same was issued by Ministry vide letter dated 5th April, 2016.

(v) Following are the existing and proposed products:

Sl. No.	Products	Quantity (TPA)
	Products	Existing capacity, (MT/ Annum), (Phase-1 & 2)
1.	Syntan	9600
2.	Bates	3600
3.	Fat liquor	3600
4.	Superplasticizer	2400
5.	Biocides	4800
6.	Uracil	180
7.	Acrylic Resin	-
8.	Urethane Resin	-
9.	Solvent based blending's	-
10.	Water based blending's	-
11.	Total	24180

Proposed Products and their Capacities for EC Expansion

S. No.	Products		Quantity (TPA)
1.	Syntan	Formaldehyde Condensed Aromatic sulphonic acids, amines and their blends	26400
2.	Fat Liquor	Sulphited, Sulphonated, Phosphated and Saponified Vegetable oils, Synthetic oils and esters, Cationic fatty acid condensates	7200
3.	Super plasticizer	Condensed Naphthalene sulphonic acids	4800
4.	Biocides	Industrial Preservatives -Leather, Surface coating, Emulsion, Metal working fluids, Water treatment	8400
5.	Acrylic Resin	Aqueous solution and emulsions of multi carboxylic polymers	4000
6.	Urethanes	Polymers of Urethane monomers with Polyols	4000
7.	Solvent based Blending's	Formulation of Solvent, Nitro Cellulose, Resins, Pigments, Casein, Plasticizer and Surfactants	6000
8.	Water based	Formulation of Pigments, Wax, Casein and Surfactants	10000

	blending's		

(vi) Baseline study was conducted between March - May 2016.

(vii) Existing land area is 19.66 ha. No additional land will be used for proposed expansion.

(viii) Industry has already developed a 58.55% green belt in the existing unit and shall continue to maintain the same after expansion and there would be thickening of plantation of 10 m alongside plant boundary with tall trees/ broad leaf index trees.

(ix) The estimated project cost is Rs.90 crore including existing investment of Rs 80 crores and the proposed cost of expansion for the unit are Rs.10 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 533 Lakhs and the Recurring cost (operation and maintenance) will be about Rs 124 Lakhs per annum.

(x) Total employment will be 150 persons as direct & 100 persons indirect after expansion. Industry proposes to allocate Rs.50 Lakhs @ 5% towards Corporate Social Responsibility of the Rs.10 crores of cost of expansion of the project and shall continue with the recurring CSR of Rs.22 lakhs/ Annum.

(xi) There are no National parks, Wildlife sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife corridors etc. lies within 10 km distance of the project. There are no River/water bodies flowing in the 10 km around the site. However, there are a number of Lakes/ Water Ponds in the area.

(xii) Ambient air quality monitoring was carried out at 8 locations during March, 2016 to May, 2016 and submitted baseline data indicates that ranges of mean concentrations of PM_{10} (59.2 – 76.1 µg/m3); $PM_{2.5}$ (26.7 – 34.3 µg/m3); SO_2 (5.1 – 6.9 µg/m3), and NO_2 (19.9 – 25.6 µg/m3), respectively. AAQ modelling study for point source emissions indicated that the maximum incremental GLCs after the proposed project would be 0.507µg/m3; 1.12 µg/m3 and 1.22 µg/m3 with respect to PM10, Sox and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xiii) Total water requirement is 260 m^3/day of which fresh water requirement of193 m^3/day and will be met from surface water from nearby Village Panchayat.

(xiv) Trade effluent of 54 KLD which will be treated through ETP, RO and MEE and reused in Plant Vessel Washings, Cooling Tower and Boiler and the plant will be based on Zero Liquid Discharge system.

(xv) Power requirement after expansion will be Licensed- 5000 HP and Connected- 3000 HP Including Existing Licensed- 5000 HP and Connected- 2640 HP and will be met from Kanchipuram Electricity Board. Existing unit has 2 DG sets of 1000 kVA & 160 kVA capacity, additionally 1 DG set is used as stand by during power failure. Stack (height 14 m (1000 kVA) and 4 m (160 kVA) above ground level) will be provided as per CPCB norms to the proposed DG sets of 1000 kVA. In addition to the existing DG sets of 1000 kVA & 160 kVA and proposed 1000 kVA which will be used as standby during power failure.

(xvi) Existing units has 5 TPH & 0.5 TPH Boilers using Briquettes (Agro Based Fuel) and an additional 6 TPH Briquette Fired boiler will be installed which would use the same fuel and the 0.5TPH Boiler would be removed after expansion. Multi cyclone separator with Wet Bottom with stack height of 32 M above ground level. (Same is being done for the 5TPH Boiler currently and same good practice shall continue for the proposed 6TPH Boiler) will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/ Nm^3) for proposed 6TPH Boiler.

(xvii) For process emissions, essential air pollution control systems such as bag filters, scrubbers are installed. By installing air pollution control devices after expansion, emissions after expansion will not increase from the existing level, hence there is

	no increment in pollution load envisaged. Essential air emission standards will be maintained. xviii) Details of solid waste/Hazardous waste generation and its management are as under: • Approximately 490 kg/day municipal solid waste shall be generated during operation phase after expansion, out of which 40 kg of biodegradable waste will be used for vermicomposting and 450 kg will be given to authorized recyclers. • Approximately 270.5 MT/Annum of Hazardous waste shall be generated after expansion phase. The sludge from ETP, MEE and solar pans is also included in this waste. The unit is having an agreement to dispose hazardous waste to the AFRF (Alternate Fuel Resource Facility) being operated by GEPIL at Ranipet, Tamil Nadu. • 150 kg/day of STP sludge generated after expansion will be used as manure and excess given to farmers/nursery after dewatering/drying. (xix) Public hearing for the proposed project has been conducted by the State Pollution Control Board on 29th December 2016. (xx) Certified Compliance Report for the unit has been received vide letter No. EP/12.1/916/TN/0899 dated 12.06.2017.
28.3.5.2	The proposal was earlier appraised by EAC in its 21st meeting held on 29th March 2017 and 26th meeting held on 27-28 July, 2017. The EAC in its last meeting, after deliberations, deferred the proposal for want of following additional information: • the project proponent has not adequately addressed to the issues raised during public hearing held on 29th December, 2016. • there is no firm commitment from the concerned regulatory authority to meet the total water requirement of 260 cum/day, • the earlier EC issued in the name of M/s Clariant Chemicals (India) Ltd is yet to be transferred in the name of M/s Stahl India Pvt Ltd. As such, the present proposal may not be considered as expansion project. The project proponent vide letter dated 12th August 2017 submitted the additional information sought by the EAC. • The proponent has submitted the minutes of the public hearing along with compliance and commitments made. • Singadivakkam Panchayat has granted permission for supply of water for the expansion project. A letter dated 28th July, 2016 from the President, Singadivakkam Panchayat has been submitted by the project proponent in this regard • The proponent has submitted application dated 30th March, 2017 for name change, and the same is under process in the Ministry.
28.3.5.3	During deliberations, the EAC noted the following:- The proposal is for environmental clearance to the expansion project of Synthetic Organic Chemicals Manufacturing from 24180 TPA to 70800 TPA by M/s Stahl India Pvt Ltd in a total area of 19.66 ha located at SF No. 534, 535, 536, 757, 759, 768, 769, 770 of Singadivakkam, Attuputhur Post, Village Singadivakkam, Taluk and District Kanchipuram (Tamil Nadu).

	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 EAC in the Ministry. The ToR for the project was granted on 5th April, 2016, and the Public hearing was conducted by the SPCB on 29th December, 2016. Total water requirement is estimated to be 260 cum/day. The fresh water requirement of 193 cum/day is to be met from surface water source. Singadivakkam Panchayat has given approval to M/s Stahl India Pvt Ltd on 28th July, 2016 for drawal of 200 KLPD of surface water for industrial purpose subject to certain terms and conditions. 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. Consent to Operate for the presently manufactured products has been obtained from the State Pollution Control Board, which is presently valid up to 31st March, 2018. Earlier, the Ministry had issued environmental clearance on 3rd June, 2009 in favour of M/s Clariant Chemicals (India) Ltd for synthetic organic chemicals manufacturing of capacity 24180 TPA. The monitoring report on compliance status of EC conditions, forwarded by the Ministry's Regional Office at Chennai vide letter dated 12th June, 2017, is found to be satisfactory. The proposal was last considered by the EAC in its meeting held on 27-28 July, 2017, wherein the Committee asked for additional information in respect of commitment for water supply, issues raised during public hearing, transfer of EC in the name of M/s Stahl India Pvt Ltd. In response to the observations of the Committee, the submissions and the clarifications provided by the project proponent were examined and found to be in order. In respect of transfer of the EC dated 3rd June, 2009 from M/s Clariant Chemicals (India) Ltd to M/s Stahl India Pvt Ltd, it was clarified that the same was not possible due to expiry of the validity of the EC, as per the provisions of the EIA Notification, 2006.
28.3.5.4	*The EAC, after deliberations, again recommended the project for grant of environmental clearance, subject to compliance of terms and 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.* • *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. 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 193 cum/day to be met from the surface water source. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA, as applicable.* • *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.* • *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 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 in consultation with the State Forest Department.* • *All the commitment made regarding issues raised during the Public Hearing/ consultation meeting held on 29th December, 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.* • *Raw material storage should not exceed 3 days at any point of time*
28.3.6	**Expansion of Specialty Chemicals, Pesticide, Fluoro Chemicals & Captive Power Plant in existing unit at Plot No. D-2/1, Village Suva, GIDC Phase II, Dahej, Taluka Vagra, District Bharuch (Gujarat) by M/s SRF Ltd - For reconsideration of EC** **[IA/GJ/IND2/60725/2016, J-11011/379/2016-IA.II(I)]**
28.3.6.1	The project proponent and accredited Consultant M/s Aqua-Air Environmental Engineers Pvt Ltd, gave a detailed presentation on the salient features of the project & informed that: (i) The proposal is for expansion of Specialty Chemicals, Pesticide, Fluoro Chemicals & Captive Power Plant in existing Unit of M/s SRF Ltd located at Plot No. D-2/1, Village Suva, GIDC Phase II, Dahej, Taluka Vagra in DistrictBharuch (Gujarat). (ii) The products are listed at S.N. 5(f), 5(b), 4(d), 1(d) of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). (iii) Earlier, the Ministry has issued EC vide letter No. J-11011/1261/2007-IA.II (I); dated 7th May, 2008 for setting up Chemical manufacturing unit to M/s SRF Limited. (iv) The State Level Expert Appraisal Committee (SEAC) had issued EC earlier vide letter No.SEIAA/GUJ/EC/8(a)/251/2012dated 6th September, 2012 for setting up enhancement of Captive Power Plant from 4 MW to 25 MW unit to M/s SRF Limited. (v) The State level Expert Appraisal Committee (SEAC) issued EC earlier vide letter No.SEIAA/GUJ/EC/5(f),4(d) & 1(d)/633/2016dated 29th October, 2016 for setting expansion of Specialty Chemicals, Fluoro Chemicals & Captive Power Plant unit to M/s SRF Limited. (vi) The project was considered by the EAC (Industry-2) in its 18th meeting held during 23-25 July, 2017 and recommended for grant of ToR. The ToR was issued by Ministry vide letter dated 29th April, 2017. (vii) Existing land area is 1181776 sqm, additional expansion is within existing premises land will be used for proposed expansion. (viii) Industry developed Greenbelt in an area of 33 % i.e. 389986 sqm out of 1181776 sqm of area of the project. (ix) Details of existing & proposed products are as under:

S. No.	Product	Existing Capacity (TPA)	Additional Capacity (TPA)	Proposed Capacity (TPA)	CAS No.
1	Trifluoro Acetic Acid	0	2000	2000	76-05-1

		2	Parabromofluorobenzene	0	500	500	460-00-4
		3	Specialty Product				
		i	Tetrafluorobenzyl Alcohol	10000	15100	25100	4084-38-2
		ii	Ethyldifluoroacetate				454-31-9
		iii	Ethyltrifluroacetate				383-63-1
		iv	Ethyltrifluoroacetoacetate				372-31-6
		v	Amino crotonate				14205-39-1
		vi	Trifluoroacetic anhydride				407-25-0
		vii	Pentafluorobenzoic Acid				602-94-8
		viii	Pyrazole Acid				288-13-1
		ix	Chlorotrichloro Methyl – Cyclopentene				--
		x	2-methyl-4-（1,1,1,2,3,3,3-heptafluoro-2-propyl aniline				238098-26-5
		xi	Fluoromethyl ester				80474-14-2
		xii	Diphenylphenol				2432-11-3
		xiii	Tetrafluoropropene - 1234yf				754-12-1
		xiv	Isobutyl Acetophenone				38861-78-8
		xv	2-Bromo-5-fluorobenzotrifluoride				40161-55-5
		xvi	2,2-Difluroethylamine				430-67-1
		xvii	2,3-Dichloro-5-trifluoromethyl-pyridine				69045-84-7
		xviii	N[1-{6-Chloro-3-pyridinyl)methyl)-2(1H)-pyridinylidene]-2,2,2, trifluoroacetamide				--
		xix	(1-(3-Chloropyridine-2-yl)-3-((5-(trifluoromethyl)-2H-tetrazol-2-yl)methyl)-1H pyrozol-5-carboxylic acid)				--
		xx	(N-(4-fluorophenyl)-2-hydroxy-N-isopropyl-acetamide				--
		4	1,1,2,2-Tetrafluoroethyl Methyl Ether	0	4000	4000	425-88-7
		5	Hexafluoropropylene	0	1000	1000	116-15-4
		6	Ethyl Difluoroacetoacetate	0	1000	1000	352-24-9
		7	Difluoromethanesulphonlychloride	0	1000	1000	1512-30-7
		8	Triflic Acid	0	1000	1000	1493-13-6
		9	Trifluoromethanesulfonic Anhydride	0	1000	1000	358-23-6
		10	Trimethylsilyltrifluoromethanesulfonate	0	520	520	27607-77-8

		11	3-Trifluoromethylacetophenone	0	1000	1000	349-76-8
		12	2,6-Dichloro-4-(trifluoromethyl) aniline	0	1000	1000	24279-39-8
		13	Cyanapyrazole	0	2000	2000	--
		14	Trifluoromethylbenzamide	0	2000	2000	360-64-5
		15	Trifluoroacetyl chloride	0	1000	1000	354-32-5
		16	Sulphur Tetrafluoride	0	500	500	7783-60-0
		17	2-Trifluoromethylbenzoylchloride	0	1000	1000	312-94-7
		18	TrifluoroMethyl-2-EthoxyVinyl Ketone	0	1000	1000	--
		19	2-(2-Methoxy-ethoxymethyl)-6-trifluoromethyl-nicotinic acid ethyl ester	0	2000	2000	--
		20	Mefenamic Acid	0	1000	1000	61-68-7
		21	Hexafluoropropylene oxide	0	500	500	428-59-1
		22	Pentaflurophenol	0	500	500	771-61-9
		23	Monomethylhydrazine	0	4000	4000	60-34-4
		24	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methylpyrazol-4-yl)methanone (Topramezone)	0	500	500	210631-68-8
		25	Tri Fluoro acetone	0	500	500	421-50-1
		26	Methyl tri Fluoro acetate	0	500	500	431-47-0
		27	Chlorodifluoroacetic Anhydride	0	100	100	2834-23-3
		28	Bromopentafluorobenzene	0	500	500	344-04-7
		29	4-Chlorobenzotrichloride	0	600	600	5216-25-1
		30	4-Chlorobenzotrifluoride	0	600	600	202-681-1
		31	Methyl HydroxyPyrazole	0	100	100	33641-15-5
		32	6-Fluoro methyl indole	0	100	100	40311-13-5
		33	Difluoroethoxy ethanol	0	200	200	148992-43-2
		34	5-Bromo-2-2-difluoro-1-3-benzodioxole	0	1000	1000	--
		35	Difluorobenzodioxole methyl ester	0	20	20	--
		36	2-Fluoro-5-nitrobenzoic acid	0	30	30	7304-32-7
		37	5-Chloro-3-(difluoromethyl)-1-methyl-1H-pyrazole-4-	0	500	500	--

			carboxaldehyde				
		38	3-Difluoromethyl-5-fluoro-1-methyl-1H-pyrazole-4-carboxaldehyde	0	500	500	--
		39	2,5-Dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)benzen amine	0	500	500	103015-84-5
		40	2,4,5-Trifluorophenyl acetic acid	0	50	50	209995-38-0
		41	3-Aminobenzotrifluoride	0	1000	1000	98-16-8
		42	2,4-Dichloro-3,5-dinitrobenzotrifluoride	0	1000	1000	--
		43	3-phenoxy Benzaldehyde	0	4000	4000	39515-51-0
		44	3-phenoxy toluene	0	200	200	3586-14-9
		45	Methyl-2- Fluoroacrylate	0	700	700	2343-89-7
		46	Lithium Tetrakis (pentafluorophenyl) borate	0	100	100	155543-02-5
		47	2-fluoro-5-bromobenzonitrile	0	50	50	179897-89-3
		48	Ethyl-Trifluoropyruvate	0	200	200	13081-18-0
		49	Isoflurane	0	250	250	26675-46-7
		50	Desflurane	0	100	100	57041-67-5
		51	Sevoflurane	0	200	200	28523-86-6
		52	Trichloroacetyl chloride	0	2000	2000	76-02-8
		53	Chlorinated Compound				
		i	Trichloroethylene	80000	10000	90000	79-01-6
		ii	Perchloroethylene				127-18-4
		iii	Methylene dichloride				75-09-2
		iv	Chloroform				67-66-3
		v	Carbon tetrachloride				56-23-5
		54	Caustic Chlorine Plant				
			Chlorine	60000	56725	72000	7782-50-5
			Caustic lye 47.5 %		147485	187200	1310-73-2
			Hydrochloric Acid (30-33%)		17018	21600	7647-01-0
			Hydrogen		1588	2016	1333-74-0
		55	Anhydrous Hydrofluoric acid	15000	25000	40000	7664-39-3
		56	Chlorotrifluoroethane (HCFC 133a)	0	500	500	75-88-7
		57	HFC Refrigerant				
		i	1,1,1,2 Tetrafluroethane	10000	52000	62000	811-97-2

			(HFC 134a)				
		ii	Pentafluoroethane (HFC 125)				354-33-6
		iii	Difluoromethane (HFC - 32)				75-10-5
		iv	1,1 difluoroethane (HFC - 152a)				75-37-6
		v	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) (R410a)				--
		vi	Refrigerant blend of Pentafluoroethane (HFC-125) + 1,1,1-Trifluoroethane (R143a) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R404a)				--
		vii	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R407c)				--
		viii	Blend of 1,1-Difluoroethane (HFC-152a) + 1,1,1,2 Tetrafluroethane (HFC-134a)				--
		58	Butane (R600a)	0	1000	1000	106-97-8
		59	Propane (R290)	0	1000	1000	74-98-6
		60	Blend of 1-Chloro-1,1-difluoroethane (R142b) + Chlorodifluoromethane (R22)	0	500	500	--
		61	Blend of 1,1,1,2 Tetrafluroethane (R134a) + Di Methyl Ether (DME)	0	500	500	--
		62	R&D Products	0	2000	2000	
		i	Organo Heterocyclic Compounds				--
		ii	Aryl/Alkyl/Alicyclic Compounds				--
		iii	Elemental Fluorine/Bromine/Iodine and their Products/Derivatives				--
		iv	Alkali Metal/Boron/Phosphorous/ Sulphur based Product/ Derivatives				--
		63	Hydrofluoric acid (20-70%)	0	34641	34641	7664-39-3
		64	Anhydrous Hydrochloric	0	1500	1500	7647-01-

	Acid				0
Total		175000	412177	587177	

S. No.	Name of Product	Existing Capacity	Additional Capacity	Proposed Capacity
65	Captive Power Plant	25 MW	50 MW	75 MW

Note: *Product No. 24: [3-(4, 5-dihydro-1, 2-oxazol-3-yl)-4-mesyl-o-tolyl] (5-hydroxy-1-methylpyrazol-4-yl) methanone (Topramezone) is a Pesticide.*

(x) List of existing and proposed by-products are as under:

S. No.	Name of By-Product	Existing Capacity (MT/Annum)	Additional Capacity (MT/Annum)	Proposed Capacity (MT/Annum)
1	Succinimide ($C_4H_5NO_2$)	0	31	31
2	Mix of Ethane + n-Butane + Isobutane (R600a) + Propane (R290)	0	7327	7327
3	Calcium Chloride	0	176	176

(xi) The estimated project cost is Rs.4800 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.100 Crores and the recurring cost (operation & maintenance) is about Rs. 2.74 Crores per annum.

(xii) Total employment will be 2000 persons as direct & indirect after expansion. Industry proposes to allocate Rs.50.20 Crores @ of 5/2.5% towards Corporate Social Responsibility.

(xiii) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, and Wildlife Corridors etc. lies within 10 km distance of the project. Narmada River is flowing at a distance a distance of 1.8 km in South direction.

(xiv) Ambient air quality monitoring was carried out at 9 locations during February 2017 and submitted baseline data indicates that ranges of concentrations of PM10 (72.53-83.16 µg/m^3), PM2.5 (41.62-46.04 µg/m^3), SO2 (11.97-17.29 µg/m^3) and NOx (14.06-18.42 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.42 µg/m^3, 0.74 µg/m^3 and 0.26 µg/m^3 with respect to PM, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xv) Total water requirement will be 36393 KL/day (Existing 12798 KL/day + Additional proposed 23595 KL/day) of which fresh water requirement of 17933 KLD and will be met from GIDC Water Supply. Daily water consumption shall be 36393 KL/day (Existing 12798 KL/day + Additional Proposed 23595 KL/Day) out of which assuming 85% efficiency of UF & RO Treatment for the Utilities Effluent stream, it gives 18460 KLD of treated water which will be reused and 3258 KLD reject. 18460 KLD of water will be recovered after UF & RO treatment and taken back to the raw water collection tank. Hence, 17933 KLD of fresh water will be consumed for the proposed expansion project.

(xvi) Treated Effluent 25199 KL/day (Existing 6646 KL/day + Additional Proposed 18553 KL/Day). Assuming 85 % efficiency of UF RO Treatment for the Utilities Effluent stream, it gives 18460 KLD of treated water which will be reused and 3258 KLD reject. From 3258 KLD reject, 100 KLD reject utilization for Ash

quenching & dust suppression. We shall explore the possibility to recover water from 3158 KLPD reject of RO. It will give 1263 KLPD (40%) recovered water for reuse and rest quantity 1895 KLPD along with treated waste water of 2614 KLPD, total 4509 KLPD will be discharged to GIDC drain. 650 KLD After its treatment in STP, it will be used for greenbelt development with drip irrigation system, 100% Domestic effluent will be reused in greenbelt development with drip irrigation system. Hence, 4509 KLPD of waste water will be finally discharged to Sea through GIDC Sewer(includes the 1895 KLPD UF & RO reject & 2614 KLPD from Biological Treatment).

(xvii) Power requirement after expansion will be power plant = 75 MW &DG-500 kVA X 2 Nos., DG-840 kVA X 2 Nos., DG-4200 kVA X 3 Nos & 12500 kVA Grid Power including existing DG-500 kVA X 2 Nos, DG-840 kVA X 2 Nos, DG-4200 kVA X 3 Nos kVA and will be met from Grid Power State Power Distribution Corporation Ltd (SPDCL). Existing unit has 2+2=4 DG sets of 500 kVA *2 + 840 kVA *2 capacity, additionally 4200 kVA *3 DG sets are used as standby during power failure. Stack (height 30 m*2) will be provided as per CPCB norms to the proposed DG sets of 4200 kVA *3 in addition to the existing DG sets of 11 m*2 + 31 m*2 which will be used as standby during power failure.

(xviii) Existing unit has 15, 60, 35 & 35 TPH FO, Coal fired boiler will be installed. Adequate Stack Height/ESP with a stack of height of 53m & 94m will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm^3) for Proposed 75, 75, 100, 100 TPH Coal fired boilers respectively.

(xix) Details of Process emissions generation and its management are as follows:

Existing Stack Details

Stack No.	Stack Attached to	Qty	Capacity	Stack height (m)	Stack Dia (m)	Exit Velocity (m/s)	Stack Exit Temp, ^oK	Stack Exhaust, m^3/s	Fuel Used	Air Pollution Control Measures
1.	Boiler	1	15 TPH	53	1.00	11.0	448.2	8.64	FO	Adequate stack height
2.	Boiler	1	60 TPH	94	2.4	16.0	448.2	72.3	Coal	Adequate stack height & Electrostatic Precipitator
	Boiler	1	35 TPH							Adequate stack height & Electrostatic Precipitator
	Boiler	1	35 TPH							Adequate stack height & Electrostatic Precipitator
3.	DG Set	2	500 KVA	11	0.20	8.0	398.2	0.25	HSD	Adequate stack height
4.	DG Set	2	840 KVA	31	0.35	8.0	398.2	0.77	HSD	Adequate stack height

5.	TFH	3	20 Lacs Kcal	30	0.8	11.0	413	5.53	FO	Adequate stack height
6.	HAG	1	50 Lacs	45	0.8	11.0	413	5.53	FO	Adequate stack height
7.	Fluoro spar Drying System	1	20 Lacs	34	0.6	11.0	413	2.61	FO	Adequate stack height

Proposed Stack Details

Stack No.	Stack Attached to	Qty.	Capacity	Stack Ht., m	Stack Dia., m	Stack Exit Velocity, m/s	Stack Exit Temp, ^oK	Stack Exhaust, m^3/s	Fuel Used	Air Pollution Control measure
1	Boiler	1	75 TPH	120	3.00	21.0	448.2	148.37	Coal	Adequate stack height & Electrostatic Precipitator
2	Boiler	1	75 TPH							Adequate stack height & Electrostatic Precipitator
3	Boiler	1	100 TPH	135	3.50	25.0	448.2	240.41	Coal	Adequate stack height & Electrostatic Precipitator
4	Boiler	1	100 TPH							Adequate stack height & Electrostatic Precipitator
5	DG Set	3	4200 KVA	30	0.80	11.0	398.2	5.53	HSD	Adequate stack height
6	Thermic Fluid Heater	20	20 Lacs Kcal	30	0.80	11.0	413.0	5.53	FO	Adequate stack height
7	Dust Collectors	10	-	30	0.80	11.0	413.0	5.53	-	Adequate stack height
8	HAG	1	50 Lacs	45	0.8	11.0	413	5.53	FO	Adequate stack height
9	Fluoro spar	1	20 La	30	0.6	11.0	413	2.61	FO	Adequate stack height

	Drying System		cs							

(xx) Details of Solid waste/Hazardous waste generation and its management are as under.

After proposed expansion

S. No.	Name of Hazardous and Other Waste	Proposed Waste Category No as per Rule 2016	UOM	Waste Generating Step	Physical State	Existing Hazardous Waste	Total Proposed Hazardous Waste Quantity	Method of Packing &Collection	Method of Storage	Mode of Transportation	Mode of disposal
1	Chemical sludge from waste water treatment	35.3	MTA	ETP Process	Solid	2340	6000	HDPE Bags	Storage in impervious covered shed having a boundary Wall	Dumper / Truck by Road	Collection, Storage, Transportation, disposal at TSDF / Co-processing.
2	Spent Oil	5.1	MTA	Lubrication of Plant Machinery / Equipment	Terry	600	1800	MS / HDPE Container	Storage in impervious covered shed having a boundary Wall	Truck by Road	Collection, Storage, Transportation, sell to registered re-refiners / recycler
3	Discard	33.1	No	Ra	S	600	134	Sta	Desi	Truc	Colle

			ed containers / barrels / liners used for hazardous wastes/ chemicals		s. per Year	w Material	olid		0000	cking	gnated area	k by Road	ction, Storage, Transportation, reuse / sell to authorize recyclers.	
					OrMTA (Discarded Containers / barrels)	Raw Material	Solid		14740	Stacking	Designated area	Truck by Road		
					MTA (Discarded liners)	Raw Material	Solid		190	Bundles	Designated area	Truck by Road	Collection, Storage, Transportation, sell to authorize recyclers.	
		4	Spent Catalyst	28.2	MTA	Process	Solid	50	2400	MS/HDPE Drums	Storage in impervious covered shed having a boundary Wall	Truck by Road	Collection, Storage, Transportation, sell to authorized recycler/ disposal at TSDF or CHWIF /	

												Co-processing.
		5	Spent Carbon	28.3	MTA	Process	Solid	0	1212	MS/HDPE Drums	Storage in impervious covered shed having a boundary Wall	Truck by Road	Collection, storage, transportation, disposed to CHWIF & or Co-processing.
		6	Off-Specification Product	28.4	MTA	Process	Solid/Semi-Solid/Liquid	0	600	MS/HDPE Drums or Designated Tank	Storage in impervious covered shed having a boundary Wall or Designated area	Truck / Tanker by Road	Collection, Storage, Transportation, sell to authorized recycler/ disposal at TSDF / CHWIF / Co-processing.
		7	Process waste sludge/residues containing acid or other	26.1	MTA	Process	Solid/Sem	0	600	MS/HDPE Drums or	Storage in impervious covered	Truck / Tanker by Road	Collection, Storage, Transportation,

			toxic metals or organic complexes				i-Solid / Liquid			Designated Tank	shed having a boundary Wall or Designated area		sell to authorized re-Processor / disposal at CHWIF / Co-processing.	
		8	Filters and filter material which have organic liquid in them e.g. Mineral oil, synthetic oil & organic chlorine compounds	35.1	MTA	Process	Solid / Semi-Solid / Liquid	0	550	MS/HDPE Drums or Designated Tank	Storage in impervious covered shed having a boundary Wall or Designated area	Truck / Tanker by Road	Collection, Storage, Transportation, sell to authorized re-Processor / disposal at CHWIF / Co-processing.	
		9	Process Residue & Waste	28.1	MTA	Process	Semisolid /Liquid	636	32000	MS/HDPE Drums or Designated Tank	Storage in impervious covered shed having a boundary Wall or	Truck / Tanker by Road	Collection, storage, transportation, disposed to CHWIF/ Co-proc	

										Designated area		essing.	
		10	Spent Organic Solvent	28.6	MTA	Process	Liquid	11100	90892	MS/HDPE Drums or Designated Tank	Storage in impervious covered shed having a boundary Wall or Designated area	Truck / Tanker by Road	Collection, Storage, Transportation, Sell to authorized re-processor & or disposal at CHWIF & or Co-processing & or Sent for Job work to third party for recovery.
		11	Chemical sludge from waste water treatment (MEE / ATFD Salt)	35.3	MTA	MEE / ATFD Process	Solid	0	73858 + 1800 (From Bromine Recovery Plant) =	HDPE Bags	Storage in impervious covered shed having a boundary Wall	Dumper / Truck by Road	Collection, Storage, Transportation, disposal at TSDF.

								75658					
		12	Inorganic Salt	-	MTA	Process	Solid	0	4447	HDPE Bags	Storage in impervious covered shed having a boundary Wall	Dumper / Truck by Road	Collection, Storage, Transportation, disposal at TSDF / Co-processing.
		13	CuCl Cake	8.2	MTA	Process	Solid	144	52	MS/HDPE Drums	Storage in impervious covered shed having a boundary Wall	Truck by Road	Collection, Storage, Transportation, sell to actual users / Co-processing / disposal at TSDF or CHWIF.
		14	Ammonium Salt	-	MTA	Process	Solid	840	5811	MS/HDPE Drums	Storage in impervious covered shed having a boundary Wall	Truck by Road	Collection, storage, transportation, Sell to Actual users /

												Sent to disposal at TSDF.	
		15	Potassium Salt	B2040	MTA	Process	Solid	1620	5061	MS/HDPE Drums	Storage in impervious covered shed having a boundary Wall	Truck by Road	Collection, storage, transportation, Sell to Actual users / Sent to disposal at TSDF.
		16	Sodium Salt	B2040	MTA	Process	Solid	2040	4402	MS/HDPE Drums	Storage in impervious covered shed having a boundary Wall	Truck by Road	Collection, storage, transportation, Sell to Actual users / Sent to disposal at TSDF.
		17	Zinc Compound	6.1	MTA	Process	Solid	0	787	MS/HDPE Drums	Storage in impervious covered shed havin	Truck by Road	Collection, storage, transportation, Sell to

											g a boundary Wall		Actual users / Sent to disposal at TSDF.
		18	Hydrofluoricsilic acid (15-40%)	C2	MTA	Process	Liquid	7200	24000	Transferring through pipeline from production units to designated tanks.	Designated Storage Tank having boundary wall	Tanker by Road	Collection, Storage, Transportation, Sell to Actual User / end user.
		19	Sulphuric acid (70-95%)	C2	MTA	Process	Liquid	18600	117932	Transferring through pipeline from production units to designate	Designated Storage Tank having boundary wall	Tanker by Road	Collection, Storage, Transportation, Sell to Actual User / end user.

									d tanks.				
		20	Hydrochloric Acid (30 - 33%)	C2	MTA	Process	Liquid	390000	912081	Transferring through pipeline from production units to designated tanks.	Designated Storage Tank having boundary wall	Tanker by Road	Collection, Storage, Transportation, Sell to Actual User / end user.
		21	Sodium Hypochlorite	C2	MTA	Process	Liquid	2040	149516	Transferring through pipeline from production units to designated tanks.	Designated Storage Tank having boundary wall	Tanker by Road	Collection, Storage, Transportation, Sell to Actual User / end user.

		22	Liquor Ammonia Solution (10-25%)	A10	MTA	Process	Liquid	0	6871	Transferring through pipeline from production units to designated tanks.	Designated Storage Tank having boundary wall	Tanker by Road	Collection, Storage, Transportation, Sell to Actual User / end user.	
		23	Hydrogen bromide Solution (40-50%)	C2	MTA	Process	Liquid	0	5691	Transferring through pipeline from production units to designated tanks.	Designated Storage Tank having boundary wall	Tanker by Road	Collection, Storage, Transportation, Sell to Actual User / end user.	
		24	Brine Sludge	16.3	MTA	Caustic Chlorine Pla	Solid	0	5500	HDPE Bags	Storage in impervious covered	Dumper / Truck by Road	Collection, Storage, Transportation,	

						nt					shed having a boundary Wall		disposal at TSDF
		25	Fly Ash	-	MTA	Process	Powder	0	108000	Loose	In Silo at CPP	Dumper / Truck by Road	Sold to Brick, Tile & Cement Manufacturer as per Fly Ash Notification
		26	Calcium fluoride	C2/A72	MTA	Process	-	0	8479	-	-	-	Collection, Storage, Transportation, disposal at TSDF
		27	Sodium methoxide Solution	B28	MTA	Process	-	0	120	-	-	-	Collection, Storage, Transportation, Sell to Actual User / end user.
		28	Phosphoric acid (25-75%)	B15	MTA	Process	-	0	2421	-	-	-	Collection, Storage, Tran

												sportation, Sell to Actual User / end user.	
		29	Phosphorus trichloride	B10	MTA	Process	-	0	1837	-	-	-	Collection, Storage, Transportation, Sell to Actual User / end user.	
		30	Mix of Trichloroethylene &Perchloroethylene	20.1	MTA	Process	-	0	33395	-	-	-	Collection, Storage, Transportation, Sell to Actual User / end user.	
		31	Gypsum	35.5	MTA	Process	-	0	162400	-	-	-	Collection, Storage, Transportation, Sell to Actual User / end user.	

32	Aluminiumtrifluoride	C2/A72	MTA	Process	-	0	1000	-	-	-	Collection, Storage, Transportation, Sell to Actual User / end user.

(xxi) Other Solid Waste are Bio-medical Wastes.

(xxii) SRF Limited has an occupational health centre. The BMW generated, if any, is sent to an authorized common bio-medical waste incinerator. The industry already has membership of common BMW incineration facility.

(xxiii) E-Wastes: E-waste will be handled and disposed as per E-Wastes (Management and Handling) Rules, 2011. The industry already registered as a member with authorized E- waste recycler.

(xxiv) Other Non-Hazardous Solid Wastes: Other solid wastes include kitchen waste, cardboard, paper, plastic and garden wastes. Amongst these cardboard, paper and plastic wastes are sent to scrap dealers. Canteen waste and garden waste is used for bio-composting. Wastes like insulation waste, thermocol waste and used & expired PPE's are sent to common TSDF/CHWIF facility. The same practice will be continued after the proposed expansion.

(xxv) Public hearing for the proposed project was conducted by the State Pollution Control Board on 28th August, 2015.

(xxvi) Certified compliance report was given by RO, MoEF&CC, Bhopal on 16th January, 2016 & compliance status w.r.t. report was submitted on 26th September, 2016.

28.3.6.2 The proposal was earlier considered by the EAC in its 25th meeting held during 5-7 July, 2017, wherein the Committee noted that there are non-complied points in the certified compliance report. EAC desired that the project proponent shall submit action taken report to comply with the non-complied points. EAC also desired to have the details of baseline data and GLC after proposed expansion. EAC has also deliberated on the ESC component. EAC opined that as the project cost is more, the ESC for the expansion project may be fixed at 2.5% of cost of expansion project instead of 5 %. However, PP has objected to the 2.5 % cost, and informed that, as the ESC amount is more, the amount would be finalized after getting the concurrence from the management.

The EAC had deferred the proposal based on the request of the PP and also desired to have the following additional information.

i. Enterprise Social Commitment (ESC) plan for five years with 2.5% of the project cost.
ii. Action taken report on non-complied points in the certified compliance report.
iii. Details of baseline data collected and GLC.

	In response, the project proponent has submitted the following:- (a) Enterprise Social Commitment (ESC) plan for five years with 2.5% of the project cost **Additional Proposed CSR Activities at SRF Dahej Site** We will continue to work towards developing Model Schools in Dahej and also ensure successful and extended partnership with Akshaya Patra for the Mid-Day Meal Programme. • At SRF Dahej Site Company will expand in phased manner on and average per year investment will be Rs.150-300 Crores, considering this cost SRF has started CSR activities in the area of Dahej. • In coming year's expenditure on CSR activities will increase to Rs.4.75 to Rs. 5.2 Crores per year. This includes Rs. 4.4 Crores towards mead-day meal program and remaining Rs.0.8 Crore shall be utilized in on-going activities of education, skill development, school building infrastructure development, Swachh Vidyalaya, Bus Facility for kids from villages to Dahej School etc. • In 2016-17, SRF made an expenditure of Rs.35 Lakhs on the above mentioned interventions at Dahej. In addition allocated Rs.4.40 Crores towards Mid-day meal program. • In 2017-18, SRF allocated Rs.4.75 Crores towards Mid-day meal program and Model school program. • In 2018-19, SRF allocated Rs.5.70 Crores towards Mid-day meal program and Model school program. (b) Action taken report on non complied points in the certified compliance report has been submitted. (c) Details of baseline data collected and GLC **<u>Baseline Environmental Status</u>** **Air Environment** The PM_{10}values at all the locations in residential/rural areas ranged between 72.53-83.16 $\mu g/m^3$ respectively in winter season. Similarly, the values of $PM_{2.5}$ varied in the range of 41.62-46.04 $\mu g/m^3$. The PM_{10} and $PM_{2.5}$ concentrations at all the AAQM locations were primarily caused by local phenomena including vehicular activities and natural dust getting air borne due to manmade activities and blowing wind. The values of NO_x at all the locations in residential/rural areas were observed to be in the range of 14.06-18.42 $\mu g/m^3$. The values of SO_2 at all the locations in residential/rural areas ranged between 11.97-17.29 $\mu g/m^3$. The monitored Ozone values at all the locations in residential/rural areas ranged between 10.02-10.68 $\mu g/m^3$. At all the air quality monitoring locations in residential/rural areas, the values of NOx, SO_2& O_3 were observed to be within limits. The values of CO at all the locations in residential/rural areas ranged between 1.15-1.28 mg/m^3. The values of NH_3 at all the locations in residential/rural areas ranged between 1.37-6.08 $\mu g/m^3$. The values of VOCs at all the locations in residential/rural areas ranged between 0.2-0.8 ppm. At all the AAQM locations (Industrial as well as residential) C_6H_6, BaP, As values were found below detectable limit.

Baseline Ground Water Quality

pH of ground water samples varies from 7.09- 8.27. Turbidity, Total Dissolved Solids and Total Suspended Solids vary in the range of 0.1-0.5 NTU, 342 - 436 mg/L and 6-46 mg/L respectively. DO is found in range of 6.06-7.52 mg/L. COD, BOD_3 are found in the range of <0.6-9.76 mg/L and <1.0 mg/L respectively.Total hardness (as $CaCO_3$) varies from 118-171.4 mg/L. Calcium hardness (as $CaCO_3$) varies from 50-100.5 mg/L. Total Alkalinity varied from 84.16-199.4 mg/L. Chlorides and Sulfates are found in the range of 66.32-126.99 mg/L and 9.62-39.62 mg/L respectively. Copper is not found in any sample. Sodium, Potassium is found in the ranges 11.8-38.3 mg/L, 1.2-17.2 mg/L respectively.

Baseline Surface Water Quality

pH of surface water sample varies from 7.47 – 8.06. Turbidity, Total Dissolved Solids and Total Suspended Solids varies in the range of 0.2 – 64.4 NTU, 430 - 24995 mg/L and 14 - 278 mg/L respectively. DO and COD are found in range of 5.64 – 6.92 mg/L and 14.16 – 46.9 mg/L respectively.BOD_3 and Total hardness (as $CaCO_3$) varies from <1.0 – 4.8 mg/L and 106.4 – 5327.4 mg/L respectively. Calcium hardness (as $CaCO_3$) varies from 30.12 – 1068.3 mg/L. Total Alkalinity varies from 138.6 – 225.4 mg/L. Chlorides and Sulfates are found in the range of 38.43 – 16356.7 mg/L and 15.64 – 1823.1 mg/L respectively. Copper is not found in any sample. Sodium, Potassium is found in the ranges 26.50 – 57.6 mg/L, 1.3 – 152 mg/L respectively.

Baseline Soil Status

pH varies from 7.02-8.87. Water Holding Capacity varies from 53.5% - 84.94%. Bulk Density varies from 1.18-1.37 g/cm^3.Sulphates and Chlorides are found in the range 2.67-1426.4 mg/kg and 54.2-3178 mg/Kg respectively. Total Hardness varies from 78.62-1048.3 mg/kg. Calcium and Sodium are found in the range of 16.96-298.9 mg/kg and 517-2580 mg/kg respectively. Iron varies from 8.7-429.5 mg/kg. Potassium is found in the range 332-1069 mg/kg. Copper & Nickel is not found in any sample.

GLC

SUMMARY OF ISCST3 MODEL OUTPUT (EXISTING)

S NO	LOCATIONS	CO-ORDINATES (X, Y)	CONCENTRATION (μg/m^3)						
			PM	SO_2	NOx	HCl	Cl_2	HF	Br_2
1.	Project-site (A1)	(0,0)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.	Jolva (A2)	(1591, 568)	0.16	0.27	0.10	0.00	0.00	0.00	0.00
3.	Suva (A3)	(1932, -1932)	0.34	0.59	0.21	0.00	0.00	0.00	0.00
4.	Vav (A4)	(1023, 3750)	0.07	0.12	0.04	0.00	0.00	0.00	0.00
5.	Dahej (A5)	(-5114, 455)	0.03	0.05	0.02	0.00	0.00	0.00	0.00
6.	Vadadla (A6)	(-227, 1705)	0.12	0.21	0.08	0.00	0.00	0.00	0.00
7.	Ambetha (A7)	(-4545, -2045)	0.12	0.21	0.08	0.00	0.00	0.00	0.00
8.	Luvara (A8)	(-8523, -3409)	0.06	0.10	0.04	0.00	0.00	0.00	0.00
9.	Galenda (A9)	(4205, 2045)	0.06	0.11	0.04	0.00	0.00	0.00	0.00

SUMMARY OF ISCST3 MODEL OUTPUT (PROPOSED)

S. NO	LOCATIONS	CO-ORDINATES (X, Y)	CONCENTRATION ($\mu g/m^3$)							
			PM	SO_2	NOx	HCl	Cl_2	HF	Br_2	NH_3
1.	Project-site (A1)	(0,0)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.	Jolva (A2)	(1591, 568)	0.17	0.29	0.11	0.00	0.00	0.00	0.00	0.00
3.	Suva (A3)	(1932, -1932)	0.42	0.74	0.26	0.00	0.00	0.00	0.00	0.00
4.	Vav (A4)	(1023, 3750)	0.10	0.18	0.07	0.00	0.00	0.00	0.00	0.00
5.	Dahej (A5)	(-5114, 455)	0.07	0.12	0.04	0.00	0.00	0.00	0.00	0.00
6.	Vadadla (A6)	(-227, 1705)	0.15	0.26	0.09	0.00	0.00	0.00	0.00	0.00
7.	Ambetha (A7)	(-4545, -2045)	0.20	0.35	0.13	0.00	0.00	0.00	0.00	0.00
8.	Luvara (A8)	(-8523, -3409)	0.11	0.18	0.07	0.00	0.00	0.00	0.00	0.00
9.	Galenda (A9)	(4205, 2045)	0.12	0.20	0.07	0.00	0.00	0.00	0.00	0.00

PREDICTED AMBIENT AIR QUALITY Unit: $\mu g/m^3$

S. NO.	SAMPLING LOCATION	PM	SO_2	NOx	HCl	Cl_2	HF	Br_2	NH_3
		AVERAGE							
1.	Project-site (A1)	124.10	16.72	18.42	<1.0	<5.0	BDL	BDL	6.08
2.	Jolva (A2)	115.07	15.22	16.97	<1.0	<5.0	BDL	BDL	1.58
3.	Suva (A3)	118.42	16.98	18.50	<1.0	<5.0	BDL	BDL	1.84
4.	Vav (A4)	116.10	16.24	17.76	<1.0	<5.0	BDL	BDL	1.74
5.	Dahej (A5)	113.15	17.41	18.40	<1.0	<5.0	BDL	BDL	1.75
6.	Vadadla (A6)	112.24	12.23	14.15	<1.0	<5.0	BDL	BDL	1.71
7.	Ambetha (A7)	116.27	12.76	14.21	<1.0	<5.0	BDL	BDL	1.61
8.	Luvara (A8)	114.17	13.66	15.46	<1.0	<5.0	BDL	BDL	1.37
9.	Galenda (A9)	115.21	13.47	15.13	<1.0	<5.0	BDL	BDL	1.69

28.3.6.3 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the project 'Expansion of Specialty Chemicals, Pesticide, Fluoro-Chemicals & Captive Power Plant' (Specialty Chemicals

	from 175000 TPA to 587177 TPA, CPP from 25 MW to 75 MW) by M/s SRF Ltd in the same premises of total area of 1181776 sqm at Plot No.D-2/1, Village Suva, GIDC Phase II, Dahej, Taluka Vagra in District Bharuch (Gujarat). The project/activities are covered under category A/B of items 5(f), 5(b), 4(d) & 1(d) of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry. The ToR for the expansion project was granted on 29th April, 2017, and the public hearing was conducted by SPCB on 28th August, 2015. Present water requirement is 12798 KL/day, which would be increased to 36393 KL/day after the proposed expansion. The fresh water requirement of 17933 cum/day shall be met from GIDC supply, and the remaining of 18460 KL/day shall be sourced through re-use/recycle. 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 Ministry had earlier issued EC vide letter No.J-11011/1261/2007-IA.II (I)dated 7th May, 2008 in favour of M/s SRF Ltd for setting up chemical manufacturing unit. The SEIAA Gujarat issued EC on 6th September, 2012 for capacity enhancement of Captive Power Plant from 4 MW to 25 MW. Further, the SEIAA in the State granted EC on 29th October, 2016 for expansion of Specialty Chemicals, Fluoro Chemicals & Captive Power Plant under category B of items 5(f), 4(d) & 1(d) of the Schedule. The monitoring report of the Ministry's Regional Office at Bhopal on compliance status of EC conditions was earlier forwarded vide their letter dated 16th January, 2016. Action taken report was submitted on 26th September, 2016. The proposal was last considered by the EAC in its meeting held on 5-7 July, 2017, wherein the Committee had ESC plan for 5 years @ 2.5% of the project cost, action taken report on non-compliance status of EC conditions, and the details of baseline data collected along with the GLCs after the proposed expansion. In response to the above observations of the Committee, the submissions and the clarifications provided by the project proponent (as in the preceding para) were examined and found to be in order.
28.3.6.4	*The EAC, after deliberations, again recommended the project for grant of environmental clearance, subject to compliance of terms and 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.* • *The effluent discharge outside the plant 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. 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 17933 cum/day to be met from GIDC supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.* • *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:-* *(g) Metering and control of quantities of active ingredients to minimize waste.* *(h) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* *(i) Use of automated filling to minimize spillage.* *(j) Use of Close Feed system into batch reactors.* *(k) Venting equipment through vapour recovery system.* *(l) 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 nearly 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 2.5% 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*
28.3.7	**Proposed 30 TPH Fertilizer Blending unit for Customized NPK Production, 25 MW along with MP steam, Gas Turbine (GT), Unfired capacity of 50 MT/Hr Heat Recovery Steam Generator & 1X5000 MT Atmospheric Ammonia Storage Tank (AAST) and Urea Granulation from 1500 MTPD to 1800 MTPD at village Zuarinagar, Sancoale, Taluka Mormugao, District South Goa (Goa) by M/s Zuari Agro Chemicals Ltd - For reconsideration of EC** **[IA/GA/IND2/59274/2015, J-11011/186/2015-IA II (I)]**
28.3.7.1	The project involves expansion of Urea Granulation from 1500 MTPD to 1800 MTPD (Urea prilling - 1200 MTPD, Urea granulation - 6000 MTPD) through 30 TPH Fertilizer Blending unit for Customized NPK Production, 25 MW along with MP steam Gas Turbine (GT), Unfired capacity of 50 MT/Hr Heat Recovery Steam Generator (HRSG) & 1X5000 MT Atmospheric Ammonia Storage Tank (AAST)by M/s Zuari Agro Chemicals Ltd in a total area of 95 acres at village Zuarinagar, Sancoale, Taluka Mormugao, District South Goa (Goa).
28.3.7.2	The proposal was earlier considered by the EAC (Industry-2) in its meeting held during 26-29 December, 2016 wherein the Committee suggested the PP to submit revised EIA/EMP report in terms of following: • Revision of Layout plan earmarking green belt within plant premises over 33% of the total project area with at least 10 m wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO. • Rework on drift losses from cooling tower and reduced it to 20%. • Revision of existing water balance to reduce fresh water requirement. • Arrangements for continuous monitoring system around working place, STP. • Provision for treatment of colony waste water in STP. • Year wise CSR Plan @2.5% for five years. • No ground water will be used even for recharging. • Issues raised during public hearing regarding waste water through pipeline. • Provision for ZLD.

	• No bore well for RWH. • Submission of SCZMA recommendations. In response, the PP has submitted the revised EIA report.
28.3.7.3	During deliberations, the EAC noted the following:- The proposal is for environmental clearance to the project '*Expansion of Urea Plant from 1500 MTPD to 1800 MTPD*' in a total area of 95 acres by M/s Zuari Agro Chemicals Ltd at village Zuarinagar, Sancoale, Taluka Mormugao, District South Goa (Goa). The project/activity is covered under category A of item 5(a) 'Chemical Fertilizers' of the Schedule to the Environmental Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry. The ToR for the project was granted on 18th February, 2016, and the public hearing was conducted by the SPCB on 11th July, 2016. Earlier, the Ministry had issued environmental clearance on 1st September, 2009 for '*Revamp of Ammonia Plant for changeover of feedstock and fuel from Naptha to NG/RLNG and reduction of specific energy consumption along with debottlenecking the capacity of ammonia-urea plants, changeover of fuel from FO to NG/RLNG in the utility boiler as also debottlenecking the capacity of NPK plant A & B alongwith product mix change'*. The monitoring report on compliance status of EC conditions, forwarded by the Ministry's Regional Office at Chennai vide letter dated 25th September, 2013, is more than three years old and may not be accepted. The proposal was last considered by the EAC in its meeting held on 26-29 December, 2016, wherein the Committee asked for additional information/inputs in respect of revision of layout plan earmarking green belt, rework on drift losses from cooling tower, revision of water balance to reduce fresh water requirement, arrangements for continuous monitoring system around working place, sewage treatment, year wise CSR Plan, no ground water to be used, provision of ZLD, issues raised during public hearing regarding waste water through pipeline and submission of SCZMA recommendations. Goa SCZMA has reportedly recommended the proposal from CRZ perspective, but neither the Ministry has been informed in this regard nor any document/records have been made available.
28.3.7.4	*The Committee, after deliberations, asked for further clarifications/inputs in respect of the following:-* • *The proposal and the project/activities requiring prior EC, need to be consistent with the items listed in the Schedule to the EIA Notification, 2006. The project title also requires correction accordingly to avoid any confusion on admissibility of the proposal vis-à-vis the said Notification.* • *The formal recommendations from the Goa SCZMA along with the desired documents are yet to be forwarded to this Ministry by the Authority.* • *The permissibility of the project/activity in terms of the CRZ Notification, 2011 is not justified.* • *The monitoring report on compliance status of the conditions for the EC dated*

	1st September, 2009 was earlier submitted by the Regional Office vide their letter dated 25th September, 2013. Since the same is more than 3 years old, fresh inspection needs to be conducted for the latest monitoring report from the concerned Regional Office. *In view of the above discrepancies, the proposal was deferred.*
28.3.8	**Setting up Synthetic Organic Chemicals and Agro Chemicals Unit at Plot No.755/1, GIDC Industrial Estate, Village Jhagadia, District Bharuch (Gujarat) by M/s Parikh Enterprises Pvt Ltd - For reconsideration of EC** **[IA/GJ/IND2/31402/2015, J-11011/305/2015-IA II (I)]**
28.3.8.1	The project involves setting up Synthetic Organic Chemicals and Agro Chemicals Unit of capacity 6000 TPM by M/s Parikh Enterprises Pvt Ltd in an area of 165825 sqm at Plot No.755/1, GIDC Industrial Estate, Village Jhagadia, District Bharuch (Gujarat).
28.3.8.2	The proposal for environmental clearance (EC) was earlier considered by the EAC (Industry-2) in its 25th meeting held on 5-7 July, 2017 in the Ministry. The project proponent and their consultant M/s Anand Environmental Consultants Private Limited gave a detailed presentation on the salient features of the project and proposed environmental protection measures. The EAC after detailed deliberations, on the basis of the information and presentation made by the PP, had recommended the project for environmental clearance, subject to compliance of certain environmental safeguards. The details of products, by-products along with the capacities were informed as below:-

Products

S. No	Name of Product	Production Capacity (MT/Month)
Synthetic Organic Chemicals		
1	Activated Copper Phthalocyanine Blue	500
2	Copper Phthalocyanine Blue	500
3	Alpha Blue	65
4	Pigment Beta Blue (15:3)	300
5	Pigment Beta Blue (15:4)	200
6	Copper Phthalocyanine Pigment Green -	200
7	Pigment Violet 23	50
8	Pigment Red 122 or Pigment Violet 19	50
9	Sosperse 5000	50
10	Carbazole	50
11	Azo Pigments(Red Series -50 + Yellow	100
12	Pigment Dispersion	400
13	Reactive Blue 21/ Turquoise Blue – G	200
14	Reactive Blue 25/Turquoise Blue - H5G	50
15	Direct Blue 86	100
16	Direct Blue 199	100
17	Ammonium Sulphate Solution	3400
18	Ammonium Sulphate	451

19	Aluminium Hydroxide	193
Agro Chemicals Technical		
1	Copper Sulphate Technical	500
2	Copper Sulphate (Basic) / Tribasic	200
3	Bordeaux Mixture Tech	200
4	Copper Oxychloride Tech	800
5	Copper Hydroxide Tech	100
6	Cuprous Oxide Tech	400

By-products

S.No.	By Product	MT/Month
1	Ammonium Carbonate (100%)	850
2	Ammonium Carbonate Solution	2442
3	Dilute HCl	370
4	Sodium Hypochlorite Solution	562

28.3.8.3 During examination in the Ministry, it is noted that the some of the proposed products namely, Ammonium Sulphate and Ammonium Hydroxide are essentially the inorganic chemicals, and as such, the information provided by the project proponent in the EIA/EMP report and during the presentation before the EAC was not correct and misleading.

In response to Ministry's query, the project proponent has now informed that Ammonium Sulphate Solution and Ammonium Sulphate are produced while manufacturing of Copper Phthalocyanine Blue and Aluminium Hydroxide is produced during manufacturing of Copper Phthalocyanine Green. Different products have since been re-classified as under:-

S. No.	**Synthetic Organic Chemicals**
1	Activated Copper Phthalocyanine Blue
2	Copper Phthalocyanine Blue
3	Alpha Blue
4	Pigment Beta Blue (15:3)
5	Pigment Beta Blue (15:4)
6	Copper Phthalocyanine Pigment Green -7
7	Pigment Violet 23
8	Pigment Red 122 or Pigment Violet 19
9	Solperse 5000
10	Carbazole
11	Azo Pigments(Red Series-50+Yellow Series-50)
12	Pigment Dispersion
13	Reactive Blue 21/ Turquoise Blue – G
14	Reactive Blue 25/Turquoise Blue - H5G
15	Direct Blue 86
16	Direct Blue 199

S.No	Agro Chemicals
1	Copper Sulphate Technical
2	Copper Sulphate (Basic) / Tribasic Copper Sulphate
3	Bordeaux Mixture Tech
4	Copper Oxychloride Tech
5	Copper Hydroxide Tech
6	Cuprous Oxide Tech

S.No	Inorganic Chemicals
1	Ammonium Sulphate Solution
2	Ammonium Sulphate
3	Aluminium Hydroxide

28.3.8.3 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the project 'Setting up Synthetic Organic Chemicals and Agro Chemicals' by M/s Parikh Enterprises Pvt Ltdin a total area of 165825 sqm at Plot No.755/1, GIDC Industrial Estate, village Jhagadia, District Bharuch (Gujarat).

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

The ToR for the project was granted on 5th March, 2016 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.

The proposal was last considered by the EAC in its meeting held on 5-7 July, 2017 and was recommended for grant of EC subject to certain environmental safeguards. Further, in response to the observations of the regulatory authority, the submissions and the clarifications provided by the project proponent were examined and found to be in order.

28.3.8.4 *The EAC, after deliberations, again recommended the project for grant of environmental clearance, subject to compliance of terms and 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.*
- *The effluent discharge outside the premises 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 :* *h) Reactor shall be connected to chilled brine condenser system.* *i) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.* *j) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.* *k) Solvents shall be stored in a separate space specified with all safety measures.* *l) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* *m) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.* *n) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.* • *Total fresh water requirement shall not exceed 950 cum/day to be met from GIDC supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.* • *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:-* *(m)Metering and control of quantities of active ingredients to minimize waste.* *(n) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* *(o) Use of automated filling to minimize spillage.*

	(p) Use of Close Feed system into batch reactors. *(q) Venting equipment through vapour recovery system.* *(r) 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 nearly 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 2.5% 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*
28.3.8(A)	**Expansion of Bulk Drugs manufacturing at Plot No.1482-1486, Trasad Road, Taluka Dholka, District Ahmedabad (Gujarat) by M/s Concord Biotech Ltd - For reconsideration of EC** **[IA/GJ/IND2/31732/2015, J-11011/268/2015-IA II (I)]**
28.3.8(A).1	The project involves expansion of bulk drugs manufacturing unit from 103.83 to 189.03 by M/s Concord Biotech Ltd in an area of 28 acres at Plot No.1482-1486, Trasad Road, Taluka Dholka in District Ahmedabad (Gujarat).
28.3.8(A).2	The proposal was last considered by the EAC (Industry-2) in its meeting held on 5-7 July, 2017, wherein the Committee deferred the proposal for want of additional information as under: • Revised water balance chart with emphasizing on fresh water requirement by adopting 3 R's (Reduce, Reuse and Recycle) concept in the process. • Submit permission from CGWB for ground water withdrawal. In response, the project proponent has submitted the following:- a) Proposed fresh water intake has been reduced to 496.6 KLD against 556 KLD by adopting the following measures: • 50% recycling of treated water for flushing under domestic use. • 20% reduction in washing of vessels, bioreactors and other equipment/tanks by use of methods like high pressure jet pumps. • Permeate from the RO plant used for cooling tower water make up. • Condensate recovery system to be installed in ETP to recover 12 KLD of condensate water, so the raw water to RO boiler feed is reduced from 135 KLD to 123 KLD.

	The above measures would reduce the extraction of raw water by 60 KLD. (b) Permission to withdraw the ground water of 362 KLD has been obtained from CGWB vide letter No. 21-4(819)WCR/CGWA/2011/95 dated 3rd March, 2011.
28.3.8(A).3	During deliberations, the EAC noted the following:- The proposal is for environmental clearance to the expansion project of Bulk Drugs manufacturing from 103.83 TPA to 183.03 TPA by M/s Concord Biotech Ltd in a total area of 28 acres at Plot No.1482-1486, Trasad Road, Taluka Dholka, District Ahmedabad (Gujarat). The project/activity is covered under category A of item 5(f) 'Drugs & Intermediates' of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry. The ToR for the project was granted on 28th January, 2016, and the public hearing was conducted by the SPCB on 27th April, 2017. Present fresh water requirement is 349.5 KL/day, which would be increased to 496.6 KL/day after the proposed expansion to be met from ground water. The required permission for ground water withdrawal of 362 cum/day has been obtained from the concerned regulatory authority/CGWA vide letter dated 3rd March, 2011. 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. Consent to Operate for the presently manufactured products from the State Pollution Control Board is presently valid up to 13th August, 2019. Earlier, the Ministry had issued environmental clearance on 8th December, 2003 for the expansion project from capacity 17.03 TPA to 43.20 TPA, and on 10th August, 2007 for expansion from 43.20 TPA to 103.83 TPA. The monitoring report on compliance status of EC conditions has been submitted by the Ministry's Regional Office at Bhopal vide their letter dated 16th August, 2016 (Monitoring conducted on 11th July, 2016). In case of the conditions partially complied or not-complied, the action plan submitted by the project proponent has been found to be adequately addressing the same. The proposal was last considered by the EAC in its meeting held on 5-7 July, 2017, wherein the Committee asked for reducing the fresh water requirement adopting 3 R's (reduce, reuse and recycle) concept, and thus revising the water balance accordingly. The project proponent were also asked to submit the permission from CGWB for ground water withdrawal. In response to the above observations of the Committee, the submissions and the clarifications provided by the project proponent were examined and found to be in order/satisfactory.
28.3.8(A).4	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and 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. 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 496.6 cum/day to be met from ground water. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.*
- *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.*
- *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 27th April, 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.* • *Raw material storage should not exceed 3 days at any point of time*

19th September 2017 (Day 2)

(Environmental Clearance)

28.3.9	**Expansion of existing Ethylene capacity along with new product diversification at Tehsil Sutahata–I &Haldia, District East Medinipur (West Bengal) by M/s Haldia Petrochemicals Ltd - For EC** **[J-11011/194/2016- IA II(I) (IA/WB/IND2/67219/2016]**
28.3.9.1	The project proponent and the accredited Consultant M/s ERM India Pvt, made a detailed presentation on the salient features of the project and informed that: (i) The proposal is for expansion of existing Ethylene capacity along with new product diversification at Haldia Petrochemicals Limited and located at Haldia. (ii) The project proposal was considered by the Expert Appraisal Committee (Industry-2) in the 13th meeting held during 26-27 September, 2016 and recommended Terms of Reference (ToRs) for the Project. The ToR has been issued by Ministry vide letter No.J-11011/194/2016-IA-II(I) dated 30th November, 2016. (iii) All projects related to petrochemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics) and Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes) are listed at S.N. of 5 (c) and 5(e) of Schedule to the Environmental Impact Assessment (EIA) Notification, 2006 under Category "A" and are appraised at Central Level by Expert Appraisal Committee (EAC). (iv) Ministry has issued EC earlier vide letter No. J-11011/176/2007-IA II (I) dated 28th June, 2007 and Corrigendum vide Letter Number J.11011/176/2007 – IA II(I) dated 24thAugust, 2007 for expansion from 520 KTA to 700 KTA Ethylene Capacity to M/s Haldia Petrochemicals Limited in Expansion case. (v) Existing land area is 453 ha, additional land area is not required. An approximately 30.63 ha land required for the proposed project exists within the facility. . (vi) Industry has an already developed greenbelt in an area of 103 ha out of 453 ha of area of the project. (vii) The estimated project cost is Rs.11935 Crores including existing investment of Rs.7625-crores (as on 31st March, 2017). Total capital cost earmarked towards environmental pollution control measures is Rs.234.26 Crore (as on 31.03.17) and the recurring cost (operation and maintenance) will be about Rs.15.21 Crores per annum (FY 2016-17). (viii) Total employment will be 40-50 skilled persons as direct and 100-150 indirect after expansion. Industry has allocated a budget of 7.79 Rs. Crores towards Corporate Social Responsibility for FY 2017-18 in line with the applicable clauses of the Companies Act, 2013. (ix) It is reported that as per Form-1, No National Parks, Wildlife Sanctuaries, Biosphere Reserves/Tiger/Elephant Reserves, Wildlife Corridors, etc, lies within 10km distance. River Hooghly is flowing at a distance of 1.9km in East direction. (x) Ambient air quality monitoring was carried out at 8 locations during October, 2016 to January, 2017 and submitted baseline data indicates that ranges of concentrations of PM_{10} (88-119 µg/m^3), $PM_{2.5}$ (47-61 µg/m^3), SO_2 (7-12

μg/m^3) and NO_x (31-43 μg/m^3), respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLC's after the proposed project would be 0.21 μg/m^3, 1.02 μg/$m^3$and 4.39 μg/m^3 with respect to PM, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xi) Additional water requirement is 2.57 MGD which will be met from Geonkhali Water Supply System being operated under Haldia Development Authority (HDA).

(xii) Approximately 1000m^3/day of additional effluent will be treated through an existing operational Integrated Wastewater Treatment Plant of capacity 3600 m^3/day of process effluent.

(xiii) Additional steam and power requirement after expansion will be 172.25 TPH and 19 MW respectively. The additional power requirement after expansion will be met through proposed Captive Power Plant (CPP) having 3X120 TPH steam generation capacity and 1X35 MW power generation capacity. Existing Unit has one emergency DG set of 1500 kVA capacity. Additional DG sets have not been proposed.

(xiv) Existing unit has 2X120 TPH boilers fired with Fuel Grade Naphtha (FGN), Residual Fuel Gas(RFG) and Carbon Black Feed Stock (CBFS). An Electrostatic Precipitator with a stack height of 140 m will be installed for controlling the Particulate Matter emissions within statutory limits of 30 mg/Nm^3 for proposed 3X120TPH coal fired boilers respectively.

(xv) Details of process emissions and its management

S.No.	Units	Emission
1.	Ethylene Capacity Expansion in Naphtha Cracker Unit	Cracker Heater Flue Gas during normal; operations: About 90 TPH at 105-110°C majorly containing N_2, O_2, CO_2 and H_2O. Major pollutants are: • NOx- 80ppmv @ 3 mol%O_2 (dry) • CO- 9-11ppmv @ 3 mol %O_2 (dry) • Hydrocarbons-6-11ppmv • Particulates-5-10ppmw • SO_2-Nil Gas Emission during decoking:60-90 TPH at 250°C with characteristic as: • NOx :20-25 ppmv@3 mol %O_2 (dry) • CO:10-25 ppmv@3 mol%O_2(dry) • Hydrocarbons:5010ppmv • Particulates-5-10ppmw Acetylene converter regeneration offgas MAPD Converter Regeneration offgas
2.	Butene -1 Plant	Methanol Stripper Purge -50Nm^3/hr, Stripper purge gas 53Nm^3/hr, C4 Selective Hydrogenation Catalysts treatments 3000Nm^3/hr (1 day per 2.5 years)
3.	MTBE Plant	Hydrocarbons (especially C4) – 400 ppm, T=43°C, Density= 990 kg/m3, pH=6.8-8.5
4.	Phenol and Acetone Plant	Spent air- 31,000Nm^3/hr Vent gas- 60 Nm^3/hr MSHP Vent Gas 30Nm^3/hr

5.	HDPE Plant	Flaring load -135 ton/hr (in emergency situation)
6.	Pyrolysis Gas Hydrogenation Unit	Off-gas composed of Hydrogen (8.9%), H_2S (9.3%), Methane (23.7%), C3-C4 (5.8%), Cyclopentane (28.5%), Pentane (16.7%), Benzene (4.1%), Toluene (2.8%)
7.	Coal based Captive Power Plant	Particulate Matter -30mg/Nm^3, NO_x and SO – 100mg/Nm^3

Management of the emissions:

- Stack of 40m with furnace of Naphtha Cracker Unit;
- Stack Height of 140m with Captive Power Plant;
- An ESP with 99% efficiency to reduce PM emission – will achieve outlet concentration of 30mg/Nm^3;
- Limestone dosing in boiler furnace to limit emission of SO_2- expected to achieve 30-70% reduction[1] and will keep the emission level of SO_2 to 100 mg/Nm^3; and
- Boiler design would be Circulating fluidised bed combustion (CFBC) type with relatively low temperature (850 – 900ºC) to reduce NO_x emission to 100 mg/Nm^3;

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

S.No	Units	Type of waste	Quantity
1.	Ethylene Capacity Expansion in Naphtha Cracker Unit	Spent Catalyst and Molecular Sieves	Existing columns will be used. Quantity will remain unchanged, frequency may change
2.	Butene-1	MTBE Reactor Catalyst (Styrene divinyl benzene copolymer/Sulfonic acid/Water)	20400 kg/2 years
3.		Catalyst beds from MTBE Catalytic Distillation (Styrene divinyl benzene copolymer/Sulfonic acid/Water)	18700 kg/4 years
4.		Resins from guard pots (Styrene divinyl benzene copolymer/Sulfonic acid/Water)	2400kg / year
5.		Resins from guard pots (Styrene divinyl benzene copolymer/Sulfonic acid/Water)	2400 kg / year
6.	Phenol and Acetone	Spent catalyst from phenol resin treater	37.2 m^3

7.	Polybutylene Terephthalate & THF	PBT Oligomers Prepolymer with steel sieves Polymer with steel sieves Side stream THF column	10-20 k/day 6 kg/day 8-12 kg/day 2-5 kg/day 2000-3000 kg/day
8.	Pyrolysis Gas Hydrotreatment/ Desulphurisation Unit	Spent hydrogenation catalysts	17 m^3 in every 5 years
9.	Coal based Energy generation	Coal Ash	15TPH (70:30 Import/Dom Mix)/40 TPH (Dom. Coal)

(xvii) The municipal waste generated from office work, canteens are collected systematically and disposed accordingly. The waste from canteen is sent to piggeries. The incinerable hazardous waste is incinerated in the captive incinerator present in HPL. The non-incinerable hazardous waste and the incinerator ash are sent to M/s West Bengal Waste Management Ltd (WBWML), the CHWTSDF at Sutahata, Haldia or secured land-filling.

(xviii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 25thMay, 2017.

(xix) Certificate for compliance report has been provided by RO, Bhubaneshwar, MoEF&CC on 7th July, 2017.

(xx) Status of Litigation pending against the proposal if any – None.

(xxi) Following are the list of existing and proposed products

S.No	Products	Existing (KTA)	Proposed (KTA)	Total (KTA)
1.	Ethylene	700	70	770
2.	Propylene	350	35	385
3.	Polypropylene	341	0	341
4.	High Density Poly Ethylene (HDPE)	334	160	494
5.	Linear Low Density Poly Ethylene (LLDPE)	386	0	386
6.	Butadiene	101	10	111
7.	Benzene	132	43	175
8.	Butene-1	0	30.2	30.2
9.	MTBE	0	98.6	98.6
10.	Vinyl Acetate Ethylene (VAE)	0	60	60
11.	Mixed Butane	113	13	126
12.	Cyclo Pentane	5.2	3	8.2
13.	Pyrolysis Gasoline	130.5	69.5	200
14.	Motor Spirit (MS) Euro IV	250.6	49.4	300
15.	Phenol	0	200	200
16.	Acetone	0	123	123

17.	Carbon Black Feedstock (CBFS)	89	11	100
18.	Poly Butylene Terephthalate (PBT)	0	70	70
19.	Tetrahydrofuran (THF)	0	16	16
20.	C6 Raffinate	36.6	27.4	64

(xxii) To augment the existing and future power and steam requirement, HPL proposes to establish a coal based Captive Power Plant of 3X120TPH and 1x35 mw Condensing Steam Turbine Generator (CSTG). Further storage facilities and associated pipelines will be built for providing adequate support.

xxiii) The list of proposed storage facilities is provided below:

S.No.	Chemical Name	Proposed Number	Working Volume (m^3)	Maximum Storage quantity (MT)
1.	Naphtha	1	42,735	28,632
2.	MS	1	4,000	3,080
3.	Hydrogenated Py-Gas	1	4,000	3,560
4.	MS Blending Tank	1	1,210	932
5.	Butadiene	1	2,050	1,271
6.	FGN	1	14,000	9,380
7.	LPG	1		10,000
8.	Methanol	2	4,500	3,564
9.	MTBE	2	5,000	3,700
10.	MTBE	1	2,800	2,072
11.	Phenol	3	5,000	16,050
12.	Acetone	2	5,000	3,955
13.	Butanediol	2	3,100	3,162
14.	THF	2	2,000	1,778
15.	VAM	2	5,500	5,137
16.	VAE	2	4,000	3,760
17.	NaOH 50% (Caustic Soda)	2	530	795
18.	H_2SO_4 98%	1	260	478

28.3.9.2 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the project 'Expansion of Ethylene Production with new product diversification' by M/s Haldia Petrochemicals Ltd in a total area of 453 ha at Tehsil, Sutahata-I, Haldia, District Medinipore (West Bengal).

The project/activities are covered under category A of item 5 (c) 'Petrochemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)' & 5(e) 'Petrochemical based processing (processes

	other than cracking & reformation and not covered under the complexes)' of the Schedule to the Environmental Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry. The ToR for the project was granted on 30thNovember, 2016, and the public hearing was conducted by the SPCB on 25thMay, 2017. Present water requirement is 7.73 MGD, which will be increased to 10.30 MGD after the proposed expansion. The total demand is proposed to be met from Geonkhali Water Supply System operated by Haldia Development Authority (HDA). Consent to Operate for the presently manufactured products was obtained from the West Bengal Pollution Control Board, which is presently valid up to 31st March, 2019. Earlier, the Ministry had issued environmental clearance on 24th August, 2007 for the project 'Increase in Ethylene production from 520 to 700 KTA'. The monitoring report on compliance status of EC conditions, was forwarded by the Ministry's Regional Office at Bhubaneshwar vide letter dated 7th July, 2017. One of the major observations made during the site visit was higher values of PM10 and PM2.5 at majority of the locations within the plant. It is also reported that a number of letters were issued to the project proponent to take appropriate action for its minimization, and no action taken report was submitted. During the presentation, the project proponent informed about the action taken report on each of the observations made during the site visit. The Regional Office has yet not confirmed the adequacy of the ATR so submitted.
28.3.9.3	*The Committee, after deliberations, asked for further clarifications/inputs in respect of the following:-* • *The proposal and the project/activities requiring prior EC, need to be consistent with the items listed in the Schedule to the EIA Notification, 2006. The project title also requires corrections accordingly to avoid any confusion on admissibility of the proposal vis-à-vis the said Notification.* • *Base line data for ambient air quality especially in respect of PM_{10} at some of the monitoring locations are not meeting the prescribed standards. It was desired for more one month data collection to confirm the consistency of data.* • *The action taken report on each of the observations made during the site visit needs to be confirmed and adequacy of the ATR is to be established by the RO at Bhubaneswar.* • *Details of statutory clearances (EC/CRZ Clearance/Consent to Operate) for the infrastructure/facilities with the KOPT/Haldia Dock Complex, but to be utilized by the project proponent.* *In view of the above, the proposal was deferred.*
28.3.10	**Exploratory Drilling of Twenty Nine Wells in additional Ten ML Blocks of Western Onshore Basin, District Mehsana-Patan (Gujarat) by M/s ONGC Ltd- For EC** **[IA/GJ/IND2/42396/2016, J-11011/45/2016-IA II (I)]**
28.3.10.1	The project proponent and the accredited Consultant M/s Kadam Environmental

	Consultant, made a detailed presentation on the silent features of the project and informed that: i. The proposal is for drilling of 29 exploratory wells in 10 ML Blocks by M/S Oil and Natural Gas Corporation Limited, Western Onshore Basin and located at Patan and Mehsana Districts of Gujarat. ii. The project proposal was considered by the Expert Appraisal Committee (industry-2) in its 26th meeting held during 25-26 February, 2016 and recommended Terms of references (ToRs) for the project. The ToR was issued by Ministry vide letter no. J-11011/45/2016-IA II (I) dated 26th April 2016. iii. All products are listed at S.N 1(b) of schedule of Environment Impact Assessment (EIA) Notification Under category 'A' and are appraised at central level by Expert Appraisal Committee (EAC). iv. Ministry has not issued any EC earlier for this project. v. Land requirement will be ~ 110 m X 110 m for each exploratory wellis required for proposed project. vi. As drilling is temporary activity greenbelt is not be applicable. vii. The estimated project cost is Rs.295 crores (Total for 29 wells). The one-time expenditure for environmental management and mitigation is estimated to be approx. Rs.1,12,39,000 per well. Additional Rs.15,00,000 will be spent for site restoration in case of no hydrocarbon discovery viii. About 30-40 will be working in 8 hour shift at site. There is some of possibility that local people will be hire for some temporary work like construction activity for drilling. Industry proposes to allocate Rs.60000000 @ 2.5% towards Corporate Social Responsibility ix. It is reported that as per Form 1, no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant reserves, Wildlife's Corridors etc. lies within 10 km distance of the project site. Khari, Rupen and Pushpavati River are within 10 km of proposed wells. x. Ambient air quality monitoring was carried out at 10 location during Post monsoon season 2016and submitted baseline data indicated that ranges of concentration of PM10:70.0 µg/Nm^3 TO 80.0 µg/Nm^3, PM 2.5:30 µg/Nm^3 TO 34 µg/Nm^3, SO2:12.1 µg/Nm^3 TO 15.9 µg/Nm^3, NOx: 16.1 µg/Nm^3 TO 24.1 µg/Nm^3, HC: 1051 µg/Nm^3 TO 1150 µg/Nm^3, NMHC: 11.0 µg/Nm^3 TO 21.5 µg/Nm^3 and VOC: < 1 ppm. AAQ modeling study for point source emission indicates that the maximum incremental GLCs after the proposed project would be 0.233 µg/m3, 5.13 µg/m3 and 0.233 µg/m3 for SO2, NOx and particulate matter respectively. These GLC's are expected to occur at a distance of 100 m from the source towards the South West direction. The resultant Concentration are within NAAQS xi. Total water requirement is 30 m^3/day out of which fresh water requirement 25 m^3/day which will be met from nearby ONGC installation. xii. It is expected that wastewater in the form of Drill cutting washing + Rig washing + cooling etc shall be generated at an average rate of around 4 m^3/day during the drilling operations from a single well. Waste water will be discharged in HDPE lined evaporation pit for solar evaporation. xiii. The capacity of the DG set that shall be used for operating the rig and the circulation system is expected to be of 1240 HP (3 Nos, two running and one standby). Stack (height 10m) will be provided as per CPCB Norms to the proposed DG sets. xiv. The proposed activity for exploratory drilling and no boiler will be installed. xv. The proposed activity for exploratory drilling and no process emission will be there.

	xvi. 150-200 MT / well of drill cuttings shall be generated at site per well (for well depth of 3000 m).This shall be stored in well-designed HDPE line pit. As water based mud will be used drill cuttings will be disposed off as per MoEF&CC notification G.S.R 395(E) dated 4th April 2016. Used/waste Oil – During the drilling approx. 200 litre of spent oil shall be generated per well. This oil shall be sent to an authorize recyclers. Domestic waste of 1-2 kg/day per well shall be generated at site, which shall be segregated at source (Organic/Inorganic) and disposed accordingly. xvii. Public hearing for the proposed project has been conducted by State Pollution Control Board for Patan district public hearing was conducted on 21st April, 2017 at Gram Panchayat Chock, Opp gram Panchayat office, Village Ganget, Taluka Chanasma, District Patan. xviii. Status of litigation pending against the proposal, if any – Not Applicable
28.3.10.2	During deliberations, the EAC noted the following:- The proposal is for environmental clearance to the project 'Exploratory Drilling of Twenty Nine Wells' in ten ML Blocks by M/s ONGC Ltd in an area of 1.21 ha per well at Western Onshore Basin, District Mehsana and Patan (Gujarat). 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 26th April, 2016, and the public hearing was conducted by the State Pollution Control Board on 21st April, 2017 in District Patan and 6th May, 2017 in District Mehsana.
28.3.10.3	*The Committee, after deliberations, asked for further clarifications/inputs in respect of the following:-* • *HC, NMHC and VOC, as the values are not balanced in proportions (Page 53, Table 3-8).* • *TDS and electrical conductivity in ground water analysis is having drastic variations (at Page 63,Table 3-15.* • *Values of Dissolved Oxygen are low, in surface water samples (pond) at Page-67, 68, 70 table 3-17, 18,19.* • *Bio-diversity of the pond has not been described (Page-88, Table 3-30)* • *Surface water sampling of Khari not undertaken (Page-66, Table 3-16)*
28.3.11	**Resins manufacturing plant at Plot No.C-21 Focal Point, Tehsil Dera Bassi, District SAS Nagar (Punjab) by M/s Surbhee Polymers Pvt Ltd - For EC** **[IA/PB/IND2/53284/2016, J-11011/133/2016- IA II(I)]**
28.3.11.1	The project proponent made a detailed presentation on the silent features of the project and informed that: (i) The proposal is for manufacturing of formaldehyde [50%] {200 TPD} and Urea resin {40TPD} at plot no. C-21, Focal Point, Dera Bassi, Tehsil Dera Bassi District SAS Nagar, Punjab by M/s Surbhee Polymers (P) Ltd. and located at Focal Point, Dera Bassi, SAS Nagar (Punjab). (ii) The project was considered by the Expert Appraisal Committee (Industry-2) in

its 18th meeting held during 23rd January, 2017 and recommended for grant of Terms of References (TORs) for the project. The ToR has been issued by Ministry vide letter No. J-11011/133/2016-IA-II (I); dated 12th April, 2017.

(iii) The project/activity is covered under category B of item 5(f) 'Synthetic Organic Chemicals' of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at the State level by the SEIAA. However, due to applicability of general conditions (within 5 km of interstate boundary of Haryana), the project was appraised at Central Level by the sectoral Expert Appraisal Committee (EAC) in the Ministry.

(iv) Total land area is 3135 sqm. Greenbelt will be developed in an area of 33.49% i.e. 1050 sqm out of 3135 sqm of area of the project.

(v) Following are the proposed products:

S.No.	Products	Quantity(TPA)
1.	Formaldehyde (55%)	200 MTD
2.	Urea Formaldehyde Resin	50 MTD

(vi) The estimated project cost is Rs. 3.5 Cr and EMP cost is Rs. 15 lakh.

(vii) Total Employment will be 10-15 persons.

(viii) It is reported that as per Form-1, there is no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance of the project site. River/ water body Ghaggar is flowing at a distance a distance of 2 km towards west side of the project site.

(ix) Ambient air quality monitoring was carried out at 8 locations during February, 2017 to April, 2017 and submitted baseline data indicates that ranges of concentrations of PM10 (66 µg/m^3 to 92.2 µg/m^3), PM2.5 (30.2 µg/m^3 to 43.46 µg/m^3), SO2 (4.0 µg/m^3 to 8.02 µg/m^3) and NOx (10.1 µg/m^3 to 16.14 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.80 µg/m^3, 0.90 µg/m^3 and 0.80 µg/m^3 with respect to PM10, SO_x and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(x) Total fresh water requirement of 119 KLD and will be met from Punjab Small Industries Export Corporation Limited.

(xi) Treated effluent of unit will be treated through ETP will be based on Zero Liquid discharge system.

(xii) Power requirement of the project will be 300 KW will be provided from Punjab State Power Corporation limited (PSPCL). Proposed unit will have 2 DG sets of 125 kVA capacities. Stack (height 6 m) will be provided as per CPCB norms.

(xiii) 1 MT/H coal/white coal fired boiler will be installed. Multi cyclone Dust Collector/ bag filter with a stack of height of 30 m will be installed for controlling the Particulate emissions (within statutory limit of 115 mg/Nm^3).

(xiv) Multi cyclone dust collector will be installed to control Particulate matter. Proper Stack heights have been suitably selected (30 m for boiler) so as to ensure that ground level concentration of pollutants remains within the permissible limits.

(xv) The Municipal solid waste will be collected by municipal solid waste collection facility. Industrial wastes are segregated and managed properly. The hazardous waste generated from the plant will be provided to treatment Storage and Disposal Facility (TSDF) Dera Bassi, Punjab.

(xvi) Being a new project, details of certified compliance report submitted by RO,

	MoEF&CC is not applicable. (xvii) No Litigation is pending against the proposal.
28.3.11.2	During deliberations, the EAC noted the following:- The proposal is for environmental clearance to the project 'Manufacturing of Formaldehyde & Urea Formaldehyde Resin' of capacity 240 TPD (Formaldehyde - 200 TPD, Urea Resin - 40 TPD) by M/s Surbhee Ploymers Pvt Ltd in an area of 3135 sqm at Plot No.C-21 Focal Point, Tehsil Dera Bassi, District SAS Nagar (Punjab). The project/activity is covered under category B of item 5(f) 'Synthetic Organic Chemicals' of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at the State level by the SEIAA. However, due to applicability of general conditions (within 5 km of interstate boundary of Haryana), 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 23rd January, 2017 with the exemption from public hearing. Total water requirement is estimated to be 119 KL/day to be met from Punjab Small Industries Export Council. Waste water generation of 7.4 KL/day would be taken to the ETP for treatment. 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.
28.3.11.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to compliance of terms and 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.* • *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. 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 119 cum/day to be met from the dedicated supply of PSIEC. Prior permission in this regard shall be obtained from the concerned regulatory authority.* • *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.* • *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.* • *Raw material storage should not exceed 3 days at any point of time*
28.3.12	**Setting up Bamboo based Ethanol Project at village Owguri Chapori Gaon,**

	Mouza Morong, Tehsil & District Golaghat (Assam) by M/s Numaligarh Refinery Ltd - For EC **[IA/AS/IND2/31790/2015 , J-11011/274/2015-IA II (I)]**
28.3.12.1	The project proponent and the accredited consultant M/s Envision Enviro Technologies Pvt Ltd, made a detailed presentation on the salient features of the project and informed that: (i) The proposal is for Bamboo based Ethanol project by M/s Numaligarh Refinery Limited located at Village Owguri Chapori Gaon, Tehsil Golaghat, adjacent to Numaligarh Refinery, Mouza- Morong, District Golaghat (Assam). (ii) All Grain based distillery (> 60 KLPD) are listed at S.N. 5(g)(ii) of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). (iii) The proposal was considered by the EAC (Industry-2) in its 3rd meeting held during 18-19 January, 2016 and recommended for grant of ToR. The ToR was issued by Ministry vide letter dated 5th May, 2016. (iv) Existing land area is 10.5 ha. Green belt will be developed in an area of 33% i.e. 34,700 sqm out of 1,05,090 sqm of area of the project. (v) Following are the proposed products: **S. No** | **Products** | **Quantity(TPA)** 1. | Ethanol | 49,000 2. | Acetic acid | 11,000 3. | Furfural | 19,000 4. | Bio-coal (20 MJ/kg) | 1,60,000 5. | Stillages (dry basis) | 30,000 (vi) The estimated project cost is Rs 950.45 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs 11.7 crores and the Recurring cost (operation and maintenance) will be about Rs 7.15 crores per annum. (vii) Total employment will be 150 persons as direct & 10,000 persons indirect. (viii) There is no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc., within 10 km distance of the project. River Dhansiri is flowing at a distance of 1.6 km in North West direction. (ix) Ambient air quality monitoring was carried out at 8 locations during October to December, 2016 and submitted baseline data indicates that ranges of concentrations of PM_{10} (32.5-64.2 µg/m3), $PM_{2.5}$ (14.2-31.1 µg/m3), SO_2 (4-6.8 µg/m3) and NO_2 (9.0-17.3 µg/m3) respectively. AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 0.5 µg/m^3,1.4 µg/m^3 and 1 µg/m^3 with respect to PM_{10}, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). (x) Total water requirement is 2,764 m^3/day of which fresh water requirement of 2,224 m^3/day and will be met from River Dhansiri using existing water intake facility. (xi) Total effluent generation is 540 KLD which includes 58 KLD boiler blow down, 352 cooling blow down, 96 KLD effluent from spent wash treatment and 34 KLD domestic. Entire effluent of 540 KLD will be treated through existing

	effluent treatment plant of Numaligarh Refinery based on Zero Liquid discharge system. (xii) Power requirement will be 8.6 MW and will be met from proposed captive power plant. The proposed CPP will produce total 20 MW power out of which 11.4 MW will be diverted to grid. During power failure, the grid power will be utilised which is a standby power source. (xiii) 135 TPH fired boiler will be installed. Electro Static Precipitator (ESP) and Modern combustion technology with a stack of height of 60 m will be installed for controlling the Particulate emissions for Proposed 135 TPH fired boiler. (xiv) Due to fermentation of sugars into ethanol, carbon dioxide is generated which will be vented from fermenters. (xv) Only fly ash around 21.6 MT/day will be generated from boiler which will be utilized as fertilizer or in cement production. (xvi) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 15th July, 2017. (xvii) Status of Litigation Pending against the proposal, if any - No litigation
28.3.12.2	During deliberations, the EAC noted the following:- The proposal is for environmental clearance to the project '*Bamboo based Bio-Ethanol Plant*' of capacity 187 KLPD/49 KTPA by M/s Numaligarh Refinery Limited in an area of 10.5 ha located at Village Owguri Chapori Gaon, Mouza Morong, Tehsil & District Golaghat (Assam). The different by-products include Acetic Acid and Furfural. Waste/residue from the proposed plant would be bio-coal of GCV 20 MJ/kg and stillages. The project/activity is covered under category A of item 5(g)(ii) 'Distillery' of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry. The ToR for the project was granted on 5th May, 2016, and the public hearing was conducted by the SPCB on 15th July, 2017. Total water requirement is estimated to be 2764 m^3/day, of which fresh water requirement of 2224 m3/day will be met from River Dhansiri using existing water intake facility. 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.
28.3.12.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to the compliance of terms and conditions as under:-* • *The final product shall be used only as a bio-fuel and not at all for human consumption.* • *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.* • *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.The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.* • *Solvent management shall be carried out as follows :* *(h) Reactor shall be connected to chilled brine condenser system.* *(i) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.* *(j) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.* *(k) Solvents shall be stored in a separate space specified with all safety measures.* *(l) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* *(m) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.* *(n) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.* • *Total fresh water requirement shall not exceed 2224 cum/day. Prior permission shall be obtained in this regard from the concerned regulatory authority.* • *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 15th July, 2017 shall be satisfactorily implemented.* • *At least 2.5% 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 ROs of MoEF&CC, CPCB and SPCB.*
28.3.13	**Expansion of distillery from 50 KLPD to 130 KLPD at Khasra No. 262/1, village Sejwaya, Lebad Chowki, Ghatabillod, Tehsil & District Dhar (Madhya Pradesh) by M/s Great Galleon Ltd-For EC** **[IA/MP/IND2/34146/2015, J-11011/306/2015-IA.II(I)]**

28.3.13.1 The project proponent and the accredited consultant M/s Mantras Green Resources 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 50KLPD to 130 KLPD by M/s Great Galleon Ltd located at Khasra No. 262/1, Village Sejwaya, Lebad Chowki, Ghatabillod, Tehsil & District Dhar (Madhya Pradesh).

(ii) All Grain based distillery (> 60 KLPD) are listed at S.N. 5(g)(ii) of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

(iii) The proposal was considered by the EAC (Industry-2) in its 7th meeting held during 28-29 April, 2016 and recommended for grant of ToR. The ToR was issued by Ministry vide letter No. J-11011/299/2015-IA II (I) dated 21st June 2016.

(iv) Existing land area is 9.416 acres which will be used for proposed expansion.

(v) Green belt will be developed in an area of 33% i.e., 12475.0 sqm out of 37804.42sqm of area of the project.

(vi) Following are the list of existing and proposed products:

Products	Existing	Proposed
ENA /RS	50 KLPD	80 KLPD
Electric Power	1.8 MW	5.77 MW
By Product (DDGS)	38.0 TPD	51.6TPD

(vii) The estimated project cost is Rs 53.94 crores. Total capital cost earmarked towards environmental pollution control measures is Rs 818.0 lakhs and the Recurring cost (operation and maintenance) will be about Rs 142.0 lakhs per annum.

(viii) Total employment will be 333 persons as direct & 900 persons indirect after expansion.

(ix) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. lies within 10 km distance of the project. River Chambal is flowing at a distance a distance of 4.6km in East direction.

(x) Ambient air quality monitoring was carried out at 8 locations during March 2016 to May 2016 and submitted baseline data indicates that ranges of concentrations of PM_{10} (50.13 - 91.57 µg/m^3), $PM_{2.5}$ (16.27 - 39.4 µg/m^3), SO_2 (8.09 - 17.38 µg/m^3) and NO_2 (11.97 - 21.52 µg/m^3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 92.18 µg/m^3, 22.19 µg/m^3 and 23.13 µg/m^3 with respect to PM_{10}, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

(xi) Total fresh water requirement is 1290 cum/day which will be met from MPAKVN Ltd.

(xii) Treated effluent of 662.5 cum/day spent wash will be treated through Decanter and MEE. Plant will be based on Zero Liquid discharge system.

(xiii) Power requirement after expansion will be 5.77 MW including existing 1.8 MW and will be met from proposed Captive Power Plant.

(xiv) Existing unit has 20 TPH coal fired boiler. The company will install a boiler of 42 TPH capacity with 55 m height stack. ESP will be installed to control the

Particulate Matter below the 50 mg/Nm^3. Existing boiler unit will be used as standby unit.

(xv) PM, SO_2 NO_x will be generated from the fuel combustion. Stack height with ESP will be provided to control the emissions. Dust emission from vehicular movement will be control through Water sprinkling.

(xvi) Details of solid waste/ hazardous waste generation and its management is as follows:

S. No.	Particular	Quantity	Mode of Disposal
a. Existing			
1	DDGS	38.0 TPD	Sold as a cattle feed
2	Total Ash	32.0 TPD (26 TPD Flay ash and 6 TPD Bottom ash)	Fly ash Sold to brick Manufactures
3.	Used oil	3.0 KL/Annum	Sold to Authorized Vender
b. Proposed			
1	DDGS	51.6 TPD	DDGS will be Sold as a cattle feed
2	Total Ash	84.0 TPD (67 TPD Flay ash and 17 TPD Bottom ash)	Fly ash will be Sold to brick Manufactures
3.	Used oil	4.0 KL/Annum	Used oil will be Sold to Authorized Vender

(xvii) Public hearing was conducted by the State Pollution Control Board on 26th April, 2017.

xviii) Certified compliance report is not applicable as existing unit was established before 1994.

(xix) Status of Litigation Pending against the proposal, if any. Not Applicable

2.28.13.2 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the project 'Expansion of Grain based Distillery from 50 KLPD to 130 KLPD' by M/s Great Galleon Ltd in a total area of 9.416 acres at Khasra No. 262/1, village Sejwaya, Lebad Chowki, Ghatabillod, Tehsil & District Dhar (Madhya Pradesh).

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

The ToR for the project was granted on 21st June 2016, and the public hearing was conducted by the SPCB on 26th April, 2017.

Present water requirement is estimated as 470 cum/day, which would be increased to 1250 cum/day after the proposed expansion. The same is to be met from the dedicated supply of MPAKVN Ltd.

	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. Consent to Operate under the Air/Water Act, for the present capacity of 50 KLPD was obtained from the MP State Pollution Control Board, which is presently valid up to 31st October, 2017. The unit has applied for the renewal of the same. The unit of capacity 50 KLPD is reported to be established and in operation since prior to the EIA Notification, 2006, and thus not requiring/having any EC. The requirement Certified compliance report is not applicable.
28.3.13.3	*The EAC, after deliberations, recommended the project for grant of environmental clearance, subject to the compliance of terms and 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 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. ESP 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 :* *(o) Reactor shall be connected to chilled brine condenser system.* *(p) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.* *(q) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.* *(r) Solvents shall be stored in a separate space specified with all safety measures.* *(s) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.* *(t) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.* *(u) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.* • *Total fresh water requirement shall not exceed 1040 cum/day. Prior permission in this regard shall be obtained from the concerned regulatory authority.*

	• *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:-* *(g) Metering and control of quantities of active ingredients to minimize waste.* *(h) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.* *(i) Use of automated filling to minimize spillage.* *(j) Use of Close Feed system into batch reactors.* *(k) Venting equipment through vapour recovery system.* *(l) 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 26th April, 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 ROs of MoEF&CC, CPCB and SPCB.*
28.3.14	**Expansion of Active Pharmaceuticals Ingredients and its Intermediates with R&D Facility at R.S.Nos. 73/1A, 73/2, 74/7B, 78/1B, 79/1, 79/2B, 79/3, 79/4B, 79/5, 79/6A, 79/6B, 79/7, 80/1, 80/2, 80/3, 80/4, 84/1, 84/2, 84/3A, 84/5A, 84/6, 84/7A,**

	85/1, 85/2B, 86/2B, 86/2C, 86/2D2, 86/3B, 86/4, 86/5, 86/6, 86/7, 86/8, 86/9, Manali Industrial Area, Thiruvottiyur Taluk, District Thiruvallur (Tamil Nadu) by M/s NATCO Pharma Limited - For EC **[IA/TN/IND2/63014/2017, IA-J-11011/119/2017-IA-II(I)]**
28.3.14.1	The project proponent and the accredited Consultant M/s KKB Envirocare Consultants Pvt Ltd, Hyderabad made a detailed presentation on the salient features of the project and informed that: i. The proposal is for expansion of Active Pharmaceuticals Ingredients (APIs) and its Intermediates with R&D Facility by M/s NATCO Pharma Ltd at R.S.Nos. 73/1A, 73/2, 74/7B, 78/1B, 79/1, 79/2B, 79/3, 79/4B, 79/5, 79/6A, 79/6B, 79/7, 80/1, 80/2, 80/3, 80/4, 84/1, 84/2, 84/3A, 84/5A, 84/6, 84/7A, 85/1, 85/2B, 86/2B, 86/2C, 86/2D2, 86/3B, 86/4, 86/5, 86/6, 86/7, 86/8, 86/9 of Manali Industrial Area, Thiruvottiyur Taluk (formerly village Vaikkadu, Ambattur, Thiruvallur District (Tamil Nadu). ii. All Synthetic Organic Chemicals Industry located in a notified Industrial area is listed at S.No.5 (f) of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006 under Category 'B' but due to the applicability of the general condition (located in the critically polluted area), it is considered under Category 'A' and is appraised at Central level by Expert Appraisal Committee (EAC). iii. Earlier, Ministry issued EC vide letter No.J-11011/456/06/2006-IA-II (I) dated 15th June, 2007 in favor of M/s NATCO Organics Ltd. iv. The proposal was considered by the EAC (Industry-2) in its 22nd meeting held during 17-18 April, 2017 and recommended the project for grant of ToR. The ToR was issued by Ministry vide letter No. J-11011/119/2017-IA II (I) dated 30th May, 2017. v. Existing land area is 10.57 ha. No additional land will be used for proposed expansion. vi. Industry already developed Greenbelt in an area of 3.513 ha (33.2%) out of 10.57 ha of area of the project. In addition, industry has given 1.05 ha (10% of total) as Open Space Reservation (OSR) land for greenbelt and also developed the lawn in an area of 0.391 ha (3.7%) out of 10.57 ha. Total 47% is greenery i.e. 4.96 ha out of total area 10.57 ha of the project. vii. The estimated project cost Rs.186.82 crores including existing investment of Rs.86.82 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 20 crores including existing Rs.15 crores and Recurring cost (Operation and maintenance) will be about Rs.12croresper annum. viii. Total Employment will be 350persons as direct &100 persons as indirect after expansion. Industry proposes to allocate Rs.5 crores @ 5% of the project cost towards Corporate Social Responsibility (Enterprises Social Commitment). ix. It is reported that as per Form-1, there are no National parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc., lies within 10 km distance. River Kosasthalaiyar is flowing at a distance of 1.8 km in NE direction and joining sea at 5.5 km E. Water bodies like Kadapakkam Panchayat Lake is at 1.5 km in NW direction, Retteri Lake is at 6.3 km in SW direction and Puzhal Lake is at 8 km in WSW direction. x. Ambient air quality monitoring was carried out at 8 locations during March to May 2017 and submitted baseline data indicates that ranges of concentrations of PM_{10} (42-64 µg/m^3), $PM_{2.5}$ (13-28 µg/m^3), SO_2 (9-17µg/m^3) and NO_2 (15-30 µg/m^3) respectively. AAQ modeling study for point source emissions indicates

that the maximum incremental GLCs after the proposed project would be 0.178 $\mu g/m^3$, 8.95 $\mu g/m^3$ and 2.2 $\mu g/m^3$ with respect to PM_{10}, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).

xi. Total water requirement is 576m^3/day of which fresh water requirement of 303 m^3/day and will be met from Metro water supply and from ground water through private tankers supply.

xii. The effluent quantity of195 m^3/day will be treated through upgraded Effluent Treatment plant will be based on Zero Liquid discharge system.

xiii. Power requirement after expansion will be 2350 KVA including existing1175KVA and will be met from captive 2100 KW wind electric generator installed in Tuticorin district, Tamil Nadu through Tamil Nadu Electricity Board (TNEB).Existing unit has2nos. DG sets of 1010 KVA& 300 KVA capacity, additionally 2 nos. of 1010 KVA&100 KVADG sets are used as standby during power failure. Stack (each height 11 m for 1010 KVA & 7m for 100 KVA) will be provided as per CPCB norms to proposed DG sets of 2 nos. of 1010 KVA&100 KVA in addition to the existing DG set of 1010 KVA which will be used as standby during power failure. Existing 300 KVA DG set will be dismantled after expansion.

xiv. Existing unit has 3TPH Furnace oil fired boiler. Additional 6 TPH Furnace oil fired boilers will be installed. Existing 3 TPH boilers will be standby after expansion. Stack height of 40m will be installed for controlling the Particulate emissions (within statutory limit of 115 $\mu g/Nm^3$) for proposed6TPH furnace oil fired boiler. Industry will use the Natural Gas in Boilers & Generators after construction & commissioning of terminal at Ennore by M/s. IOCL for import and re-gasification of LNG. The terminal is expected to be ready by 2018-19. IOCL has entered agreement with NATCO Pharma Ltd, to this effect.

xv. Details of process emissions generation and its management.

Sl. No.	Process Emission	Maximum Quantity on various combinations (kg/day)	Treatment
1.	HCl	196.54	Scrubbed by using water & Caustic Soda (CS) lye solution
2.	SO_2	61.53	Scrubbed by using CS lye solution
3.	H_2	47.37	Diffused with Flame Arrestor
4.	CO_2	145.65	Scrubbed by using CS lye solution
5.	Methyl Bromide	0.08	Scrubbed by using CS lye solution
6.	O_2	2.05	Dispersed into Atmosphere
7.	N_2	2.45	Dispersed into Atmosphere
8.	Cl_2	15.9	Scrubbed by using CS lye solution
9.	Chloroethane	0.9	Scrubbed & condensed
10.	Dimethylamine	4.83	Scrubbed by using water
11.	NH_3	4.74	Scrubbed by using Chilled water

xvi. Details of solid waste/ hazardous waste generation and its management.

SN	Description	Schedule as HW rules	Proposed Quantity (TPD)	Proposed Quantity (TPA)	Handling Method	Disposal
1.	Process Organic residue	28.1 of Schedule - I	1.31	471.6	HDPE Bags / Drums	Sent to Authorized Cement Industries **(or)** TNWML for incineration **(or)** disposed in in-house incineration in the plant premises
2.	Distillation residue (1% of solvent recovery)	36.1 of Schedule - I	0.22	79.2		
3.	Spent carbon	28.3 of Schedule - I	0.1	36		
4.	(a) Inorganic salt (Process)	28.1 of Schedule - I	1.08	388.8	HDPE Bags	Sent to Tamil Nadu Waste Management Limited (TNWML)
	(b) Evaporation salt (Process)	35.3 of Schedule - I	2.35	846		
5.	Evaporation salt (Non-Process)	35.3 of Schedule - I	1	360		
6.	ETP Sludge	35.3 of Schedule - I	0.5	180		
7.	Incinerator ash	37.2 of Schedule-I	0.1	36		
8.	Spent Catalyst (Spent Raney Nickel catalyst-0.03, Spent Palladium Catalyst-0.03)	28.2 of Schedule-I	0.06	21.6	Drums	Sold to Authorized Recyclers **(or)** Sent to TNWML
Other Hazardous Waste generation from the Plant						
9.	Detoxified Container / Liners drums, HDPE Carboys, Fiber Drums, PP Bags	33.1 of Schedule-I	--	100 Nos./ month	Stored in Scrap yard	After Detoxification sent to outside agencies or recyclers
10.	Spent solvents with moisture (22 KLD)	28.6 of Schedule - I	22 KLD	7920 KL/A	Tanks / Drums	Recovered within the premises duly sending the residue to TNWML **(or)** On-site incineration of

						distillation residue.
11.	Recovered solvents from spent solvents	28.6 of Schedule –I	20 KLD	7200 KL/A	Tanks / Drums	Reuse in process **(or)** sold to authorized recyclers
12.	Spent Mixed solvents (2 KLD from SRS + 0.4 KLD with 50% moisture from ETP)	28.6 of Schedule - I	2.4 KLD	864 KL/A	Tanks/ Drums	Sent to Cement industries for Co-Processing **(or)** Sent to TNWML for incineration **(or)** On-site Incineration (Existing)
13.	Waste oils & Grease	5.1 of Schedule-I	--	4 KL/A	MS Drums	Sent to authorized re-processors**(or)** TNWML
14.	Used Lead acid Batteries	A1160 of Schedule-III	--	24 Nos/A	Stored in Covered shed	Sent to suppliers on buy-back basis.
15.	Date expired	28.5 of Schedule-I	0.0009	0.33	HDPEB ags and stored in covered shed	Sent to TNWML**(or)** Cement Industries for processing **(or)**On-site Incineration (existing Incinerator)
16.	Off specification products/ chemicals	28.4 of Schedule-I	0.0009	0.33		
17.	Spill control Wastes/ Residues containing Oil	5.2 of Schedule-I	0.001	0.36		Sent to TNWML

* Solid waste quantities maximum on various combinations i.e., 16 products on campaign products at a point of time and R&D products

**50% pure solvents recovered in process reactors for reuse and balance will be spent solvents.

Non-Hazardous Waste Generation, Handling and Disposal

Sl. No.	Source	Proposed Quantity			Handling	Disposal
		TPD	TPM	TPA		

1	Non-hazardous waste(Domestic– canteen waste, discarded papers)	0.09	2.7	32.4	Packed in drums/ HDPE bags	Handed over to local waste collection system
2	Non-hazardous waste(Paper/cartons / packing materials, glass, plastic/Used PPE, etc.)	0.06	1.8	21.6	Stored in Scrap yard	Sent to outside agencies/ recyclers
3	Used Insulation waste	0.05	1.5	18	Stored in Scrap yard	
4	Metal scrap (MS/SS/ Aluminum)	0.3	9	108	Stored in Scrap yard	

Biomedical Waste and E- Waste Generation, Handling & Disposal

Sl. No.	Name of the waste	Quantity			Disposal option
		kg/day	TPM	TPA	
1.	Category : Yellow (h) **Decontaminated media from Microbiology Lab**	10	0.3	3.6	Pre-treat to sterilize with non-chlorinated chemicals on-site as per BMW Rules and sent to PCB authorized agency for incineration.
2.	Category: White **Waste sharps from OHC** (Needles, syringes, scalpels, blades, glass, etc.)	0.5	0.015	0.18	Autoclaving and sent to PCB authorized agency.
3.	Category : Yellow (c) **Soiled Waste from OHC** (cotton, dressings, soiled plaster casts, other material)	0.5	0.015	0.18	Sent to PCB authorized agency for incineration.
4.	Category : Red) **Contaminated Waste (Recyclable)** (wastes generated from disposable items other than the waste sharps such as tubings, catheters, intravenous sets etc.)	0.5	0.015	0.18	Autoclaving and shredding and sent to PCB authorized agency.
5.	E – waste	10	0.3	3.6	Sent to authorized E-waste collection centres/ registered dismantlers / authorized recyclers/ return back to manufacturers.

xvii. The EAC has exempted the public hearing under para 7(ii) of the EIA Notification, 2006.

xviii. The RO, MoEF&CC, Chennai submitted certified copy of the EC compliance

report vide dated 25-07-2016/1491.

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

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

Permitted Products and their Capacities as per EC

S. No.	Name of the product	Quantity (Kgs/Annum)	Quantity (TPA)
1	Allylestrenol	4	0.004
2	Drospirenone	50	0.05
3	Daunomycin Hydrochloride	12	0.012
4	Altretamine	5	0.005
5	Epirubicin Hydrochloride	2	0.002
6	Idarubicin Hydrochloride	0.5	0.0005
7	Nandrolone Decanoate	2	0.002
8	Chlorambucil	1	0.001
9	Doxorubicin Hydrochloride	2	0.002
10	Fulvestrant	1	0.001
11	Testosterone Decanoate	2	0.002
12	Geftinib	500	0.5
13	Imatinib Methane Sulfonate	1000	1
14	GB-5 intermediate	3670	3.67
15	Temozolomide	15	0.015
16	Sumatriptan	36000	36
17	Setraline Hydrochloride	5000	5
18	Melphalan	1	0.001
Total Production Quantity		**46267.5**	**46.2675 (46.267 TPA)**

Permitted (Existing) Products and their Capacities as per CTO 2016

S. No.	Name of the product	Quantity (Kgs/Annum)	Quantity (TPA)
1	Allylestrenol	4	0.004
2	Drospirenone	50	0.05
3	Daunomycin Hydrochloride	12	0.012
4	Altretamine	5	0.005
5	Epirubicin Hydrochloride	2	0.002
6	Idarubicin Hydrochloride	0.5	0.0005
7	Nandrolone Decanoate	2	0.002
8	Chlorambucil	1	0.001
9	Doxorubicin Hydrochloride	2	0.002
10	Fulvestrant	1	0.001
11	Testosterone Deconoate	1	0.002
12	Geftinib	500	0.5
13	Imatinib Methane Sulfonate	1000	1
14	GB-5 intermediate	3670	3.67
15	Temozolomide	15	0.015
16	Melphalan	1	0.001

Total Production Quantity	5266.5	5.2665

Proposed Products and their Capacities for Expansion

S.No.	Product	Quantity kg/day	Quantity (TPA)	CAS No.	Therapeutic Category
1.	Bendamustine HCl	0.83	0.3	3543-75-7	Antineoplastic agent
2.	Bortezomib	0.03	0.01	179324-69-7	Antineoplastic agent
3.	Decetabine	0.33	0.12	2353-33-5	Antineoplastic agent
4	Everolimus	0.07	0.03	159351-69-6	Antineoplastic agent
5	Temsilrolimus	0.03	0.01	162635-04-3	Antineoplastic agent
6	Trabectedine	0.03	0.01	114899-77-3	Antineoplastic agent
7	Busulfan	0.13	0.05	55-98-1	Antineoplastic agent
8	Lenalidomide	1.00	0.36	191732-72-6	Antineoplastic agent
9	Nelarabine	0.03	0.01	121032-29-9	Antineoplastic agent
10	Thiotepa	0.03	0.01	52-24-4	Antineoplastic agent
11	Azacitidine	0.83	0.3	320-67-2	Antineoplastic agent
12	Chlorambucil	0.03	0.01	305-03-3	Antineoplastic agent
13	Doxorubicin Hydrochloride	0.13	0.05	25316-40-9	Antineoplastic agent
14	Epothiline B	0.13	0.05	152044-54-7	Antineoplastic agent
15	Fulvestrant	0.13	0.05	129453-61-8	Antineoplastic agent
16	Pomolidomide	0.83	0.3	19171-19-8	Antineoplastic agent
17	Sirolimus	0.33	0.12	53123-88-9	Immunosuppressive agents
18	Carmustine	0.13	0.05	154-93-8	Antineoplastic agent
19	Melphalan	0.03	0.01	148-82-3	Antineoplastic agent
20	Cabozantinib-S-Malate	2.83	1.02	1140909-48-3	Antineoplastic agent
21	Dasatinib Monohydrate	3.33	1.2	863127-77-9	Antineoplastic agent
22	Erlotinib Hydrochloride	11.67	4.2	183319-69-9	Antineoplastic agent
23	Geftinib	11.67	4.2	184475-35-2	Antineoplastic

						agent
	24	Imatinib Mesylate	23.33	8.4	220127-57-1	Antineoplastic agent
	25	Lapatinib Ditosylate Monohydrate	5.67	2.04	388082-78-8	Antineoplastic agent
	26	Nilotinib Hydrochloride	5	1.8	923288-90-8	Antineoplastic agent
	27	Palbociclib	5	1.8	571190-30-2	Antineoplastic agent
	28	Pazopanib Hydrochloride	5	1.8	635702-64-6	Antineoplastic agent
	29	Sorafenib Tosylate	13.33	4.8	475207-59-1	Antineoplastic agent
	30	Sunitinib Malate	5	1.8	341031-54-7	Antineoplastic agent
	31	Dabigatran Etexilate	12.5	4.5	211915-06-9	Anticoagulant
	32	Deferasirox	2.83	1.02	201530-41-8	Chelating Agents
	33	Lansoprazole	12.5	4.5	103577-45-3	Proton pump inhibitors
	34	Lanthanum Carbonate Dihydrate	16.67	6	929207-29-4	Renal and genitourinary agent
	35	Ledipasvir	8.33	3	1441674-54-9	Antiviral
	36	Ondansetron Hydochloride Dihydrate	10	3.6	99614-01-4	Antimetic
	37	Pirfenidone	5.67	2.04	53179-13-8	Anti-inflammatory agent
	38	Rizatriptan Benzoate	2.83	1.02	145202-66-0	Antimigraine
	39	Sacubitril	14	5.04	149709-62-6	Cardiovascular Agent
	40	Sertaline Hydrochloride	16.67	6	79559-97-0	Selective serotonin reuptake inhibitors
	41	Sumatriptan Succinate	8.33	3	103628-48-4	Antimigraine
	42	Ticagrelor	8.33	3	274693-27-5	Platelet Aggregation Inhibitor
	Total 16 products at time out of total 42 products		**183.67**	**66.12**		
	R & D Activity					
	Developmental Products (D)		0.55	0.2		
	Total 16 products at time out of total 42 products		**184.22**	**66.32**		

	and R&D products	
28.3.14.2	During deliberations, the EAC noted the following:- The proposal is for environmental clearance to the expansion project of 'Active Pharmaceuticals Ingredients (APIs) and Intermediates with R&D Facility' from 40.267 TPA to 66.32 TPA by M/s NATCO Pharma Ltd in a total area of 10.57 ha at R.S. Nos. 73/1A, 73/2, 74/7B, 78/1B, 79/1, 79/2B, 79/3, 79/4B, 79/5, 79/6A, 79/6B, 79/7, 80/1, 80/2, 80/3, 80/4, 84/1, 84/2, 84/3A, 84/5A, 84/6, 84/7A, 85/1, 85/2B, 86/2B, 86/2C, 86/2D2, 86/3B, 86/4, 86/5, 86/6, 86/7, 86/8, 86/9, Manali Industrial Area, Thiruvottiyur Taluk, District Thiruvallur (Tamil Nadu). The project/activity is covered under category B of item 5 (f) 'Bulk Drugs and Intermediates' of the Schedule to Environmental Impact Assessment Notification, 2006, and requires appraisal at the State level by the SEAC/SEIAA. The project proponent informed that due to applicability of general conditions (located within 5 km of the Critically Polluted Area of Manali), 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 ToR for the project was issued on 30th May, 2017 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. Consent to Operate for the capacity of 5.2665 TPA (excluding *Sumatriptan* and *Setraline Hydrochloride*) has been obtained from the Tamil Nadu State Pollution Control Board, which is presently valid up to 31st March, 2018. Earlier, the Ministry had issued environmental clearance on 15th June, 2007 for setting up bulk drug unit of capacity 40.267 TPA. The last monitoring report of the Ministry's Regional Office at Chennai on compliance status of EC conditions, forwarded vide their letter dated 25th July, 2016 is found to be satisfactory. The SEIAA in Tamil Nadu vide their letters dated 12th April & 21st July, 2017 has informed the project proponent that the project/activity falls under category A of item 5 (f) of the schedule to the EIA Notification because of applicability of general conditions (within 5 km of Manali CPA). However, the Committee was informed that Manali in Tamil Nadu is no more a CPA as of now, and the general conditions shall not be applicable to the proposal.
28.3.14.3	*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 preferred 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. 16th August, 2017.* *However, in view of the ToR for the project already issued by the Ministry, EIA/EMP report submitted accordingly by the project proponent, and the monitoring report from the RO on compliance status of EC conditions, the EAC also recommended the project for grant of environmental clearance, subject to compliance of terms and*

	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. 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 303 cum/day to be met from the dedicated supply of CMWS&SB and also from the private suppliers. Prior permission in this regard shall be obtained from the concerned regulatory authority.* • *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.* • *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 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*
28.3.15	**Guru Gobind Singh Polymer Addition project at Petrochemical Complex in District Bathinda (Punjab) by M/s HPCL - Mittal Energy Ltd (HMEL) - For EC** **[IA/PB/IND2/64796/2017, IA-J-11011/266/2017-IA-II(I)]**
28.3.15.1	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 that: i. The proposal is for Polymer Addition Project at Guru Gobind Singh Refinery by M/s HPCL-Mittal Energy Limited (HMEL) and located at village PulloKhari, Tehsil Talwandi Saboo, District Bhatinda (Punjab). ii. The project proposal was considered by the Expert Appraisal Committee (Industry-2) in its 24th meeting held during 14-16 June, 2017 and recommended Terms of References (ToRs) for the project. The ToR was issued by Ministry vide letter dated 3rd August, 2017. iii. All Petrochemical Complex are listed at S.N. 5(c) of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006 under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC). iv. Ministry has issued EC earlier vide letter No.J-11011/275/2007-IA-II(I) dated 22nd June, 2015 for expansion of refinery from 9 MMTPA to 11.25 MMTPA at village PhuloKheri, Tehsil Talwandi Saboo, District Bhatinda (Punjab) by M/s HPCL-Mittal Energy Limited. v. Existing land area is 787 ha, additional no land will be required for proposed expansion.

	vi. Industry is already/ will be developed Greenbelt in an area of 33% i.e. 193 ha out of 594 ha area of the project. vii. The estimated project cost is Rs.19635 crores excluding existing investment of Rs zero crores. Total capital cost earmarked towards environmental pollution control measures is Rs.252.5 Crores and the recurring cost (operation and maintenance) will be about Rs.30-40 lakhs per annum. viii. Total employment will be 600 as direct (during operation) &20000-25000 persons indirect during construction phase. Industry proposes to allocate Rs.50 crores towards Corporate Social Responsibility. ix. It is reported that as per Form-1, no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. are within 10 km distance of the project site. River/water body is not present within 10 km radius from the refinery. x. Ambient air quality monitoring was carried out at 4 locations during March to May 2017andsubmitted baseline data indicates that ranges of concentrations of PM_{10} (76-238 µg/m3), $PM_{2.5}$ (71-99 µg/m3), SO_2 (4-7.5 µg/m3) and NO_x (13-21.3 µg/m3) respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 26.2 µg/m3 and 9.5 µg/m3 with respect to SO_2 and NOx. xi. Total water requirement is 5920 m^3/hr (refinery and petrochemical complex) of which fresh water requirement of 3500 m^3/hr for the proposed polymer addition project and will be met from existing raw water system from Kotla canal. xii. Total effluent of 185 m^3/hr will be treated through anew ETP Plant which will be based on Zero Liquid discharge system. xiii. Power requirement for polymer addition project will be 220 MW (150 MW to be taken from power grid, and 70 MW from 2 new STGs). xiv. Total SO_2 emissions from the proposed polymer addition project is zero TPD and the overall SO_2 emission from the Guru Gobind Singh Refinery will remain 23.64 TPD (as per earlier EC). xv. Hazardous waste will be disposed off in secured landfill inside refinery and further disposed off in nearby authorized landfill agency. Spent catalysts will be sent back to the original supplier for reprocessing. The other catalysts are normally sent to an authorized secured landfill. xvi. Public Hearing was exempted as per provisions contained as clause no. 7(ii) in EIA Notification 2006. xvii. Regional Office, MoEFCC Chandigarh submitted certified copy on 20/07/2017 after site visit of Guru Gobind Singh Refinery. xviii. There is no litigation pending against the proposal. xix. Following are the existing and proposed products:

The following proposed units are envisaged in Polymer Addition Project.

S. No.	Unit Name	Capacity
1.	Dual Feed Cracker Unit consisting of; i. Steam Cracking Unit ii. Refinery Off gas treatment unit iii. Total Hydrogenation unit iv. Pyrolysis Gasoline Hydrogenation Unit v. Benzene Extraction Unit vi. Spent Caustic Treatment unit	1200 KTPA of Ethylene
2.	Butene-1 Unit	55 KTPA
3.	Linear Low Density Polyethylene/High Density Polyethylene Swing Unit	2x400 KTPA
4.	High Density Polyethylene Unit	450 KTPA
5.	Polypropylene Unit	500 KTPA
6.	Storage Facilities	Total 34 - DWST(4)/ Spheres(6)/ Bullets(4)/ Tanks (20)

Existing and proposed products are given in below table:

Products	Before GGSPAP (KTPA)	Post GGSPAP (KTPA)
From New Units		
HDPE/ LLDPE	-	1195.3
PP-Regular	-	324.6
PP-Impact	-	150
Benzene	-	79
Mixed Xylenes	-	161
Low Sulphur Fuel Oil	-	15
From Existing Units		
LPG	807	593.3
Naphtha	237	0
Hexane	5	5
Gasoline	1533	993.3
Kerosene	200	100
Aviation Turbine Fuel	303.3	400
MTO	25	25
Diesel	4955	3946
Bitumen	500	500
Coke	598	565
Sulphur	209.5	213.5
PP-Regular	466.7	466.7

28.3.15.2 During deliberations, the EAC noted the following:-

The proposal is for environmental clearance to the '*Polymer Addition Project*' by M/s HPCL-Mittal Energy Ltd (HMEL) in a total area of 787 ha within the premises of Guru Gobind Singh Refinery at village PulloKhari, Tehsil Talwandi Saboo, District Bhatinda (Punjab).

	The project involves setting up different processing units namely, Dual Feed Cracker Unit (includes steam cracker unit, refinery off gas treatment unit, total hydrogenation unit, pyrolysis gasoline hydrogenation unit, benzene extraction unit, spent caustic treatment unit) for production of 1200 KTPA of Ethylene, Butene-1 Unit, LLDPE/HDPE Swing Unit, HDPE Unit, Polypropylene Unit and storage facilities. The project/activity is covered under category A of item 5(c) 'Petro-chemical Complexes' of the Schedule to the Environmental Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry. The ToR for the project was granted on 3rd August, 2017 providing exemption from public hearing as per the provisions contained in para 7(ii) of the EIA Notification, 2006. Total water requirement after the proposed expansion would be 5920 m^3/hr (both for refinery and petrochemical complex). Out of it, fresh water requirement of 3500 m^3/hr for the proposed polymer addition project will be met from existing raw water system from Kotla canal. 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. Base line data for ambient air quality especially in respect of PM_{10} & $PM_{2.5}$ at many of the monitoring locations are not meeting the prescribed standards. However, it is reported that there would be no incremental concentration due to the project, and thus not further adding to the already higher PM_{10} & $PM_{2.5}$ values. The incremental GLC in respect of SO_2 due to the project is estimated to be 26.2 ug/m^3, but the total SO_2 emission is reported to be nil. The same was not found convincing and required clarification to substantiate the facts. Earlier, the Ministry had issued environmental clearance on 22nd June, 2015 to Guru Gobind Singh Refinery for its expansion from 9 to 11.25 MMTPA. The monitoring report on compliance status of EC conditions, forwarded by the Ministry's Regional Office at Chandigarh on 20th July, 2017 was also deliberated during the meeting. The summary/brief submitted by the project proponent in respect of many of the core components namely, waste water treatment, base line air quality, process emissions, investment, public hearing, etc, were not found to be in conformity with those mentioned in the EIA/EMP report and presented during the meeting.
28.3.15.3	*The EAC, after deliberations, recommended the project for grant of EC subject to compliance of terms and conditions applicable for Petro-chemical Complexes, along with the condition that during process/detailed engineering, all emission sources shall be equipped with the latest devices to ensure emissions/values in the present readings/values.* *The Committee, at the same time, also desired for clarifications/inputs in respect of the following:-* • *In view of the base line air quality data for PM_{10} & $PM_{2.5}$ already exceeding the prescribed standards, one more season data to be collected to confirm the consistency of readings/values, and for suggesting mitigating measures*

	accordingly. • *Considering the critical air quality scenario, the incremental GLCs for PM_{10}, $PM_{2.5}$, SO_2 & NO_x, due to the increased vehicular and other allied/developmental activities, also need to be analyzed and reported for actual impact of the project.*

20th September 2017 (Day 3)

28.4 Terms of Reference (TOR)

28.4.1	**Expansion of Synthetic Organic Chemicals, Active Pharmaceutical Ingredients and Pesticides Technical manufacturing by M/s Pax Chem Ltd at Plot No.W-156, TTC Industrial Area, Pawane, Navi Mumbai (Maharashtra) - For reconsideration of ToR** **[IA/MH/IND2/64578/2017, IA-J-11011/228/2017-IA-II(I)]**
28.4.1.1	The proposal involves expansion of 'Synthetic Organic Chemicals, Active Pharmaceutical Ingredients and Pesticide Technical manufacturing unit' of capacity 700 MT by M/s Pax Chem Ltd in an area of 1150 sqm at Plot No.W-156, TTC Industrial Area, Pawane, Navi Mumbai (Maharashtra). The project/activity is covered under category A of item 5(b) 'Pesticides' and Category B of item 5(f) 'Synthetic organic chemicals' of the schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central Level by the Sectoral Expert Appraisal Committee (EAC) in the Ministry. The proposal was earlier considered by the EAC in its 24th meeting held on 14-16 June, 2017, wherein the committee asked for clarification from SPCB that existing unit is manufacturing product by mixing and blending process and also the environmental sensitivity involved around 15 km radius of the project site. In response, the desired inputs/ information have been provided by the project proponent.
28.4.1.2	*The EAC, after examination and further deliberations on the proposal, asked the project proponent to provide details of the existing products and their capacities. There being no clarity even on the basic information about the project, the proposal was deferred.*
28.4.2	**Expansion of Particle Board manufacturing unit from 1500 MT/month to 2400 MT/month and addition of new products Synthetic Organic resins @850 MT/month at S.No.441/P 1 & 2, Haripar Kerala Road, village Bela (Rangpar), Taluka & District Morbi (Gujarat) by M/s Sun Particle Board Pvt Ltd - For reconsideration of ToR** **[IA/GJ/IND2/64813/2017, IA-J-11011/284/2017-IA-II(I)]**
28.4.2.1	The project involves expansion of Particle Board manufacturing unit (from 1500 MT/month to 2400 MT/month) and manufacturing of Synthetic Organic resins @850 MT/month', by M/s Sun Particle Board Pvt Ltd in an area of 25192 sqm at Sy.No. 441/P 1 & 2, Haripar-Kerala Road, Village Bela (Rangpar), District Morbi (Gujarat).

	The project/activity is covered under category A of item 5(f) 'Synthetic Organic Chemicals' of the schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central Level by the Sectoral Expert Appraisal Committee (EAC) in the Ministry. The proposal was earlier considered by the EAC in its 26th meeting held on 27-28 July, 2017, wherein the committee asked for quantum of hazardous chemicals used in manufacturing of bonding glue w.r.t the water and fuel consumption vis-à-vis its requirement in board manufacturing. In response, the desired inputs/ information have been provided by the project proponent.
28.4.2.2	*The EAC, after examination and further deliberations on the proposal, recommended for grant of ToR for preparation of EIA/EMP reports for the expansion project of Particle Board manufacturing unit (from 1500 MT/month to 2400 MT/month) and manufacturing of Synthetic Organic resins @850 MT/month, by M/s Sun Particle Board Pvt Ltd in an area of 25192 sqm at Sy.No. 441/P 1 & 2, Haripar-Kerala Road, Village Bela (Rangpar), District Morbi (Gujarat).* *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 the 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.*
28.4.3	**Expansion of API and Dye Intermediates, Food and Nutraceuticals and Cosmetic Products on plot No.A1/2402/02, Ankleshwar, District Bharuch (Gujarat) by M/s Jay Jalaram Enterprise - For reconsideration of ToR** **[IA/GJ/IND2/64564/2017, IA-J-11011/251/2017-IA-II(I)]**
28.4.3.1	The project involves expansion of 'APIs & Dye Intermediates, Food, Nutraceuticals and Cosmetic Products manufacturing unit' from the present capacity of 25 TPM to 164 MTPM by M/s Jay Jalaram Enterprise in an area of 3834.34 m^2 at plot no. A-1/2402/02, GIDC estate, Ankleshwar, Bharuch (Gujarat). The project/activity is covered under category B of item 5(f) 'Synthetic Organic Chemicals' of the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006. However, due to SEIAA not functional in the State at the time of application (22nd May, 2017), the proposal is appraised at Central Level by the Sectoral Expert Appraisal Committee (EAC) in the Ministry. The proposal was earlier considered by the EAC in its 26th meeting held on 27-28 July, 2017, wherein the committee noted the discrepancy in the Form-I and the presentation. In response, the desired inputs/information have been provided by the project proponent.
28.4.3.2	*The EAC, after examination and further deliberations of the proposal, recommended for grant of ToR for preparation of EIA/EMP reports for the project 'Expansion of APIs & Dye Intermediates, Food, Nutraceuticals and Cosmetic Products*

	manufacturing unit' from capacity of 25 TPM to 164 MTPM by M/s Jay Jalaram Enterprise at plot No.A-1/2402/02, GIDC Estate, Ankleshwar, District Bharuch (Gujarat). *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 exempted in terms of provisions of the EIA Notification, 2006.* • *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.* • *Consent to establish for the manufacturing capacity of 25 MTPM to be submitted to support their claim for commissioning of the unit prior to applicability of the EIA Notification, 2006, and thus not having any EC for the present.* • *Compliance report for the environmental clearance, if any, duly certified by the concerned Regional Office of the Ministry to be submitted.*
28.4.4	**Expansion of isolated storage for Ethanol at IOCL, Delhi Terminal, Bijwasan, New Delhi by M/s Indian Oil Corporation Ltd - For reconsideration of ToR** **[IA/DL/IND2/64268/2017, IA-J-11011/255/2017-IA-II(I)]**
28.4.4.1	The proposal involves expansion of isolated storage facility for Ethanol by adding two tanks of capacity of 2000 KL each, by M/s Indian Oil Corporation Limited in an additional area of 4547 sqm at IOCL- Delhi Terminal, Bijwasan, New Delhi. The project/activity is covered under category B of item 6(b) 'Isolated Storage & Handling of Hazardous Chemicals' of Schedule of Environmental Impact Assessment (EIA) Notification, 2006. General condition is applicable to this project as project site is within 5 km from interstate boundary of Haryana. Accordingly, the project requires appraisal at Central Level by the Sectoral Expert Appraisal Committee (EAC) in the Ministry. The proposal was earlier considered by the EAC in its 24th meeting held on 14-16 June, 2017, wherein the Committee asked for revised layout plan clearly marking the storage tanks area, greenbelt area along with all other facilities within the project site. In response, the desired inputs/information have been provided by the project proponent.
28.4.4.2	*The EAC, after examination and further deliberations on the proposal, recommended for grant of ToR for preparation of EIA/EMP reports. 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 exempted in terms of provisions of the EIA Notification, 2006.* • *ESR plan for 5 years @ 2.5% 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.*
28.4.5	**Capacity Augmentation of Jamnagar Loni LPG Pipeline Project at Jamnagar (Gujarat) by M/s Essquare Geo Services - For ToR** **[IA/GJ/IND2/66162/2017, IA-J-11011/390/2017-IA-II(I)]**
28.4.5.1	The proposal involves 'Capacity Augmentation of Jamnagar Loni LPG Pipeline Project from 2.50 MMTPA to 3.25 MMTPA' by M/s Essquare Geo Services in an area of 3.25 ha at Jamnagar (Gujarat).
28.4.5.2	*The project proponent did not attend the meeting. The proposal was, therefore, deferred.*
28.4.6	**Expansion of High Rubber Graft (Rubber rich ABS) at Satnoor Plant, District Chhindwara (Madhya Pradesh) by M/s Bhansali Engineering Polymers Ltd – For TOR** **[IA/MP/IND2/66210/2017, IA-J-11011/391/2017-IA-II(I)]**
28.4.6.1	The project involves expansion of High Rubber Graft (Rubber rich ABS) unit from 15000 TPA to 50000 TPA by M/s Bhansali Engineering Polymers Limited in an area of 35.775 ha at Satnoor Plant, Bhansali Nagar, Taluka Sausar, District Chhindwara (Madhya Pradesh). The project/activity is covered under category A of item 5(f) 'Synthetic organic chemicals (Synthetic rubber)' 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 project proponent has submitted a copy of Environmental Clearance dated 03.11.1987 issued by Madhya Pradesh Pollution Control Division. The unit has been in operation from 1990 at capacity of 6000 TPA, which was further increased to 15000 TPA in 1995. Since the total investment was less than Rs.50 Crores, EC was exempted as per the EIA Notification, 1994. The project proponent has submitted CTO dated 13.10.2016 for 15000 TPA of HRG (valid upto 31.12.2017) and for DG Sets 1 x 1250 kVA and 2 x 500 kVA (valid upto 31.12.2017).
28.4.6.2	*The EAC, after deliberations, recommended the proposal for grant of ToR for preparation of EIA/EMP reports for the project 'Expansion of High Rubber Graft (Rubber rich ABS) unit from 15000 TPA to 50000 TPA by M/s Bhansali Engineering Polymers Limited at Satnoor Plant, Bhansali Nagar, Taluka Sausar, District Chhindwara (Madhya Pradesh).* *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 the 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.*
28.4.7	**Setting up Dyes & Dye Intermediates unit at Plot No.C-1B-5406, GIDC Estate, Taluka Ankleshwar, District Bharuch (Gujarat) by M/s Siddhi Dyes & Chemicals - For ToR** **[IA/GJ/IND2/66250/2017, IA-J-11011/392/2017-IA-II(I)]**
28.4.7.1	The project involves setting up 'Dyes & Dye intermediates unit' of capacity 85 MT/month (in the existing Formulation Unit of capacity 50 TPM) by M/s Siddhi Dyes & Chemicals in an area of 1406 sqm at plot no. C-1B-5406 & C1B-5407, GIDC estate, Taluka Ankleshwar, District Bharuch (Gujarat). The project/activity is covered under category B of item 5(f) 'Synthetic organic chemicals' and should have been appraised by SEAC/SEIAA in Gujarat. However, since the proposal was already accepted and listed for consideration, EAC preferred to consider the proposal.
28.4.7.2	*The EAC, after deliberations, recommended the proposal for grant of Standard ToR for preparation of EIA/EMP reports for the project 'Setting up Dyes & Dye intermediates' of capacity 85 MT/month by M/s Siddhi Dyes & Chemicals in an area of 1406 sqm at plot no. C-1B-5406 & C1B-5407, GIDC estate, Taluka Ankleshwar, District Bharuch (Gujarat).*
28.4.8	**Setting up a Greenfield Petrochemical Complex to produce 1 MMTPA of Ethylene and Ehylene derivatives (Ethane and/or Naphtha based) at village AV Nagaram, Thondangi Mandal, District East Godavari (Andhra Pradesh) by M/s GAIL India Ltd - For ToR** **[IA/AP/IND2/66972/2017, IA-J-11011/383/2017-IA-II(I)]**
28.4.8.1	The project involves setting up '*Greenfield Petrochemical Complex to produce 1 MMTPA of Ethylene and Ethylene derivatives' (Ethane and/or Naphtha based)* by M/s GAIL India Limited in an area of 2000 acres at A.V. Nagaram village, Thondangi Mandal, East Godavari District (Andhra Pradesh). The project/activity is covered under category A of item 5(c) 'Petro-chemical complexes' and item 5(e) 'Petrochemical based processing' of the Schedule to the EIA Notification, 2006 and requires appraisal at Central Level by the Sectoral Expert Appraisal Committee (EAC) in the Ministry.
28.4.8.2	*The EAC, after deliberations, recommended the proposal for grant of ToR for preparation of EIA/EMP reports for the project 'Setting up a Greenfield Petrochemical Complex to produce 1 MMTPA of Ethylene and Ethylene derivatives' (Ethane and/or Naphtha based) by M/s GAIL India Limited at A.V. Nagaram village, Thondangi Mandal, East Godavari District (Andhra Pradesh)*

	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 the EIA Notification, 2006.* • *To meet fresh water requirement of 3900 m^3/h from Polavaram left main canal, necessary permission shall be obtained from concerned regulatory authority.* • *ESR plan for 5 years @ 2.5% 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.* • *Total land required of 2000 acres for the proposed Petrochemical complex, presently in the name of M/s GMR for Kakinada SEZ, shall be transferred/acquired in name of the project proponent.* • *For the proposed activities namely, laying of pipeline, jetty, etc (as a part of the project) in the coastal regulation zone, the prior permission shall be obtained from the State CZMA.*
28.4.9	**Expansion of Active Pharmaceuticals Ingredients (APIs) with R&D Facility at S. Nos. 165/A, 165/AA & 165/E, Gummadidala (V & M), District Sangareddy (Telangana) by M/s Harika Drugs Pvt Ltd - For ToR** **[IA/TG/IND2/66988/2017, IA-J-11011/398/2017-IA-II(I)**
28.4.9.1	The project involves expansion of '*Active Pharmaceutical Ingredients (APIs) with R&D Facility*' from the present capacity of 1.93 TPM (3 products) to 50.02 TPM (19 products with R&D facility, maximum 6 products at a time) by M/s Harika Drugs Pvt Ltd in an area of 2.227 ha (existing area 1.104 ha, additional required 1.123 ha) at Sy.Nos.165/A, 165/AA & 165/E, Gummadidala (V & M), Sangareddy District (Telangana). 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 project/activity was earlier accorded EC vide letter dated 15th July, 2005 for the capacity of 1.93 TPM. The monitoring report on compliance status of EC conditions has been forwarded by the RO, Chennai vide letter dated 5th September, 2017. The same was found to be satisfactory and in order.
28.4.9.2	*The EAC, after deliberations, recommended the project for grant of ToR for preparation of EIA/EMP reports. 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 is exempted in terms of the provisions of para 7(ii) of the EIA Notification, 2006.* • *For total ground water abstraction of 206.9 KLPD, 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.*
28.4.10	**Manufacture Technical Grade Pesticides at Plot No. D-3/1/A, GIDC, Dahej - III Industrial Estate, Tehsil Vagra, District Bharuch (Gujarat) by M/s Dhanuka Agritech Ltd - For ToR** **[IA/GJ/IND2/67203/2017, IA-J-11011/403/2017-IA-II(I)]**
28.4.10.1	The project involves manufacturing *Technical Grade Pesticides* @ 3415 TPM by M/s Dhanuka Agritech Ltd in an area of 151954.70 sqm at Plot No.D-3/1/A, GIDC, Dahej - III Industrial Estate, Tehsil Vagra, District Bharuch (Gujarat). The project/activity is covered under category A of item 5(b) 'Pesticides industry and pesticide specific intermediates (excluding formulations)' 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.
28.4.10.2	*The EAC, after deliberations, recommended the project for grant of ToR for preparation of EIA/EMP reports. The ToR shall include the standard ToR as specified/notified applicable for such project/activity, and the additional terms and conditions as under:* • *ESR plan for 5 years @2.5% 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.*
28.3.11	**Discussion on any other item**

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Members of the EAC (Industry-2) present during 28th meeting held on 18-20 September, 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. Prof. (Dr.) H.R.V. Reddy	Member
6. Shri Sanjay Bist	Member
7. Sh. Paritosh Kumar	Member
8. Prof. (Dr.) Y.V. Rami Reddy	Member
9. Shri S.K. Srivastava	Member Secretary