

Minutes of the 284th meeting of the State Level Expert Appraisal Committee held on 23/03/2016 at Committee Room, Gujarat Pollution Control Board, Gandhinagar.

The 284th meeting of the State Level Expert Appraisal Committee (SEAC) was held on 23rd march, 2015 at Committee Room, Gujarat Pollution Control Board, Gandhinagar. Following members attended the meeting:

1. Shri T. P. Singh, Chairman, SEAC.
2. Shri V. C. Soni, Vice Chairman, SEAC.
3. Shri R. J. Shah, Member, SEAC.
4. Dr. V. K. Jain, Member, SEAC.
5. Shri V.N. Patel, Member, SEAC.
6. Hardik Shah, IAS, Secretary, SEAC

The agenda of TOR/Scoping/ cases and appraisal cases were taken up. Fifteen (15) cases of TOR/Scoping/, Six (6) appraisal cases and Three (3) cases of amendment were taken up. The applicants made presentations on the activities to be carried out along with other details furnished in the Form-1, EIA report and other reports.

1	SIA/GJ/IND2/50606/2016	Resipol Adhesives Pvt. Ltd, Survey No. 1298, Vill: Rajpur, Kalol-Mehsana Highway, Tal: Kadi, Dist: Mehsana, State: Gujarat.	Appraisal																																								
<p>Project / Activity No.: 5(f)</p> <ul style="list-style-type: none"> • M/s: Resipol Adhesives Pvt. Ltd herein after Project Proponent – PP) had submitted application for expansion project on 20/03/2015. • Proposal was considered for screening and scoping during SEAC meeting held on 30/06/2015. After presentation, committee sought additional information. • On 01/03/2016, PP submitted additional information. <p>Project status: Expansion</p> <p>Project / Activity Details:</p> <p>This is an existing project engaged in manufacturing of Synthetic organic chemicals and has applied for expansion as tabulated below:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Name of the Products</th> <th>Existing MT/Month)</th> <th>Proposed (MT/Month)</th> <th>Total (MT/Month)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Benzyl Alcohol</td> <td style="text-align: center;">2.0</td> <td style="text-align: center;">-2.0</td> <td style="text-align: center;">Nil</td> </tr> <tr> <td>2.</td> <td>Benzyl Benzoate</td> <td style="text-align: center;">1.1</td> <td style="text-align: center;">-1.1</td> <td style="text-align: center;">Nil</td> </tr> <tr> <td>3.</td> <td>Benzoic Acetate</td> <td style="text-align: center;">3.0</td> <td style="text-align: center;">-3.0</td> <td style="text-align: center;">Nil</td> </tr> <tr> <td>4.</td> <td>Sodium Benzoate</td> <td style="text-align: center;">1.4</td> <td style="text-align: center;">-1.4</td> <td style="text-align: center;">Nil</td> </tr> <tr> <td>5.</td> <td>Sodium Acetate</td> <td style="text-align: center;">1.8</td> <td style="text-align: center;">-1.8</td> <td style="text-align: center;">Nil</td> </tr> <tr> <td>6.</td> <td>Polyester Resins (Different Grades)</td> <td style="text-align: center;">-</td> <td style="text-align: center;">300</td> <td style="text-align: center;">300</td> </tr> <tr> <td>7.</td> <td>Alkyd Resins (Different Grades)</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Sr. No.	Name of the Products	Existing MT/Month)	Proposed (MT/Month)	Total (MT/Month)	1.	Benzyl Alcohol	2.0	-2.0	Nil	2.	Benzyl Benzoate	1.1	-1.1	Nil	3.	Benzoic Acetate	3.0	-3.0	Nil	4.	Sodium Benzoate	1.4	-1.4	Nil	5.	Sodium Acetate	1.8	-1.8	Nil	6.	Polyester Resins (Different Grades)	-	300	300	7.	Alkyd Resins (Different Grades)			
Sr. No.	Name of the Products	Existing MT/Month)	Proposed (MT/Month)	Total (MT/Month)																																							
1.	Benzyl Alcohol	2.0	-2.0	Nil																																							
2.	Benzyl Benzoate	1.1	-1.1	Nil																																							
3.	Benzoic Acetate	3.0	-3.0	Nil																																							
4.	Sodium Benzoate	1.4	-1.4	Nil																																							
5.	Sodium Acetate	1.8	-1.8	Nil																																							
6.	Polyester Resins (Different Grades)	-	300	300																																							
7.	Alkyd Resins (Different Grades)																																										

8.	Melamine Formaldehyde Resin	-	90	90
9.	Urea Formaldehyde Resin	-	85	85

The proposed production activity falls in the project/activity 5(f) as per the schedule of the EIA Notificaiton-2006. Plot area is approx.6033.00Sq. meter sq. m. Unit has proposed 2000 Sq. meter area for green belt development. Estimated cost of proposed expansion is Rs. 4.0 Crore Fresh water requirement will be met through borewell. Fresh water consumption will be 2.3 KL/day.(1.00 KLPD Domestic + 0.5 KLPD for gardening and 0.8 KLPD for cooling purpose in process. Wastewater generation will be 1.22 KLPD (Domestic: 0.8 KLPD and Process: 0.42 KLPD).Industrial effluent of 0.42 KLPD after primary treatment will be evaporated in kettle type evaporator. Domestic wastewater (1.0 KL/day) will be disposed off in to soak pit via septic tank. There are three thermic fluid heaters (2 lac Kcal* 2 Nos + 4 lac Kcal* 1 Nos). Two DG Sets each of 65 KVA will be provided and will be kept Stand by. Natural Gas(128 m³/hr) and HSD: 30 Lit/hr will be used as fuel. There will be no process emission. Details of hazardous waste generation and its management proposed are as under.

Sr. No.	Type/Name of Hazardous waste	Source of generation	Category of Waste	Quantity (MT/Annum)	Disposal Method
1.	Evaporation Residue	Evaporator (Cap:500 litre/hour)	34.3	50 kg/month	Collection, storage, transportation & disposal at CHWIF site approved by GPCB.
2.	ETP Sludge	ETP	34.3	100 kg/Month	Collection, storage & disposal at approved TSDF site by GPCB
3.	Discarded drums Bags	From Raw material storage	33.3	3500 nos./month 0.5 MT/Month	Collection, storage and reuse for product packing or transportation and disposal by selling to authorize scrape vendor.
4.	Used Oil	D. G. set	5.1	10 lit/year	Collection, storage, transportation & reuse within premises as lubricant or sell to registered re-recyclers.

Observations & Discussions:

Technical presentation was made by the project proponent included point wise details of the additional information sought. Committee noticed that PP has submitted copy of non agriculture status of the land, justification for the proposed expansion, details of machineries and infrastructure, distance of surrounding entities from the proposed project including satellite image, legal undertaking regarding chemicals used in the project are not coming under major accident hazard categories. Lay out of the unit includes single entry with width of 7.88 meter. Submission of PP further includes details of products and raw materials with monthly production and consumption respectively with material balance, quantitative and qualitative analysis of waste streams, details of effective spill control, details of reused of waste water from MF resin to UF resin, measures

suggested to curb fugitive emission, measures suggested from noise control, method for decontamination of used containers etc. Further, it was noticed that proposed process waste water (Condensate stream) to be disposed off through evaporation (Cap: 500 litre per hour) using thermic fluid heater.

After detailed discussion, it was unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environmental Clearance.

2	SIA/GJ/IND/10434/2013	Roxul Rockwool Insulation India Pvt. Limited	P.No.Z/4, Dahej-SEZ,Vagra,Dist:Bharuch	Appraisal
---	-----------------------	--	--	-----------

Project / Activity No.: 3(a)

- Roxul Rockwool Insulation India Pvt. Limited (herein after Project Proponent – PP) submitted an application for obtaining EC for expansion of product from existing 30,000 MTPA to 72,000 MTPA within the existing premises of 94,162.82 m2 on 05/10/2013.
- Proposal was scheduled for screening and scoping in the SEAC meeting held on 19/07/2014 and Terms of References were issued on 25/08/2014.
- Project proponent has submitted final EIA Report on 05/03/2016 for appraisal.

Project status: Expansion

Project / Activity Details:

The unit is engaged in the manufacturing of 30,000 MTPA of stone wool insulation. Unit proposes to expand the production capacity from existing 30,000 MTPA to 72,000 MTPA within the existing premises. The effective increase in production capacity will be 42,000 MTPA. Production of Briquette (by-product) will increase from 1230 MTPM to 4130 MTPM. These briquettes will be used as raw material for captive consumption only in production of stone wool insulation. The production activity falls in the project activity 3(a) as per the schedule of the EIA Notification-2006. Total plot area is of 94,162.82 m2.Green belt area is 12,739 sq. meter. Proposed investment for expansion will be Rs. 22.90 Crore. Source of water is from GIDC. Water consumption details is as under:

Activity	Raw water Consumption details in KLPD		
	Existing	Proposed addition	Total
Domestic	20	36	56
Industrial			
Processing, washing and cooling	176	524	700
Total	196	560	756

Waste water generation is as under:

Activity	Waste water generation in KLPD		
	Existing	Proposed	Total
Domestic	19	29	48
Industrial			
Processing, washing and cooling	23	163	186
Total	42	192	234

Raw water requirement is 756 KLPD. Water consumption for domestic purpose will be 56 KLPD. Raw water about 700 KLPD will be sent to RO plant. RO permeate of 514 KLPD will be received and 489 KLPD permeate will be used for wool manufacturing process and washing and 25 KLPD permeate will be used for cooling make up. Waste water of 41 KLPD generated from wool manufacturing and washing section will be reused in bricket process. Out of RO plant rejection of 186 KLPD, 56 KLPD will be used for gardening and for developing of green belt. Rest of the quantity of 130 KLPD will be discharged to GIDC drainage. Domestic waste water (48 KLPD) will be disposed off to soak pit. EMP for water is suggested are (1)RO reject is/shall only a source of wastewater generation from Stone wool plant (2)Process water from manufacturing unit is being collected in a sump of capacity 180 KLD and then transferred to collection tank of capacity 10 KL via filter. It is being reused in briquette plant or back to process and same practice shall continue after proposed expansion (3)RO reject comprising TDS less than 1000 ppm will be directly used for greenbelt development.(4)Remaining quantity of RO reject will be collected in holding tanks for settling of solids (5)Flow meter and pH meter have been installed at treatment facility to check the quality of treated water to be disposed in GIDC drainage line (6)Treated wastewater will be discharged in to the Dahej Vilayat Pipe Line for final disposal in the deep sea.

Natural gas and coke will be used as fuel and total consumption will be 68,544 m³/day and 71 MTPD respectively after the proposed expansion. Cupola furnace-8 Tons/hr, curing oven-8 Tons/hr and RO plant 720 KL/day will be installed for the proposed expansion in addition to the existing Cupola furnace-3.5 Tons/hr, curing oven-3.5 Tons/hr, RO plant 80 KL/day and a D.G.set of 25 KVA.

Details of fuel consumption is as under:

Sr NO	Fuel consumption	Existing	Proposed	Total
1	Natural Gas(M3 per day)	20160	48384	68544
2	Coke (MTPD)	21	50	71
3	HSD (Litre per hour)	0.057	--	0.057

There is no flue gas stacks in existing as well as proposed plant, only process stack and exhaust stacks will be available at the premises.

Details of process emission from proposed plant is as under:

Sr. No	Description	Process Stack attached to Cupola furnace /Spinning Chamber/Curing oven	Remark
1	Stack ID number	Combined stack	-
2	Melt production Capacity, MT/hr.	400000	-
3	Stack height above GL, m	50	-
4	Stack diameter, mm	2700	-
5	Material of construction	Steel	-
6	Type of Fuel	Coke and Natural Gas	-
7	Flue-gas temperature, °C	100	-
8	Nature of Pollutants	PM, SO ₂ , NO _x , H ₂ S	-
9	Air Pollution Control Equipment	Cyclone bag filter to Cupola Furnace Rockwool Filter to Spinning Chamber Afterburner CO Combustion unit for cupola and curing oven (two ABs)	APC equipment will be same but will be designed with revised dimensions for greater flow.

Emission from the exhaust vent from the proposed plant is as under:

Sr. No	Description	Stack Attached to				
		Cupola Melt flow equipment	Curing oven hood in	Curing oven hood out	Cooling zone	Line de-dusting
1	Cupola Melt flow, MT/hr.	25,000	25,000	25,000	70,000	40,000
2	Stack height above GL, m	25	14	12	30	14
3	Stack diameter, mm	800	560	800	1200	900
4	Material of construction	Steel	Steel	Steel	Steel	Steel
5	Temperature, °C	50°C	50 - 60°C	50 - 60°C	70°C	40°C
6	Nature of Pollutants	Hot Air			PM	
7	Air Pollution Control Equipment	Vented to atmosphere for dispersion			Rock wool Filter	Bag Filter

EMP suggested for Air environment is as under;

- Sources of proposed process emission through stack/exhaust vents : (1)Cupola furnace/

Spinning chamber / Curing Oven (2)Cupola-melt flow equipment (3)Curing oven hood in (4)Curing oven hood out (5)Cooling zone (6)Line de-dusting

- Air pollution control equipments such as cyclone bag filter, Rockwool filter and bag filter shall be provided at stack attached to cupola furnace to achieve the GPCB norms.
- Air pollution control equipments shall not be required at exhaust vents as only hot air of high temperature shall be discharged through vent to atmosphere for proper dispersion.
- Enclosure for transport vehicles, spraying of water at raw materials storage area will be effectively implemented to control the dust/fugitive emission.
- Vehicles used for transportation of raw materials/finished product will be covered by tarpaulin to prevent the dusting.
- Existing greenbelt area provided along the periphery of plant is acting as a barrier to dust emission.
- Enhancement of existing greenbelt area shall be planned by proponent and adequate budget shall also be provided for the same.
- The unit has online PM monitoring facility for existing plant and is planning to install online monitoring facility for other parameters i.e. SO₂, NO_x, H₂S.
- Proposed stacks shall be installed with online monitoring system for all the emitted parameters.
- The unit has online PM monitoring facility for existing plant and is planning to install online monitoring facility for other parameters i.e. SO₂, NO_x, H₂S.
- Proposed project stacks shall be installed with online monitoring system for all the emitted parameters.

Details of hazardous waste management is as under:

Sr. No	Type of Waste	Waste Category	Quantity of waste			Waste Management	
			Existing	Proposed	Total	Source of waste generation	Mode of disposal /Treatment
1	ETP Sludge	34.3	1.00 MTPA	2.39 MTPA	3.39 MTPA	Effluent Treatment Plant	Collection, Storage, reuse in briquette production within premises
2	Used Oil	5.1	1000 ltr/year	2399 MTPA	2400 MTPA	Spent oil from machine	Collection, Storage, Transportation & disposal by selling to registered refiners or Reused in process (in-house)
3	Discarded Container	33.3	22 TPA	52 TPA	74 TPA	Raw material storage area	Collection, Storage, Transportation & Disposal by selling to authorized recyclers

							or re-use within premises.
--	--	--	--	--	--	--	----------------------------

EMP for hazardous waste is as under: (1)Solid/hazardous waste storage shed with pucca R.C. C. flooring has been provided for storage of wastes.(2)Unit has already obtained membership of M/s. Bharuch Enviro Infrastructure Ltd. (BEIL) at GIDC – Ankleshwar (vide membership no. Oth/127)(3)There is no conventional type of effluent treatment plant at existing unit. Sludge mentioned in table is actually not purely gypsum solids, as no use/dosing are being done at treatment plant. It is purely solids settled at the bottom of the holding tank. Rockwool have permission to re-use it in the briquette production for captive consumption (4)Reuse of used oil in Pallet Picker Operation (5)Possibility of chemical seepage from existing as well as proposed project is not envisaged as no hazardous chemical in large quantity is being/shall handled within plant premises.

EMP for noise is as under: (1)Cupola furnace and briquette plant are identified as high noise generation area of Rockwool Industry. (2)There is provision of Personal Protective Equipment to workmen so exposure to noise will decrease.(3)All possible measures mentioned below to reduce noise level in process area are adopted by project proponent and same shall be followed after commissioning of proposed expansion project.(4)Provision of vibrating pads & acoustic enclosure to noise generating equipments.(5)Enhancement of existing greenbelt area. Rockwool has already developed greenbelt on 4239 sq. m area. Green belt shall further be enhanced on continuous basis (6) Provision of noise barrier material, i.e. acoustic enclosure, sound proof wall etc. at noisy area. (7)Personal Protective Equipment to all workmen working in high noise area. (8)Enhancement of existing greenbelt area (9). Regular maintenance of equipments to reduce noise from them.

EMP for occupational health and safety are as under:(1)Occupational health and safety of the workers has been undertaken by project proponent. (2)It is ensured by management that furnace refractories are in good condition and workers have enough space/room to safely work when near energized furnaces.(3)Electrical safety guidelines is being/shall be strictly followed by all employee. (4) Workplace monitoring with significant heat load from process-related heat or where workers have experienced heat-related illness should measure the wet bulb globe temperature (WBGT).(5)Adjust schedules where possible so that hot operations are not performed at the same time and place as other operations that require the presence of workers. For example, do not schedule maintenance cleanup while tapping a furnace.(6)Regular environmental monitoring program to assess worker exposure to conditions that could cause occupational hazards.(7)Adhere to all control measures or work procedures that have been designed and implemented to reduce exposure to conditions that could cause occupational hazards.(8)Provision of controls (engineering, administrative, or personal protective equipment) to minimize occupational hazards.(9)Scheduling and organization of work in such a way so that worker will not get continuous exposure to health hazards.(10)Personal Protective Equipment such as heat resistant suit, heat resistant hand gloves, heat resistant shoes etc. shall be provided to workers.(11)Personal Protective Equipment must be appropriately selected, individually fitted and workers need to be trained in their correct use and maintenance. Personal Protective Equipment must be regularly checked and maintained to ensure that the worker is being protected.(12)First aid procedures and facilities relevant to the needs of the particular workplace should be laid down and provided in consultation with an occupational physician or other health professional.(13)Special procedures and provision to handle medical emergency equipment such as burns, heat stroke, eye injury etc.(14)A health register containing names of all the persons employed is already maintained as per statutory requirement.(15)The unit has appointed a safety officer and factory medical officer for monitoring of the hazardous processes and occupational injury to workers

as well as impact on the workers as per GFR rules.(16)Personal Protective Equipment such as heat resistant suit, heat resistant hand gloves, heat resistant shoes etc. shall be provided to workers.(17)PPE must be regularly checked and maintained to ensure that the worker is being protected.(18)First aid procedures and facilities relevant to the needs of the particular workplace should be laid down and provided in consultation with an occupational physician or other health professional.(19)Special procedures and provision to handle medical emergency equipment such as burns, heat stroke, eye injury etc.(20)A health register containing names of all the persons employed is already maintained as per statutory requirement. (21)The unit has appointed a safety officer and factory medical officer for monitoring of the hazardous processes and occupational injury to workers as well as impact on the workers as per GFR rules.

PP has submitted risk assessment study for Catastrophic Failure of Storage Tank for Phenol Formaldehyde Urea Based Oil and release of toxic chemicals(30% Ammonia solution).

Details of Disaster management plan is as under:

Unit has prepared the DMP to minimize human, property and economic losses, which is in force since quite long. The same DMP shall be updated after expansion to cover new plants or facilities. The LEVEL of emergency can be classified in three categories:

LEVEL - 1: The leakage or emergency, which is confinable within the plant, premises. It may be due to (a) Collapsing of equipment that do not affect out side premises (b) Low toxic gas release for short duration (c). Small fire in the plant

LEVEL - 2: The emergency, which is confinable within the factory premises. It may arise due to (a) Heavy toxic gas leakage for short duration.(b) Major fire inside the factory premises.

LEVEL - 3: The emergency, which is not confinable within the factory premises and general public in the vicinity likely to be affected. It may arise due to -heavy / Profuse leakage of toxic for a long duration (as the case considered in QRA studies). Major fire inside the factory premises.

Unit has made an emergency management team. The management structure includes the following personnel's;

Site Main Controllers, Incident Controllers and Deputy Incident Controllers, Key Personnel's , Essential Workers

The other elements of Disaster Management Plan are (1)Assembly points : Designated Assembly point is marked near Security Gate (2)Emergency control center : Available at existing plant(3)Fire control arrangements are made available. First aid facility is available at existing plant and medical facility with study region

Unit has presented compliance of CCA for existing unit.

During SEAC meeting held on 19/07/2014, project proponent presented that they have collected the baseline data during the *March-2014 to May-2014* and requested to permit them to use the same for preparation of the EIA report. The request was considered by the committee and the project proponent was issued Terms of Reference for the EIA study to be done covering 5 Km radial distance from the project boundary.

Observations & Discussions:

ECO CHEM. sales and service has prepared EIA report which is a NABET accredited consultant for

the category 3(a) of the project. As per OM of MoEF&CC vide letter NO: -11013/41/206 IA-II (I) dated 04.08.2009, Ecochem Sales and Service has submitted an undertaking regarding carrying out of EIA and EMP studies from proposed expansion of manufacturing stone wool insulation plant from 30,000 MTPA to 72,000 MTPA within existing premises have been addressed and incorporated in final EIA and EMP report and also submitted an undertaking regarding compliance of TOR issued by SEAC. An undertaking regarding ownership of information provided in EIA and EMP is submitted by the Project proponent.

A baseline environmental study has been conducted for the study area of 10 km radial distance from plant site for a period of December 2013 to February 2014. Total 7 locations have been decided within 10 km radius.

Noise levels during study period for the seven locations are found to be within prescribed standards under the Noise pollution (Regulation and Control) Rules, 2000 notified by MOEF&CC, New Delhi.

For Air environment study, five locations were selected within 5 km radial distance and 2 locations were selected within 10 km radial distance from the proposed project site. Parameters monitored were PM_{2.5}, PM₁₀, SO₂, NO₂, NH₃, H₂S, VOC and HC. VOC is expressed as isobutylene. During study period, the detailed air quality measurement is as follows: (1) PM_{2.5} was observed between 31.3-58.9 microgram/NM³. Maximum concentration was found at Dahej village and project site and were found to be within prescribed limit. (2) PM₁₀ was observed between 48.70-96.60 microgram/NM³ and were found to be within prescribed limit. (3) SO₂ concentration was observed in the range of 9.1 to 19.10 microgram/NM³ and found to be within prescribed limit. (4) NO_x concentration was observed in the range of 14.20 to 29.70 microgram/NM³ and found to be within prescribed limit. (5) Monitoring and analysis was carried out for HC and VOC. Maximum concentration of HC was found 133 microgram/NM³ at the project site and Dahej village. (6) Monitoring and analysis for Ammonia was found to be within prescribed limit. On the basis of test results during survey, it is concluded that ambient air quality of the study region is within prescribed limit.

For soil quality, five samples were collected from different locations to assess the baseline status. Analysis of soil during study period is as under: (1) Results of pH were varying in narrow range for one location to other location from 7.67 to 8.25 during the study period. Overall the pH of all the soil samples were found almost neutral. (2) Loss on ignition test was also carried out to know the probability of Organic matter in the soil samples. Concentration of organic matter was found in the range of 0.3 to 0.5 %. Minimum Value was observed at Vadadla. (3) During analysis total Nitrogen was found in the range of 16.7-27.7 mg/100 gm. Minimum value was observed in the soil sample of Suva village. (4) Total Phosphorous content was found in the range of 29.8 to 34.2 mg/100 gm. (5) Calcium content ranges from 49.6 to 155.0 meq/100 gm and magnesium 23.6 to 35.4 meq/100 gm. (6) As a micronutrient analysis of Iron, Chromium, copper & Boron was also carried out for all the soil samples & its presence was found lower than the desired value. On the basis of test results it is concluded that soil is not quite good for agricultural purpose as sandy clay soils are having hard texture and low porosity.

For water quality study, the water resources in the study area were divided into two categories forgetting ideal upshot of baseline status of water quality of the region. These two major categories as determined are (1) Ground Water resources (tube well, open well, springs etc.) (2) Surface water resources including streams, nallas, ponds, river, canals, Estuary. To assess the quality of ground water, samples were collected from 6 locations for the analysis of physico-chemical and

microbiological parameters. Frequency of sampling was twice in a month during the study period. The test results were compared with the Drinking Water Specification: IS: 10500, 2012 (Reaffirmed 1993) & it is summarized as under.(1) pH range was observed between 6.85 – 7.8. It is well within the specified limit (2) Total dissolved solids were recorded in the range of 1514 - 2965 mg/L. Total Dissolved solids concentration was found at higher side. It may be due to high content of chloride, calcium, magnesium & carbonate ions.(3)Total hardness was in the range of 300 - 990 mg/L with minimum at Dahej & maximum at Lakhigam. Hardness results were found more than the standard limit for all locations except Dahej.(4) Results of Alkalinity, Calcium, magnesium and hardness were also found at higher side.(5)All the heavy metals were found well within the range of prescribed standard. Any of toxic metals were not found in any village during analysis. Fluoride & phosphate were also within the range of prescribed limit in all the samples.(6) As microbiological parameters MPN analysis was also carried out and it was found NIL. On the basis of test results it is summarized that water quality for studied locations is not as per IS 10500 :1993 except in Dahej. Water samples collected from Dahej can be used for drinking purpose and other water can be used for washing and other domestic purposes.

After deliberations on various aspects, the committee unanimously decided to recommend the project to SEIAA, Gujarat for the grant of Environmental Clearance

3.	SIA/GJ/IND2/49722/2016	M/s. Sagar Veneer Industries, Block No.: 1781, 1782 P-3, Vansda Road, Nr. Bhavin Construction, Village: Alipore, Taluka: Chikhli, Navsari, Gujarat	Appraisal
----	------------------------	--	-----------

Project / Activity No.: 5(f)

- M/s: Sagar Veneer Industries herein after Project Proponent – PP) submitted application for expansion project on dated 30/06/2015.
- Proposal was considered for screening and scoping during SEAC meeting held on 09/09/2015.
- After presentation, committee sought additional information. On 03/03/2016, PP submitted additional information sought by the committee.
- Project was appraised during SEAC meeting held on 23/03/2016.

Project status: Expansion

Project / Activity Details:

This is an existing project engaged in manufacturing of raw agarbatti, sila ras perfume etc and now applied for expansion as tabulated below:

Sr. No.	Name of Product	Quantity (existing)	Quantity (Proposed)	Total quantity after proposed Expansion
1.	Plywood	1,15,000 Sq. M/ Month	---	1,15,000 Sq. M/ Month
2.	Flush Door	25,000 Sq. M/ Month	---	25,000 Sq. M/ Month
3.	Block Board	25,000 Sq. M/ Month	---	25,000 Sq. M/ Month

4.	Phenol Formaldehyde Resin	---	20 MT/Month	20 MT/ Month
5.	Melamine Urea Formaldehyde Resin	---	70 MT/Month	70 MT/ Month
6.	Urea Formaldehyde Resin	---	50 MT/Month	50 MT/ Month

The proposed production activity falls in the project/activity 5(f) as per the schedule of the EIA Notification-2006.

The location of the unit is outside the notified area. As per amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014, small units are categorized as Category "B" projects. Small units are defined as with water consumption less than 25 M³/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989. During presentation, PP informed that water requirement is 14.5 KL/day. Fuel requirement is 2 MT/day and Chemicals to be used are not covered in MAH category. Hence, committee during screening and scoping considered this proposal under Category B2 and additional information were sought.

Total plot area is 14,588 Sq.m and unit has proposed 4800 Sq. meter area for green belt development. Estimated cost of proposed expansion is Rs. 30.5 Lacs.

Water Consumption	Existing (KLPD)	Proposed(KLPD)	Total
Domestic	3.5	0.15	3.65
Gardening	0	8.60	8.60
Industrial			
cooling	0.05	2.00	2.05
Washing	0	0.2	0.2
Total	3.55	10.95	14.50
Waste Water Generation	Existing (KLPD)	Proposed(KLPD)	Total
Domestic	3	0.4	3.4
cooling	0	0.1	0.1
Washing	0	0.2	0.2
Total	3	0.7	3.7

Fresh water requirement will be met through estate borewell.

Details of waste water treatment facility is as below:

Unit Name	Volume/ Capacity	No of Unit	Retention Time (hours)
Collection cum Neutralization Tank	500 Ltr	1	36
Nutch Filter	200 Ltr	2	12
Evaporator	50 Ltr/Hr	1	6

Domestic wastewater (3.40 KLPD) will be disposed off in to soak pit via septic tank and industrial waste water (0.30 KLPD) after primary treatment will be evaporated in evaporator (cap: 50 litre per hour). Two thermic fluid heaters each of 4 lac Kcal/hour and one D G Set of 65 KVA will be installed. Waste wood/ Briquettes consumption will be 2.0 MT/day. Multi cyclone dust collector is furnished in existing TFH. Further Multi cyclone dust collector followed by bag filter will be provided to thermic fluid heaters after expansion.

Details of hazardous waste generation is as under:

Sr. No.	Type/Name of Hazardous waste	Quantity (MT/Annum)			Disposal Method
		Existing	Proposed	Total after expansion	
1	ETP Sludge + Evaporation Residue	----	300 Kg/ Month	300 Kg/ Month	Collection, storage and Disposal at TSD Site.
2	Used Oil	2.0 Kg/ Month	----	2.0 Kg/ Month	Collection, storage and used within premises as a lubricant / sold to registered recycler.
3	Discarded Plastic bags	0.0084 MT/ Annum	0.78 MT/ Annum	0.7884 MT/ Annum	Collection, storage & sell to authorized vendor.

Observations & Discussions:

Technical presentation made during the meeting also covered the point wise reply of additional information sought. Committee noted that after proposed expansion, water consumption for industrial use is 2.25 KLPD (Washing: 0.20 KLPD + cooling: 2.05 KLPD) and waste water generation will be 0.30 KLPD (Washing: 0.20 KLPD + cooling: 0.10 KLPD) having COD: less than 100 mg/litre, TDS: 1500-2000 mg/litre, pH : 6.0-8.0 and SS: 100-120 mg/litre and entire quantity will be evaporated in evaporator. It is noted by the committee that NA copy is also submitted by the PP along with partnership deed. Storage capacity of Formaldehyde within the premises will be one tank of capacity 4.5 KL and for Phenol, one storage tank of 5 KL capacity will be provided. Nearest residence area is Bhamavel which is 790 meter away from the unit. PP has mentioned that adequate ventilation system will be provided in work area and ambient air quality monitoring will be done in process area for VOC. Committee asked PP to use Briquettes of Bio-coal only as a fuel and wood shall not be used. Further committee asked PP to provide adequate APCM for control of SPM from the stack. After deliberations on various aspects, the committee decided to recommend the project to SEIAA, Gujarat for the grant of Environmental Clearance

4.	SIA/GJ/IND2/10187/2014	M/S NUTAN DYECHEM, Plot No. 2428, GIDC Sachin, Sachin, Taluka Choryasi, District Surat, Gujarat	Appraisal
----	------------------------	---	-----------

Project / Activity No.: 5(f)

- M/s: Nutan Dyechem herein after Project Proponent–PP) had submitted application for expansion project on 22/06/2014.
- Project was considered for screening and scoping in the SEAC meeting held on 11/09/2014.
- TOR were awarded vide letter no. EIA-10-2013-6120-E.2728 dated 14/10/2014.
- Final Environment Impact Assessment (EIA)/EMP report was submitted on 03/08/2015.
- Project was appraised during SEAC meeting held on 29/09/2015. During meeting, additional information was sought by the committee.
- PP has submitted additional information on 24/02/2016 and project was further considered in the SEAC meeting held on 23/03/2016.

Project status: Expansion

Project / Activity Details:

This is an existing unit engaged in manufacturing of Dyes Intermediate and now unit has applied for expansion of the project by increasing existing capacity and by addition of one product as tabulated below.

Sr. no.	Name of Product	Existng (MTPA)	Total after proposed expansion (MTPA)
1	Pyrazolone (Assorted) / Hydrazine(Intermediate stage)	240	600
2	P-Amino 3-Methoxy Azo benzene 3-Sulfonic acid (Sod. salt)		250
3	Diamino toluene Sulfate *		00
4	O Anisidine P-Sulfonic acid *	60	00
5	5-Nitro O–Toludine OR 4–Nitro 2 : 5 Dimethyl Aniline	60	150
6	Meta Nitro Para Phenetidine	0	20
	Total	360	1020

*= Products to be discontinued

Total plot area is 3900 sq. m. Green belt area is 1280 sq. m. Total cost of the proposed expansion is 47 Lacs. Total water consumption after proposed expansion will be 70.86 KL/day with existing

water consumption of 10.86 KL/day) Fresh water will be sourced from GIDC water supply. Water consumption for process/washing will be 37.36 KLPD, for boiler: 7 KLPD, for cooling: 17.50 KLPD. Waste water generation from industrial use will be 49.16 KLPD (process/washing: 47.36 klpd, boiler: 0.95 klpd, cooling: 0.85 klpd). Industrial waste water of 49.16 KLPD will be treated in ETP and sent to CETP. Unit has existing permission of 16.85 KLPD treated waste water (Dilute Stream) for its disposal to CETP of GECL, Sachin and concentrated waste water of 32.31 KLPD will be subjected to captive MEE or will be sent to MEPL for evaporation. Total water consumption after expansion of 4 KLPD will be used for domestic purpose and 5 KLPD for gardening. Domestic waste water (after expansion) of 3.80 KLPD will be disposed off to soak pit.

At present Bio-Coal (2 MT/day) is used as fuel in 0.4 TPH steam Boiler and Multi Cyclone separator is provided as APCM. LPG is used as fuel in one Spin Flash dryer and one Tray dryer. Cyclone separator is provided as APCM with Spin Flash dryer. Existing 0.4 TPH steam Boiler will be replaced by proposed 1 TPH Boiler. Bio-coal / Lignite / Steam Coal (2 MT/day) will be used as fuel and Multi Cyclone separator is proposed as APCM. Unit has proposed one HAG (Hot Air Generator). At present unit has provided two stage alkali scrubber with reaction vessel to control SO₂ gas and single stage Alkali scrubber with Acidifying process in collection tank of ETP to control process gas emission SO₂.

Unit has proposed two stage alkali scrubber with reaction vessel for process gas emission control (SO₂). LDO (200 Lit/day) will be used as fuel in DG set (75 KVA) to be installed as auxiliary power backup. Hazardous waste to be generated will be ETP sludge (126 + 24 = 150 MT/Yr), Used Oil (0.27 + 00 = 0.27 MT/Yr), Discarded containers/Bags/Liners (28.8 + 16 = 44.8 MT/Yr), Distillation residue (9.6 MT/Year), MEE salt (2 MT/Month) and Sodium Bi-Sulphite (234 + 216 = 450 MT/Yr). Generation of Iron Sludge will be NIL.

PP has submitted that total existing capacity of CETP of GECL is 0.5 MLD. CETP is running at 50% utilization.

Observations/Discussions:

Technical presentation during the meeting on 29.09.2015 included the Pointwise ToR compliance. EIA is prepared by en-vision enviro technologies pvt. limited who is NABET accredited consultant. The baseline environmental quality has been assessed for a period from December 2014 to February 2015 in a study area of 5 km radial distance from the project site. Ambient Air Quality Monitoring (AAQM) was carried out at 8 locations during the study period for PM₁₀, PM_{2.5}, Sulphur Dioxide (SO₂) and Oxides of Nitrogen (NO_x), HCl, CO and VOC. All the parameters are well within the NAAQS. The maximum 24-hourly average ground level concentration for pollutants due to proposed expansion calculated using mathematical model (ISCST3). The incremental ground level concentration of various pollutants at all the ambient air monitoring locations is negligible. While reviewing the EIA report, Committee observed that some ToRs related to water consumption, waste water generation and treatment, hazardous waste generation & its management, process gaseous emission and APCM, risk assessment, Green belt development etc. are not addressed properly in the EIA report. On asking about the segregation of waste streams, PP could not reply satisfactorily.

After detailed deliberations the Committee sought additional information. Accordingly PP has submitted reply of the additional information sought on 24/02/2016 and made technical presentation before the committee on 23/03/2016.

PP mentioned that discrepancy in water consumption in Form I and EIA report was due to consideration of ice quantity in Form I whereas same was not considered in EIA report. PP submitted acknowledged copy of application made to GIDC for additional water requirement. Characteristics of waste water quality before and after treatment was discussed along with treatability report prepared by Enpro enviro tech and engineers Pvt. limited. It was also mentioned that process gas emission of SO₂ occurs from the product i.e. Pyrazolone (Assorted) in quantum of 496 kg per 1 MT of product. Two stage alkali scrubbers are provided as air pollution control measures. List of sources of fugitive emission and mitigations measures, list of authorized recyclers are submitted. Further PP clarified discrepancy in generation of Sodium Bisulfite. PP informed that in Form-I, quantity of Bi-Sulphite generation due to scrubbing of SO₂ with NaOH, is calculated only considering SO₂ generation during manufacturing of product Pyrazolone (Assorted) / Hydrazine (Intermediate stage) whereas during preparation of EIA report a detailed treatability study was conducted by Enpro Enviro Tech and Engineers Pvt. Ltd. In this report quantity of Bi-Sulphite generated due to scrubbing of SO₂ from the effluent present in equalization tank by acidification with Sulfuric acid / or concentrated Acidic effluent to evolve SO₂ gas from Sodium bisulfate present in effluent, is also considered. Hence, the total quantity of Bi-Sulphite generation reaches to 770 MT/year. Total need of 1,089 MT/Year of Bi-Sulphite as a raw material after proposed expansion is there and PP even after complete reuse of generated Bi-Sulphite quantity (770 MT/Year) needs to purchase approximately 318 MT/Year to meet the requirement. Risk assessment report including prediction of worst case scenario is submitted. Further, PP has submitted details of existing capacity of CETP is 0.5 MLD and additional capacity is 0.5 MLD for which EC is accorded. It is also mentioned that booked capacity is 0.2 MLD and CETP is running at 50% load. CETP has done up gradation by installing advance oxidation plant. Recommendation/suggestion of environmental audit reports for the period April 2015 to September 2015 and July 2014 to December 2014 are submitted by PP. Concentrated waste water of 32.31 KLPD will be subjected to captive MEE or will be sent to MEPPPL for evaporation. Referring to EIA,EMP and revised Form I and after detailed discussion, it was unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environmental Clearance.

5	SIA/GJ/IND2/9884/2016	M/s. Sun Industries. Plot No. 1207 to 1213,GIDC, industrial estate, Sarigam, Dist: Valsad-396 155, Gujarat.	Appraisal
---	-----------------------	---	-----------

Project / Activity No.: 5(f)

- M/s: Sun Industries herein after Project Proponent– PP) submitted proposal to MoEF&CC seeking Environmental Clearance for expansion project .
- TOR(Amended) was issued by MoEF&CC vide letter No: J-11011/55/2012-IA II (I) dated 08/05/2015.
- Proposal was transferred to SEIAA, Gujarat vide F.No. J-11011/55/2012-IA II (I) dated 05/08/2015 mentioning that said project now falls under category B project as per amendment

to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014.

- The project proponent submitted final EIA report on 08/03/2016.
- PP was called for appraisal of the project in the SEAC meeting held on 23/03/2016

Project status: Expansion

Project / Activity Details:

The proposed production activity falls in the project/activity 5(f) as per the schedule of the EIA Notification-2006. Plot area is approx. 10920 m²sq. m. Unit has proposed 1500 m²area for green belt development. Estimated cost of proposed expansion is Rs. 3.35 Crore. This is an existing project engaged in manufacturing of Synthetic organic chemicals and TORs are obtained from MoEF&CC for proposed expansion. Details of products (Existing and Proposed) are as under:

S. No.	Name of Products	Quantity in MT / Month		
		Existing Quantity	Proposed Quantity	Total
Existing Products				
1.	Alphapipenene, 4,3 carene& pine oil	99.00	-	99
2.	Pine Tar	1.00	-	1
3.	Ortho Bromo Toluene	25.00	-	25
4.	Para Bromo Toluene	30.00	-	30
Proposed Products				
5.	4 Methyl Acetophenone	-	70	70
6.	4 Methyl Propiophenone	-	70	70
7.	2,4 DichloroAcetophenone	-	70	70
8.	Tiglic acid	-	3	3
9.	4-Tertiary Butyl Benzoic Acid	-	} 100	} 100
10.	4-Bromo Benzoic Acid			
11.	2-Bromo Benzoic Acid			
12.	2-Chloro Benzoic Acid			
13.	4-Nitro Benzoic Acid			
14.	4-Nitro Benzamide	-	10	10
15.	2-Methyl P-PhenyleneDiamine	-	30	30
16.	2-Amino phenol	-	10	10
17.	4-Chloro 2-Amino phenol		100	100
18.	2-Chloro, 5-Nitro Benzoic Acid	-	25	25
19.	2, 5 Dibromo Nitro Benzene	-	} 125	} 125
20.	2, 5 Dichloro Nitro Benzene			
21.	3-Nitro Phthalic Acid	-	25	25
22.	Halquinol	-	100	100
By-Product				
23.	30 % HCl	-	189	189
24.	AlCl ₃ Solution	-	844.5	844.5
25.	Chloroform	-	3.5	3.5
TOTAL		155	1775	1930

Details of water consumption and waste water generation are as under. Water will be received from

GIDC.

Water consumption	Existing(KLPD)	Proposed(KLPD)	Total(KLPD)
Domestic	1.5	2.8	4.3
Industrial			
Process	0	73	73
Cooling	2.7	41.2	43.9
Washing	0.3	12.5	12.8
Boiler	0	4.5	4.5
Srubby	0	7.5	7.5
Gardening	1	5	6
Total	5.5	146.5	152

Fresh water requirement will be increased from 5.5 KL/day to 152 KL/day after proposed expansion.

Waste Water Generation	Existing(KLPD)	Proposed(KLPD)	Total(KLPD)
Domestic	1.2	2.0	3.2
Industrial			
Process	0	56.5	56.5
Cooling Blow down	0.2	5.0	5.2
Washing	0.3	12.5	12.8
Boiler Blow down	0	2.0	2.0
Srubby	0	0	
Gardening	0	0	
Total	1.7	78	79.7

Domestic Waste water will be disposed off to septic tank. Industrial waste water generated will be treated in proposed ETP units and treated effluent will be disposed into CETP sarigam through GIDC underground drainage system as per the inlet norms of CETP. Waste water from the first stage of 4-Tertiary Butyl Benzoic Acid, 4 Bromo Benzoic Acid, 2 Bromo Benzoic Acid, 2 Chloro Benzoic Acid and 4 Nitro Benzoic Acid processes will be recycled back into the process.

The high TDS effluent stream generated from manufacturing process of 4-Methyl Acetophenone, 4-Methyl Propiophenone, 2,4-Dichloro Acetophenone and Tiglic Acid will be Evaporated in Vacuum Evaporation Plant. Condensate water recovered from this plant will be reused as cooling tower make-up water and salt recovered from the plant will be collected, stored and finally disposed off to TSDF site.

Details of source of flue gas emission along with type of fuel consumption are as under.

Stack no.	Stack attached to	Ht. & Dia. of Stack	Fuel	APCD	Emission conc.
Existing Scenario					
1.	Thermic fluid heater (10 lakh kCal/Hr)	H: 30 m D: 0.6 m	Coal: 125 kg/Hr	Multicyclone Dust collector + Bag filter	PM<150 mg/Nm3 SO2< 100 ppm NOx< 50

					ppm
Proposed Scenario					
1.	Thermic fluid heater (10 lakh kCal/Hr)	H: 30 m D: 0.6 m	Coal: 167 kg/Hr	Multicyclone Dust collector + Bag filter	PM<150 mg/Nm3 SO2< 100 ppm NOx< 50 ppm
2.	Boiler (1 TPH)	H: 30 m D: 0.6m	Coal: 140 kg/Hr	Multicyclone Dust collector + Bag filter	PM<150 mg/Nm3 SO2< 100 ppm NOx< 50 ppm
3.	D. G. Set-120 kVA (Stand-by)	H: 11 m	Diesel: 8.5 Lit/Hr.	-	PM<150 mg/Nm3 SO2< 100 ppm NOx< 50 ppm

Existing fuel consumption (Coal) is 125 kg/hour. Proposed fuel consumption is 7.36 MT/day (Coal) and 8.5 litre per hour for 120 KVA D G Set. Bag Filter& MDC will be provided as APC measures to the thermic fluid heater& Boiler. The process emission will be generated in the form of NO from the manufacturing process. Minor quantity of fugitive emissions will occur during handling of the raw materials. Fugitive emissions are also likely to occur from storage area. Three stage water scrubber will be provided to control HCl emission. Two stage scrubber will be provided to control NO emission. Proper storage facility will be provided to reduce the fugitive emission and also good housekeeping will be maintained in the plant.

Detailed scenario for hazardous waste for existing and proposed expansion is as below:

Sr. No.	Type of waste & Category	Source	Quantity		Mode of Disposal
			Existing	Additional	
Hazardous waste					
1.	ETP Waste (Cat. 34.3)	ETP	0.06 MTPA.	10 MT/Month	Collection, storage, transportation and disposal to TSDF site
2.	Solid process waste (Mainly Salt) (Cat.28.1)	Process	Nil	10 MT/Month	This waste will be collected into polythene bags & sent to TSDF site
3.	Distillation residue (Cat.36.4)	Process	Nil	4 MT/Month	Collection, Storage, transportation and disposal to CHWIL or will be sold to cement industry
4.	Used Oil	Utility	0.12	0.5	Collection, storage,

	(Cat. 5.1)		KLPA	KLPA	transportation, disposal by selling to registered re-refiners.
5.	Discarded Containers (Cat. 33.3)	RM storage	Drums 120 Nos Per Annum	Drums: 4200 Nos/M Liners: 11700 Nos./Month.	Collection, storage & sold off to authorized re-conditioners.
6.	Spent Acid (Cat. D2)	Process	Nil	1200 MT/Month	Collection, storage & sold off to Actual users
Non – Hazardous Waste					
7.	Fly Ash	Utility	30 MTPA	221 MTPA	Collection, storage, & sold off to brick manufacturers

Industrial unit is a member of Sarigam waste & effluent management company limited for TSD site. Fly Ash will be sold to brick manufacturers. PP has submitted final EIA report through NABET accredited consultant having following details:

Name of Consultants	Precitech Laboratories Pvt Ltd.
Validity of Certificate of accreditation issued by the NABET, QCI	NABET list No.119, Provisional Accreditation
Baseline environmental monitoring period	Dec 2013- Feb 2014
Date of public hearing (If applicable)	Not Applicable
Any other details	

Observations & Discussions:

Technical presentation during the meeting on 23.03.2016 included the Pointwise TOR compliance. EIA is prepared by Precitech Laboratories Pvt. Limited who has obtained provisional NABET accreditation. The baseline environmental quality has been assessed for a period from December 2013 to February 2014. Ambient Air Quality Monitoring (AAQM) was carried out at 8 locations in 10 km radial periphery during the study period for PM₁₀, Sulphur Dioxide (SO₂), NO_x, TVOC, CO, HC, and NMHC. During study period range of various parameters recorded as PM₁₀ : 54 to 94 µg/m³, SO₂ : 16 to 30 µg/m³, NO_x : 18 to 33 µg/m³, TVOC: 1 to 1.6 ppm, CO: 0.4 to 0.9 mg/m³, HC: 0.4 to 0.9 ppm., NMHC: BDL Parameters PM₁₀, Sulphur Dioxide (SO₂), NO_x are well within the NAAQS. The maximum 24-hourly average ground level concentration for pollutants due to proposed expansion was calculated using mathematical model (ISC-AERMOD). The incremental ground level concentration of various pollutants at all the ambient air monitoring locations are well below the NAAQS. Range of Noise recorded values during Dec'13 to Feb'14 during day time found 52.7 to 63.8 dB(A- Leq range) and during night time, it is found 42.4 to 58.4 dB(A)- Leq range. 8 groundwater samples and 8 surface water samples have been drawn from the study area during the study period. All parameters for ground water quality and surface water quality are found within permissible limits and desirable limits of drinking water standard of IS:10500 respectively. The land use in the immediate vicinity consists of presence of several industries and agricultural lands followed by uncultivated land. The satellite image indicates major portion of the land-use in 10 km radial periphery covered by cultivated land @ 33.6% followed by uncultivated land @ 27.8% respectively. The industrial area comprises of 2.89% in 10km radial periphery respectively. Settlement is observed in 4.50% km in 10 km radial periphery.

While reviewing the EIA report, Committee observed that some ToRs (No 19,32) are not addressed properly as per the prescribed TOR. Committee noticed that during manufacturing of Tiglic acid, chloroform is produced and in EIA storage, handling and management of Chloroform with all possible precautions is not addressed properly and during presentation, PP showed readiness to drop proposal of making Tiglic acid. More over 30 % HCl, AlCl₃ Solution and Chloroform are shown as by-products which fall under the HW(M,H and TM)Rules 2008 and committee asked PP to correct the same for inclusion under hazardous waste categories.. Handling of spent acid along with names of actual recyclers are also not given. Committee also noticed that baseline study does not include PM2.5 for evaluation of impact and accordingly GLC is not studied for PM2.5. Process emission includes HCl which is also not incorporated in process gas incremental impact study. Waste water after treatment is proposed to discharge to CETP. Committee asked PP to submit the performance of CETP along with booked quantity of the effluent from the member units and its load. During presentation, committee also asked PP for the various maps (Aspects map, land use maps etc) for its interpretation as the same were put in the report with data without an interpretation/recommendation.

After deliberation, It was unanimously decided to consider the project only after submission of the following:

1. An undertaking by the Project Proponent on the ownership of the EIA report as per the MoEF&CC OM dated 05/10/2011 and an undertaking by the Consultant regarding the prescribed TORs have been complied with and the data submitted is factually correct as per the MoEF&CC OM dated 04/08/2009.
2. Summary & Conclusion as per the generic structure given in Appendix III A of the EIA Notification 2006.
3. Confirmation / undertaking to drop the production of Tiglic Acid assured by PP during meeting and Compliance status of CETP, Sarigam
4. Revised Form I incorporating corrected details including updated hazardous waste details including AlCl₃ solution and HCl.
5. Details of Leak detection and Repairing Programme m(LDAR) for control of VOCs emission.
6. Compliance of TOR Nos 19 and 32 for process gas emission of HCl and PM2.5 and associated incremental impact on ambient air quality.
7. Analysis result of inlet and outlet of CETP for the last 6 months including present load and spare capacity.
8. Details of use of hazardous waste by registered recyclers with list.

6	Zenith Aromas P.No:20, Shubhlaxmi Industrial Estate, Chhtral–Kadi Road, Village-Dhanot, Ta: Kalol, Dist: Gandhinagar	Appraisal
Project / Activity No.: 5(f) <ul style="list-style-type: none"> • M/s: Zenith Aromas herein after Project Proponent – PP) had submitted application for expansion project on dated 10/02/2015 as the project site is located outside the notified area. • Proposal was considered for screening and scoping during SEAC meeting held on 19/05/2015. 		

- After presentation, committee sought additional information.
- On 03/11/2015, PP submitted additional information.
- Project was appraised during SEAC meeting held on 23/03/216.

Project status: Expansion

Project / Activity Details:

This is an existing project engaged in manufacturing of raw agarbatti, sila ras perfume etc and now applied for expansion as tabulated below:

No.	Name of Products	Quantity (MT/Month)		
		Existing	Proposed	Total
1	Raw Agarbatti	10.0	0.0	10.0
2	Sila Ras	5.0	0.0	5.0
3	Sugar Syrup(<i>Chasni</i>)	2.0	0.0	2.0
4	Olibenum resinoid	0.5	0.0	0.5
5	Olibenum oil	0.5	0.0	0.5
6	Perfume for agarbatti	0.2	0.0	0.2
7	2 Phenoxy Methyl Phenyl Carbonil Acetate (Rose Crystal)	0.0	10.0	10.0
8	Para Cresyl Phenyl Acetate (PCPA)			
9	2 Methoxy Nephthaline (Yara Yara)			
10	2 Ethoxy Nephthaline (Neraline Bromiliya)			
11	Potassium Acetate (By product)	0.0	6.8	6.8
12	Sodium Sulphate (By product)	0.0	5.8	5.8
	Total	18.2	22.6	40.8

The location of the unit is outside the notified area. However, as per amendment to EIA Notification, 2006 vide S.O. 1599 (E) dated 25.06.2014, small units are categorized as Category "B" projects. Small units are defined as with water consumption less than 25 M³/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989. During presentation on 19/05/2015,, PP informed that water requirement is 0.5 KL/day. Fuel requirement is 0.2 MT/day and Chemicals to be used are not covered in MAH category. Hence, this project falls under Category B of project activity 5(f) as per the EIA Notification 2006.

Total plot area is 873 sq. m & unit has proposed 140 sq mtr area for the green belt development/Tree plantation. Expected project cost is Rs. 0.15 Crores. Total water consumption for proposed project will be 4 KL/day (1.2 KL for Domestic, 0.3 KL for Gardening, 2.1 KL for Process, 0.1 KL for Boiler , 0.2 KL for Cooling, 0.1 KL for washing) which will be sourced from Shubhlaxmi industrial estate. Industrial waste water generation will be 0.4 KL/day (Process: 0.3 KLPD and Washing:0.10 KLPD) which will be treated in proposed Primary treatment plant and treated waste water will be evaporated in evaporator (Cap. 50 ltr/hr). Domestic waste water (0.85 KL/day) will be disposed off into soak pit system. Flue gas generation will be from Steam Boiler (0.1 TPH). Wood is proposed as fuel for Boiler. Unit has proposed dust collector as APCM. No process gas emission is envisaged. Hazardous waste generated from the manufacturing activity will be ETP sludge & evaporation residue (0.5 MT/Month), Discarded containers/Bags/Liners (2 MT/Month) and used oil

(6 ltrs /Month). After presentation on 19/05/2015, committee sought additional information. PP submitted additional information on 03/11/2015 and project was further considered in the SEAC meeting held on 23/03/2016.

Observations/Discussions:

In view of the additional information sought by the committee after presentation on 19/05/2015 categorizing the said proposal under B2 category, PP submitted the said information on 03/11/2015 and made presentation before the committee.

Technical presentation included details of products, raw materials, details of water consumption, waste water generation, hazardous waste generation. Point-wise explanation of additional information was made by the PP before the committee. PP submitted a layout of the plan showing separate exit and entry point, an undertaking of the unit as per the amendment Notification 2006 vide SO 1599(E) dated 25.06.2014. PP mentioned that entire quantity of the fresh water will be received from Subhlaxmi Estate and an undertaking in this regard has been submitted by the PP. There will be no disposal of treated waste water. Treated waste water of 0.40 KLPD will be evaporated within the premises. PP has also submitted productwise estimation of water consumption and waste water generation with characteristics of waste water. Committee noticed that waste water from PCPA and Rose crystal products comprise of COD in the tune of 3800-4000 mg/litre having pH 6.8-7.0. After treatment, COD of the waste water will be 2000 mg/litr with TDS 2000 mg/litre and it will be evaporated in an evaporator of capacity 50 litre per hour. PP submitted management plan for waste streams to be generated from spillages, leakages, vessel washing, used container washing etc. It is mentioned that hazardous waste including evaporation salt will be disposed off to TSDF. PP has mentioned that Toluene and Methanol solvents are used in process, 90%-92% of solvents are recovered and recycled. PP has also submitted details of measures proposed for preventing impacts on human health and environment as well as detailed monitoring plan along with socio economic development measures. PP has proposed additional 100 sq. meter green belt area in addition to existing 140 sq. meter green belt area out of total plot area of 873.67 sq. meter. Details of hazardous characteristics of Cholroform and DMS are given along with handling and control measures. Safety instructions for handling of hazardous materials to the transporter, detailed fire control plan, details of fire and safety equipments are submitted. It was mentioned that no fatal accident occurred in the existing unit in last three years.

After detailed discussion, it was unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environmental Clearance.

7 & 8	SIA/GJ/IND2/3570/2014 & SIA/GJ/IND2/3277/2014	M/S. Deepak Nitrite limited M/S. Deepak Phenolics limited <i>Plot No. 12/B, GIDC Industrial Estate Dahej, Taluka Vagra, District Bharuch, Gujarat</i>	Amendment in EC
Project / Activity No.: 5(f)			
<ul style="list-style-type: none"> M/s:Deepak Nitrite limited and 			

M/S. Deepak Phenolics limited herein after Project Proponent – PP) have submitted applications for amendment in Environmental clearance project. EC is originally issued in the name of M/S Deepak Nitrite limited and applied for amendment for bifurcation of existing EC No. SEIAA/EC/5(f), 4(d), 1(d)/120/2014 dated 6th August 2014 into Deepak Nitrite Limited (DNL) and Deepak Phenolics Limited (DPL) on 13/01/2016

- Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: EC Amendment

Project / Activity Details:

Project proponent M/S Deepak Nitrite Limited has obtained Environmental Clearance vide No. SEIAA/EC/5(f), 4(d), 1(d)/120/2014 dated 6th August 2014 and now applied for bifurcation of EC into Deepak Nitrite Limited (DNL) and Deepak Phenolics Limited (DPL) stating that there is no change in any of the parameters of original EC due to proposed bifurcation.

Project proponent has applied for the bifurcation and detail is as under:

S. No.	Name of Final EC Product	EC Received (MT/Month)	Capacity (MT/Month)	
			DNL	DPL
1	Hydrogenation Toludine (Ortho, Para, Meta), Xylidine (2-4,2-6,3-4,2-3), Cyclohexanone, Cumidine, (Para & Ortho)	3400	750	2650
2	Nitration Plant- Any one Product at a time			
	Nitro Toluenes (ONT, PNT, MNT)	2500	2500	-
	Nitrochlorobenzenes (ONCB, PNCB)	2500	2500	-
	O- Nitroxylens (3 NOX & 4NOX)	2160	2160	-
	M- Nitroxylens (2, 4 NXL & 2,6 NXL)	2160	2160	-
	Ethyl Hexyl Nitrate (EHN)	1800	1800	-
	Nitrocumenes (PNC)	1800	1800	-
3	Monochlorobenzene (MCB)	1667	1667	-
4	Dichlorobenzene DCB (Byproduct)	187	187	-
5	30% HCl (Byproduct)	1850	1850	-
6	DASDA	1875	1875	-
7	Sodium Sulphate (Byproduct)	2511.30	2511.3	-
8	Various Optical Brightening Agents (OBA) such as DMA-X Conc., UP liq., UP Conc., SRK, BMK, AS liq., HF liq., ABP liq., SI liq., BOP, MST liq., 2B Type etc. on activity basis	3750	3750	-

9	Hydrogen (Byproduct) (Nm ³ / hr)	1800	1800	-
10	Power	42 MW	-	42 MW
11	Steam	125 TPH	25 TPH	100 TPH
12	Phenol	16667	-	16667
13	Cumene	25000	-	25000
14	Acetone	10000	-	10000
15	Alpha Methyl Styrene (AMS)	500	-	500
16	Benzene Rich Cut	175	-	175
17	Crude Phenol Column Bottoms	730	-	730

For location and power details, PP has submitted following details:

Item	Details		
	As per EC	DNL	DPL
Location	Plot No.: 12/B of GIDC Dahej Taluka : Vagra; District: Bharuch; State: Gujarat.		
Area	231617.14 m ²	91499.14 m ²	1,40,118 m ²
Power Requirement & Source	Connection load : 9 MW Stand By: 2 D.G Sets of capacity 1500 KVA each	Connection load : 3.5 MW Power supply from grid (Dakshin Gujarat Vij Co. Ltd.) Stand By: 1 D.G Sets of capacity 1500 KVA each	Connection load : 5.5 MW Power supply from grid (Dakshin Gujarat Vij Co. Ltd.) Stand By: 1 D.G Sets of capacity 1500 KVA each Power Plant: DPL- 42 MW CPP

Details of water requirement & Source: The water source is GIDC water supply.

Total Water Requirement	10373 KLD	8325 KLD	2048 KLD
Recovery	-2717 KLD	-2717 KLD	0
Net Water Requirement	7656 KLD	5608 KLD	2048KLD

Water consumption details:

S. No.	Source	Quantity of Water Consumption, KLD		
		EC Received	Deepak Nitrite Ltd	Deepak Phenolics Ltd

1	Process	3672	3495	177
2	Boiler	1464	964	500
3	Cooling & Chilling	4929	3630	1299
4	Washing	145	110	35
5	Domestic	100	88	12
6	Gardening	63	38	25
	Total Water Requirement	10373	8325	2048
7	Recovery	-2717	-2717	0
	Net Water Requirement	7656	5608	2048

Details of waste water generation:

S. No.	Description	Waste water generation in KLD
1	Process	517.9
2	Boiler	670.6
3	Cooling & Chilling	996.5
4	Washing	110
5	Domestic	74.6
6	Total Wastewater Generation	5182.5
	Water to MEE for Recovery	2812.9
7	Total Water to ETP & thereafter to GIDC Drain for disposal to deep sea	2369.6

Details of effluent generation and handling:

Item	Details		
	As per EC	DNL	DPL

Effluent Generation, Treatment and Disposal:			
Total	6131.5 KLD	5182.5 KLD	949 KLD
Recovery from MEE	2812.9 KLD	2812.9 KLD	0
After treatment disposed to drain	3319 KLD	2369.6 KLD	949 KLD
ETP Capacity		750 KLD X 3	1000 KLD
Details of Air Emissions:			
Air emission	Flue Gas Stacks: 11 Nos Process Vents: 9 Nos.	Flue Gas Stacks: 7 Nos. Process Vents: 8 Nos.	Flue Gas Stacks: 4 Nos. Process Vents: 1 Nos.
Hazardous Solid Waste treatment and Disposal	Membership of Certificate of Saurashtra Enviro Projects Pvt. Ltd. (SEPPL), Bhachau is available for hazardous waste disposal.		

Details of fuel consumption and flue gas stacks:

S. No.	Stack Attached to	Type of Fuel used	EC Received	DNL	DPL
1	Boiler for Hydrogenation, Nitration & Chlorination Plant (22TPH)	Indian/ Imported Coal	3806/ 2530	3806/ 2530	-
2	Thermic Fluid Heater for Chlorination Plant	Furnace Oil	14.25	14.25	-
3	Boiler for DASDA Plant (32 TPH)	Indian/ Imported Coal	5536/ 3680	5536/ 3680	-
4	Thermic Fluid Heater for DASDA Plant	Indian Coal	230	230	-
5	Scrubber for FBRS of DASDA Plant	Saw Dust	125	125	-
6	Boiler for OBA Plant (16 TPH)	Indian/ Imported Coal	2768/ 1840	2768/ 1840	-
7	Boiler for ECH Plant (30 TPH)	Indian/ Imported Coal	-	-	-
8	Cogen Plant Boiler (100 TPH)	Indian/ Imported Coal(kg/hr.)	17300/ 11500	-	17300/ 11500
9	DG Set (1 no. of 1500 kVA)	HSD	500 lit/hr.	500 lit/hr.	-

10	Boiler for Phenol & cumene plant (100 TPH)	Indian/ Imported Coal	21000/ 14000	-	21000/ 14000
11	Incinerator for Vent gas	Gas	25 m3/ hr	-	25 m3/ hr
12	Hot Air Generating Unit	Indian/ Imported Coal(kg/hr)	1950/ 1500	1950/ 1500	-
13	DG Set (1 no. of 1500 kVA)	HSD	500 lit/hr.	-	500 lit/hr.

Fuel consumption and APCM details of DNL

S. No.	Stack Attached to	Capacity	Stack Nos.	Type of Fuel used	Fuel consumption (Kg/hr)	Air Pollution Control Measures
1	Boiler for Hydrogenation, Nitration & Chlorination Plant	22 TPH	1	Indian/ Imported Coal	3806/ 2530	Electro Static Precipitator (ESP) & Adequate Stack Height
2	Thermic Fluid Heater for Chlorination Plant		1	Furnace Oil	14.25	Adequate Stack Height
3	Boiler for DASDA Plant	32 TPH	1	Indian/ Imported Coal	5536/ 3680	ESP & Adequate Stack Height
4	Thermic Fluid Heater for DASDA Plant		1	Indian Coal	230	Adequate Stack Height
5	Boiler for OBA Plant	16 TPH	1	Indian/ Imported Coal	2768/ 1840	ESP & Adequate Stack Height
6	Hot Air Generating Unit (OBA Plant)		1	Indian/ Imported Coal	1950/ 1500	ESP with adequate stack height will be provided
7	DG Set (1 no.)	1500 kVA	1	HSD	500 lit/hr	Adequate Stack Height

Fuel consumption and APCM for DPL

S. No.	Stack Attached to	Capacity	Stack Nos.	Type of Fuel used	Fuel consumption (Kg/hr)	Air Pollution Control Measures
--------	-------------------	----------	------------	-------------------	--------------------------	--------------------------------

1	Cogen Plant Boiler	100 TPH	1	Indian/Imported Coal	17300/11500	ESP & Adequate Stack Height
2	Boiler for phenol & Cumene	100 TPH	1	Indian/Imported Coal	21000/14000	ESP with adequate stack height will be provided
3	Incinerator for 304 Nm3/hr. Vent gas	304 Nm3/hr	1	Gas	25 m3/ hr	Adequate Stack Height will be provided
4	DG Set (1 no.)	1500 KVA	1	HSD	500 lit/hr.	Adequate Stack Height will be provided

Details of process vents for DNL.

Stack Attached to	Nos. of Stack	Stack Height in m	Pollutants Emitted	Air Pollution Control Measure
Hydrogenation Reactor of Hydrogen Plant	1	20	Hydrogen	Vent Scrubbing System for H ₂ gas
Nitration Reactor of Nitration Plant	1	16	NO _x Vapours <40 mg/ Nm ³	NO _x Scrubber with water as scrubbing media
Chlorination Reactor of Chlorination Plant	1	20	HCl Vapours <20 mg/ Nm ³	HCl absorption column with water as scrubbing media
Drowning Reactor of DASDA Plant	1	15	SO ₂ Vapours <40 mg/ Nm ³	SO ₂ Vent scrubbing system
Oxidation Vats of DASDA Plant	1	20	Air with minor organics	Vent scrubbing system for Oxidation vats
Reactors of OBA Plant	1	20	CO ₂ Vapour	CO ₂ vent scrubbing system
Process Plant of OBA Plant	1	37	HCl Fumes	Scrubber

Spray Dryer of OBA Plant	1	29	PM, SO ₂ , NOx	-
--------------------------	---	----	---------------------------	---

Process vent details of DPL:

Stack Attached to	Nos. of Stack	Stack Height in m	Pollutants Emitted	Air Pollution Control Measure
Process Plant	1	30	VOC	Incinerator

Details of Land distribution of DNL:

S. No.	Area	Area in m ²	% of Plot Area
1	Production	3290	3.60
2	Storage		
	Product Storage	3221	3.52
	Raw Material	9748	10.65
	Drum Storage	5373	5.87
3	Boiler	479.2	0.52
4	Substation	177.8	0.19
5	DG Room	117	0.13
6	Security Room	26.5	0.03
7	Cooling Tower	82	0.09
8	Office	527.4	0.58
9	Effluent Treatment Plant	5110	5.58
10	Road & open area	23787.84	26.00
11	Green belt Area	32235.7	35.23
12	Fire water tank	297.5	0.33
13	Raw Water	670	0.73
14	Process water/ DM water	217.3	0.24
15	Chilled water	124.4	0.14
16	Substation/CCR	739.1	0.81

Observations & Discussions:

After technical presentation, referring to the EC already granted to Deepak Nitrite Limited and proposal of PP for demerger of the project proponent, Committee noticed that due to bifurcation of the Deepak Nitrite Limited into Deepak Nitrite Limited and Deepak Phenolics limited, a study on environment impact is required. After deliberation on various aspects, it was decided to consider the proposals for amendment in EC of M/S. Deepak Nitrite limited and M/S. Deepak Phenolics limited after satisfactory submission of the following:

1. Environmental study report by accredited consultant covering impacts on water, Air, Soil, Noise, Flora fauna etc. due to bifurcation of products, plants, RM storage facilities, utilities, EMS from Deepak Nitrite Limited into (1) Deepak Nitrite Limited and (2) Deepak Phenolics Limited keeping EIA report submitted earlier in a view, its associated mitigation measures and recommendations.
2. Land possession documents of Deepak Nitrite Limited and Deepak Phenolics limited obtained from the GIDC.
3. Justification for demerger of Deepak Nitrite Limited into Deepak Nitrite Limited and Deepak Phenolics Limited with submission of all concerned documents.
4. Detailed breakup of hazardous waste generation for DPL and DNL.

9	SIA/GJ/IND2/6480/2016	M/s. KDAC CHEM PVT. LTD. 92/A1 & A2, 92/B/2, 95, 97, 98/1-4, G.I.D.C., NANDESARI, VADODARA	Amendment
---	-----------------------	--	-----------

Project / Activity No.: 5(f)

- M/s: KDAC CHEM PVT. LTD herein after Project Proponent – PP) has submitted application for amendment in EC on 19/01/2015 for discharge of treated industrial waste water to CETP, Nandesari.
- Proposal was scheduled in SEAC meeting on 22/04/2015. On 16/04/2015, PP requested to defer their proposal in next meeting instead of appraising on 22/04/2015 as authorized signatories were unavailable from their site.
- Subsequently, proposal was deferred and appraised during SEAC meeting held on 16/07/2015 and additional information was sought by SEAC.
- Additional information was submitted by the PP on 16.12.2015
- Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: Amendment in EC

Project / Activity Details:

M/s. KDAC CHEM Pvt. Ltd. is located at Plot No 92/A/1-1, 92/2/B, 95, 97, A-98/1, C1B-98/2, C1B-98/3, C1B-98/4 GIDC Nandesari, District: Vadodara.

Industry has obtained Environmental Clearance No. SEIAA/GUJ/EC/5(f)/269/2014, dated on 30.09.2014 for expansion by enhancement of production capacities of existing products and

addition of new products in the existing unit at Nandesari.

In Environmental Clearance, Specific Condition A-2 states “*Total industrial effluent generation shall not exceed 94 KLD out of which 80.5 KLD of effluent (40 KLD process effluent +8.5 KLD reactor washing effluent + 32 KLD RO reject water) shall be evaporated with help of Multi Effect Evaporator (MEE) and only 13.5 KLD (5 KLD cooling tower blow down + 2 KLD Boiler blow down + 8.5 KLD floor washing effluent) of existing consented effluent quantity shall be sent to the CETP – Nandesari.*”

PP informed the committee that they are having existing membership of Nandesari CETP. Nandesari Industries Association has received Environmental Clearance No. SEIAA/GUJ/EC/7(H)/1/116/2014 dated 14/08/2014 for enhancement of capacity 5.5 MLD to 12 MLD of the CETP.

PP further mentioned that CETP has conducted treatability on the effluent sample generated by their industry based on which CETP has confirmed acceptance of 80.5 KL/day effluent load in addition to the present 13.5 KL/day consented effluent quantity, hence it is proposed to discharge 94 KLD of treated waste water to the CETP.

PP has applied to amend the Specific Condition A.2 for discharge of 94 KLD effluent to CETP, Nandesari. EC amendment application was appraised during 248th SEAC meeting held on 16.07.2015. Following additional information was sought by SEAC vide its letter EIA-10-2014-1219-E/2928 dated 02.09.2015.

1. Copy of CTE & CC&A of the CETP Nandesari and point wise compliance thereof.
2. Give details of CETP- Nandesari including (1) Total capacity & Spare capacity of the CETP, (2) Actual load at present (Qualitative and Quantitative) (3) CETP Up gradation scheme, if any. (4) Analysis Reports of GPCB for Inlet and outlet of CETP for last 6 months. Comparative statement with respect to Norms prescribed by the GPCB.
3. Final certificate from the CETP-Nandesari confirming the acceptance of effluent from your industry.
4. Recommendations and suggestions of the last two Environment Audit reports of CETP-Nandesari and their compliance report.

Additional information was submitted by PP vide letter dated 16.12.2015. Based on submission, request for amendment was appraised in the SEAC meeting held on 23/03/2016.

Observations & Discussions:

Technical presentation of the proposal included details of proposed waste water discharge (94 KLPD) to CETP with copy of EC issued to the unit, details of products, water consumption, waste water generation with increase in quantity of discharge of existing waste water of 13.5 KLPD to 94 KLPD to CETP, Nandesari, Proposed and existing water balance, letter of Nandesari Industries Association (CETP) issued to PP accepting additional load of 80.5 KLPD in addition to the existing effluent load of 13.5 KLPD summing to 94 KLPD, details of effluent load at CETP, treatability report etc.

Committee noted the following details submitted by PP:

(1) Total capacity and spare capacity of CETP & (2) Actual load (Qualitative and quantitative) at CETP

- Total capacity of CETP: 12 MLD
- Booked capacity and actual load received at CETP: Booked qty: 9.7 MLD, Actual quantity received: 4.7 MLD
- Spare capacity with CETP to accommodate increased waste water quantity from proposed expansion: 2.3 MLD

(3) CETP up gradation scheme (if any): Hydrodynamic Cavitation and electro oxidation adopted.

(4) Last 6 months AR of inlet and outlet of CETP: PP has submitted AR of outlet of CETP

(5) Recommendation, Suggestion of Audit report (Last 2 years): PP has submitted compliance report of suggestions given by third party auditors for the audit period of January 2014-December 2014.

After detailed deliberation, committee noted that PP submitted CTE of CETP with compliance of conditions, treatability report, AR of CETP, letter of acceptance of CETP for additional load of waste water from the unit and unanimously decided to recommend for grant of the amendment to SEIAA in specific condition A-2 of EC NO: SEIAA/GUJ/EC/5(f)/269/2014 dated 30 September 2014 as under:

2. *Water requirement for the project shall not exceed 261 KLPD after the proposed expansion (Green belt development: 6 KLPD+ RO supply Water : 255 KLD {RO Reject: 32 KLD+RO Permeate:223 KLD(Boiler: 80 KLPD+ Cooling tower:80 KLPD+ Floor washing: 6.5 KLPD+ Reactor washing: 8.5 KLPD+ Process: 36 KLPD+ Domestic use: 12 KLPD) and it shall be met through GIDC water supply only. The water meter shall be installed and records of monthly water consumption shall be maintained regularly.*

3 & 4 :*Total industrial effluent generation shall not exceed 94 KLD (RO reject: 32 KLD+ Bolier blow down: 2 KLD+ cooling tower drain : 5 KLD + Washing waste water from reactor: 8.5 KLPD+ Floor washing: 6.5 KLD+ Process waste water: 40 KLD)and it shall be discharged to the CETP, Nandesari meeting prescribed CETP inlet norms".*

Rest of the conditions of EC NO: SEIAA/GUJ/EC/5(f)/269/2014 dated 30 September 2014 shall remain unchanged.

10.	SIA/GJ/IND2/10059/2016	M/s. Radhey Foam Pvt. Ltd., Block No. 166/b, Plot No. 143, 144, 145, 146, 149, 150 & 151, Om textile park, Vibhag – 3, Umbhel road, Parab, Tal. Kamrej, Surat.	Screening/Scoping
<p>Project / Activity No.: 5(f)</p> <ul style="list-style-type: none"> • M/s: Radhey Foam Pvt. Ltd. herein after Project Proponent – PP) had submitted application for new project on dated 17/02/2016. • Proposal was considered for screening and scoping during SEAC meeting held on 			

23.03.2016.

Project status: New

Project / Activity Details:

This is a new project proposed to manufacture Polyurethane Foam-300 MT/Month. List of raw materials to be used are as under:

Sr No.	Name Of Raw Material	Mt/Month	Source Of Supply
1.	n-Butyl Alcohol (Polyol)	127.5	Mumbai
2.	TDI (Toluene Di Isocyanate)	76.5	Mumbai Ankleshwar
3.	Catalysts (Silicon/Stannous Octoate(SO))	2.9	Bangalore Ahmadabad Mumbai
4.	Filler (Calcium Hydroxide)	82.9	Surat
5.	Methylene Chloride	10.2	Mumbai
6.	Water	99.0	----

The proposed production activity falls in the project/activity 5(f) as per the schedule of the EIA Notificaiton-2006. Total plot area is 1,095.0 m². Green belt developed within Premises is 221.0 m² (20.2 %) and outside premises is 200.0 m² (18.2%), Total greenbelt developed is 421.0 m² (38.4 %). Estimated cost of proposed expansion is Rs. 1.95 Crores. Water source is bore well and consumption for Industrial use is 3.3 KLD, for domestic purpose is 11.0 KLD and for Gardening: 5.0 KLD. Waste water generation from industrial use is Nil, domestic waste water will be 10 KLPD. Domestic wastewater will be disposed off in to soak pit via septic tank.

Unit has proposed on D G Set having following details:

Sr. No.	Stack Attached To	Height & Diameter Of Stack	APCM	Fuel	Final Concentration
01.	D. G. Set (250 KVA) (Stand by)	H: 5 Mtr. D: 5"	---	Diesel @ 125 Lit/Hr	SPM<150 MG/NM ³ SO ₂ <100 PPM NO _x <50 PPM

Details of hazardous waste generation and its management proposed are as under:

Sr. No.	Type of Waste	Category	Source of Generation	Quantity	Facility
01.	Used Oil	5.1	D. G Set	0.045 MT/Year	Collection, Storage, Transportation, Disposal by selling to Registered Re-refiners approved by GPCB/CPCB or reused

					as lubricant for machinery within the factory.
02.	Discarded Containers/Bags	33.3	Raw Material storage	600 Nos./Year	Collection, Storage, Transportation, Disposal by selling to Registered recycler approved by GPCB/CPCB
03.	Waste Foam (Product cutting waste)	--	Process	15.3 MT/Month	Collection & reuse again in process
04.	Carbon Waste	35.3	APCM	2 Kg/Month	Collection, Storage, Transportation, Disposal by selling to Registered recycler approved by GPCB/CPCB

Observations & Discussions:

During meeting, Committee noted that the site of the proposed project is located outside the notified industrial estate and raw materials to be used for proposed products are the hazardous and toxic chemicals like TDI, Methelene chloride etc. Committee felt that Synthetic organic chemical manufacturing unit consuming and storing toxic chemical shall not be allowed to come up in such area where common environmental infrastructure facility is not available, area is relatively virgin for this kind of product making units and residential area is in the nearby vicinity. Looking to above, committee was of the view that such type of projects shall not be allowed in this area. During the meeting, the project proponent was advised to select another location in any of the suitable chemical estates. Considering the above facts, it was unanimously decided to consider the project for TOR/Scoping only after submission of Revised proposal with suitable location.

11	SIA/GJ/IND2/10065/2016	M/s. Prime Polymers, P NO: 3346, GIDC, Chatral, Phase IV, Vill: Chatral, Ta: Kalol, Dist: Gandhinagar, PIN: 382729	Screening/Scoping
----	------------------------	--	-------------------

Project / Activity No.: 5(f)

- M/s: Prime Polymers herein after Project Proponent – PP) has submitted application for new project on dated 25.02.2016.
- Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: New

Project / Activity Details:

This is a new project and proposed products are as below:

Sr. No.	Name of Product	Quantity (MT/ Month)
1	Unsaturated Polyester Resins	600
2	Saturated Polyester Resins	
3	Alkyd Resin	
4	Vinyl Ester Resin	100
Total		700

The proposed production activity falls in the project/activity 5(f) as per the schedule of the EIA Notificaiton-2006. Total plot area is 1325 m². Green belt area is 400 m². Total cost of project is Rs. 1.25 Crores. Water source is GIDC and consumption is 2.5 KLPD (for Industrial use is for cooling: 0.5 KLD, for domestic purpose is 1.0 KLD, Gardening: 1.0 KLD). Waste water generation is 2.3 KLPD (From industrial use, cooling tower rejection: 0.06, Condensate: 1.44 KLPD and domestic waste water: 0.8 KLPD). Domestic wastewater will be disposed off in to soak pit via septic tank. Condensate waste water: 1.44 KLPD and cooling tower rejection 0.06 KLPD will be treated in ETP and 0.75 KLPD waste water will be recycled in cooling tower and rest quantity of 0.75 KLPD will be evaporated in evaporator of capacity 125 litre per hour.

Unit has proposed a thermic fluid heater with stack height 12 meter and one DG Set of 65 KVA (Diesel: 7 litre per hour). There is no process gas emission. Natural gas (0.3 MT/day) is proposed to be used as fuel.

Hazardous waste generation details is as under:

Sr. No.	Name of the Waste Generated	Category	Nature of the waste- solid, liquid or gas	Source of Waste Generation	Quantity of Total Waste	Quantity of Total untreated waste at site
1	Spent Oil	5.1	Liquid	Machineries Pump	30 L/Year	Sold to recycler or used as lubricant in machineries)
2	ETP Sludge	34.3	Solid	ETP	80 Kg/ Month	(Dispose off to TSDF, site)
3	Discarded Drums/Containers	33.3	Solid	Industrial (Raw Material Packing)	50 No./ Month	(Reuse/ send back to supplier or Sold to recycler)
	Bags				10000 No./ Month	(Sold to recycler)

4	Evaporation Residue	34.3	Solid	Condensate	30 Kg/ Month	15 Kg/Month (Dispose off to TSDF, site)
---	---------------------	------	-------	------------	--------------	--

Observations & Discussions:

Technical presentation made during the meeting by project proponent. During the meeting, PP was asked to ensure that there shall not be effluent discharge from the proposed activities. Committee noted that proposed fuel is natural gas and there is no process gas emission. The committee desired to have MSDS of materials to be handled, information on storage of each hazardous chemical and safety measures thereof. Project proponent has requested to consider the project as B2 category project. The request was considered by the committee looking to the low pollution potential in terms of air & water and location of the project in GIDC, Chhatral and the following additional information was sought for appraisal of the project.

1. Copy of plot holding certificate obtained from GIDC Chhatral.
2. Layout plan of the factory premises showing the proposed project activities on the same. Provision of separate entry & exit and adequate margin all round the periphery for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back. Mark the same in the plant layout.
3. Monthly consumption of each raw material (Product wise). End use of the products.
4. Detailed manufacturing process of each product along with chemical reactions, mass balance and schematic diagram.
5. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the proposed project. Copy of permission letter obtained from the GIDC for supply of raw water as per the requirement of the proposed project.
6. Water balance (including reuse-recycle and evaporation)
7. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes and to conserve fresh water.
8. Stream wise qualitative and quantitative assessment of the wastewater. A detailed treatability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated.
9. Plan for management and disposal of waste streams to be generated from spillage, leakages etc. Measures proposed for preventing effluent discharge during unforeseen circumstances.
10. Details of the ETP including size of each unit, retention time, other technical parameters etc. and its adequacy and efficacy report.
11. Give characteristics of the effluent to be generated and its feasibility to reuse in process.
12. Action plan for 'Zero' discharge of effluent shall be included.
13. Technical details of proposed evaporator including Control measures proposed for the evaporator in order to avoid/reduce gaseous emission/ VOC from evaporation of industrial effluent containing solvents & other chemicals.
14. Details of possibility of chemical seepage & consequent soil contamination & mitigation measure proposed for the same.
15. Specific details of (i) Details of the utilities required, (v) Types of fuel to be used and quantity of the each fuel, (vi) Flue gas emission rate from each utility along with stack height, (vii) Air

- Pollution Control Measures proposed along with its adequacy, (viii) List the sources of fugitive emission from the unit along with its quantification and proposed measures to control it. (All these details should be in tabular format with comparative data of existing and proposed data).
16. An action plan to control and monitor secondary fugitive emissions from all the sources.
 17. Specific details of fugitive emission from the unit along with measures proposed to monitor VOC within work area. Details of ventilation system proposed in the work area. Measures proposed to keep the work area environment as per the norms of GFR.
 18. Details of measures proposed for noise pollution abatement & its monitoring.
 19. Details of management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling and its disposal. How the manual handling of the hazardous wastes will be minimized? (All these details should be in tabular format with proposed activity).
 20. Methodology of de-contamination and disposal of discarded containers and its record keeping.
 21. Complete Management plan for By-products/Spent acids to be generated (if any) from the project including their quantity, quality, characteristics, end use etc. along with the name and address of end consumers to whom the by-product will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-product from the proposed project. Also give characteristics of the by products and feasibility of their actual use in respective products as a raw material.
 22. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent. Also submit Leak Detection and Repairing programme (LDAR)for control of VOCs.
 23. Measures proposed to be taken for the work area ambient air quality monitoring as per Gujarat Factories Rules.
 24. Copy of membership certificate from Common Environmental Infrastructure including the TSDF / Common Hazardous Waste Incineration facility for disposal of hazardous wastes to be generated from the proposed project.
 25. A detailed EMP including the protection and mitigation measures for preventing impacts on human health and environment as well as detailed monitoring plan with respect to various parameters and responsible head for the environmental management cell and environmental management cell proposed for implementation and monitoring of EMP.
 26. A detailed Green Belt Development Program including annual budget, types & number of trees to be planted, area under green belt development [with map]; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the GIDC area and elsewhere.
 27. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impacts. This shall include the details of Antidotes also.
 28. Details of quantity of each hazardous chemical to be stored, Material of Construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of the Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals. How the manual handling of the hazardous chemicals will be minimized?
 29. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed.
 30. Specific safety details / provisions for various hazardous chemicals including solvents to be used in the process along with onsite emergency plan.
 31. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.

32. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical checkup of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
33. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the facilities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
34. MSDS of all the products and raw materials.
35. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
36. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, mfg utility staff for safety related measures.

The project shall be appraised on satisfactory submission of the above.

12	SIA/GJ/IND2/10190/2016	M/s. Quilon Real Industries Pvt. Ltd. Plot No. C/292, GIDC, Saykha, Taluka: Vagra, District: Bharuch, Gujarat.	Screening/Scoping
----	------------------------	--	-------------------

Project / Activity No.: 5(f)

- M/s: Quilon Real Industries Pvt. Ltd herein after Project Proponent – PP) has submitted application for new project on dated 29/02/2016.
- Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: New

Project / Activity Details:

This is a new proposal an proposed production activity falls in the project/activity 5(f) as per the schedule of the EIA Notificaiton-2006. Total plot area is 21592 m². Green belt area is 6085 m². Total cost of project is Rs. 25 Crores.

Proposed products are as below:

Sr. No.	Name of Product	Proposed Capacity
Acid Dyes Group		50 MT/Month
1	Acid Black 210	
2	Acid Black 194	
3	Acid Black 235	
4	Acid Brown 165	

5	Acid Brown 161		
6	Acid Brown 282		
7	Acid Brown 355		
8	Acid Brown 432		
9	Acid Brown 425		
10	Acid Blue 113		
11	Acid Blue 193		
12	Acid Red 119		
13	Acid Red 97		
14	Acid Red 357		
15	Acid Yellow 42		
16	Acid Orange 142		
Reactive Dye Group			650 MT/Month
1	Reactive Black B and Black Mixes		
2	Reactive Orange M2R		
3	Reactive Orange-122		
4	Reactive Red-195		
5	Reactive Golden Yellow 145		
6	Reactive Golden Yellow HER		
7	Reactive Orange H2R		
8	Blue 3R		
9	Blue F4R		
10	Blue HERD		
11	Blue 221		
12	Blue HEGN		
13	Blue LFNG		
14	Blue BF		
15	Blue BFN		
16	Blue 2B		
17	Red BS		
18	Red RB		
20	Red 5B		
21	Red F3G		
22	Red H7B		
23	Red DS4B		

24	Red F2B		
25	Red SGR		
26	Golden Yellow R		
27	Golden Yellow RNL		
28	Navy Blue 2G		
29	Navy XLE		
30	Navy RGB		
Direct Dyes Group		50 MT/Month	
1	Direct Orange 26		
2	Direct Red 31		
3	Direct Black 22		
4	Direct Blue 71		
5	Direct Blue 281		
6	Direct Blue 218		
7	Direct Red 239		
8	Direct Blue 80		
9	Direct Black 170		
10	Direct Black 168		
11	Direct Black 179		
12	Direct Black 80		
13	Direct Black 22		
14	Direct Orange 39		
Vinyl Sulphone Derivatives			
1.	Sulpho VS	100 MT/Month	
2.	Sulpho OAVS		
Naphthalene Derivatives			
1.	H-Acid	200 MT/Month	325 MT/Month
2.	K Acid	50 MT/Month	
3.	Gamma Acid	50 MT/Month	
4.	NMJ Acid	25 MT/Month	
Amine Derivatives			
1.	MPDSA	25 MT/Month	250 MT/Month
2.	4 Sulpho Anthranilic Acid	10 MT/Month	

3.	5 Sulpho Anthranilic Acid	10 MT/Month	
4.	Aniline 2,5 Di Sulphonic Acid	10 MT/Month	
5.	P.N.A.	20 MT/Month	
6.	6,Choloro Metanilic Acid	10 MT/Month	
7.	F.C. Acid	30 MT/Month	
8.	4-Sulpho Hydrazone	10 MT/Month	
9.	5-Sulpho Hydrazone	10 MT/Month	
10.	DASA	50 MT/Month	
11.	DABA	25 MT/Month	
12.	6-Actyl OAPSA	20 MT/Month	
13.	Acetanilide	30 MT/Month	
	TOTAL	1425 MT/Month	

Water source is GIDC. Water consumption for Industrial use (Process, Boiler, Cooling, Washing, Water consumption) will be 439 KL/Day, for domestic purpose, it will be 15 KL/Day and for gardening, water consumption will be 20 KL/Day. Thus total water consumption will be 474 KL/Day.

Sr. No.	Category	Proposed Scenario (m ³ /day)	
		Water Consumption	Waste Water Generation
1. Industrial			
	Process	193	181
	Boiler & Cooling	126	20
	Washing	120	120
2.	Gardening	20	NIL
3.	Domestic	15	15
Total (Industrial)		439	321
Total		474	336

Waste water generation from Industrial use (Process, Boiler, Cooling, Washing) will be 321 KL/Day, from domestic use it will be 15 KL/Day. Total waste water generation will be 336 KL/Day

Project proponent during presentation informed committee that they are going for option I i.e. Zero Liquid Discharge that includes treatment of concentrated & dilute stream (321 KL/Day) in ETP having primary treatment facility then subjected to four stages MEE. Entire quantity of treated

effluent after multiple effect evaporation of 225 KLPD will be reused in process maintain total consumption of water of 439 KLPD. Domestic effluent (15 KL/Day) will be treated in septic tank or soak pit

Unit has proposed following sources of air emission.

(A) Details of Flue Gas Stack; Stack Attached To Steam Boiler

SOURCES OF GASESOUS EMISSIONS	STACK		
Fuel Used	Coal - 25 MT/day		
Capacity	7 MT/Hr		
Type of Emissions	SO ₂	NOx	SPM
Stack Height	35 meter		
Stack Diameter at the Top	1.0 meter		
Air Pollution Control Measures	Multicyclone Separator, Bag Filter & Scrubber		

(B) Details of Flue Gas Stack; Stack Attached To Thermic Fluid Heater Boiler

SOURCES OF GASESOUS EMISSIONS	STACK		
Fuel Used	Coal - 5 MT/day		
Capacity	4 Lac.Kcal/Hr		
Type of Emissions	SO ₂	NOx	SPM
Stack Height	30 meter		
Stack Diameter at the Top	0.5 meter		
Air Pollution Control Measures	Bag Filter + Multi Cyclone Separator		

(C) Details of Flue Gas Stack; Stack Attached To Hot Air Generator

SOURCES OF GASESOUS EMISSIONS	STACK		
Fuel Used	Coal - 10 MT/day		
Capacity	30 Lac.Kcal/Hr		
Type of Emissions	SO ₂	NOx	SPM
Stack Height	30 meter		
Stack Diameter at the Top	0.5 meter		
Air Pollution Control Measures	Bag Filter		

(D) Details of Flue Gas Stack; Stack Attached to D.G. Set

Sources of Gaseous Emissions	D.G. Set (200 KVA)		
Fuel Used	HSD		
Stack Height	11 meter		
Stack Diameter at The Top	0.2 meter		
Type of Emissions	SO ₂	NOx	SPM

(E) Stack Attached to Process Vent

Sr. No.	Stack attached to	Stack Height	Air Pollution Control System	Parameter	Permissible Limit
---------	-------------------	--------------	------------------------------	-----------	-------------------

Proposed					
1	Process Vent - 1	15 m	Two Stage Scrubber	SO ₂	40 mg/Nm ³
2	Process Vent - 2	15 m	Ventury Scrubber	NO _x	25 mg/Nm ³
3	Process Vent - 3	15 m	Two Stage Scrubber	NH ₃	175 mg/Nm ³

Details of hazardous solid waste management and disposal

Sr. No.	Type of Hazardous Waste	Quantity	Hazardous Waste Category	Storage, Collection & Disposal
1.	ETP Sludge	125 MT/Month	34.3	Collection, Storage, Disposal to nearest TSDF
2.	Gypsum Sludge	3735 MT/Month	--	Collection, Storage, Disposal to nearest TSDF or sell to cement industries
3.	Iron Sludge	250 MT/Month	--	Collection, Storage, Disposal to nearest TSDF or sell to cement industries
5.	Salt from Spray Dryer	470 MT/Month	--	Collection, Storage & Disposal to nearest TSDF
6.	Conc. H ₂ SO ₄ 70%	775 MT/Month	D2	Reuse in Process (H-Acid)
7.	Fly Ash	200 MT/Month	--	Collection, Storage, Transportation & Sell to Brick Manufacturers
8.	Empty Drums (MS/PP)	200 Nos./Month	33.3	Collection, Storage, Transportation & Sell to GPCB Authorised Vender
9.	Empty Bags (HDPE/LDPE/Paper)	700 Nos./Month	33.3	Collection, Storage, Transportation & Sell to GPCB Authorised Vender
10.	Liquid Sodium Bisulphide (25%)	100 MT/Month	--	Collection, Storage, Transportation & Sell to end user
11.	Liquor Ammonia	20 MT/Month	D2	Reuse in plant (K-Acid & Gamma Acid)

Observations / Discussion:

Technical presentation by the PP included general information, details of products and raw materials, Waste generation, hazards & control, analysis of pollution parameters before and after treatment, resource consumption and conservation, Risk estimation etc. Issues related to spent acid management, segregation of effluent stream, safety and occupational health and infrastructure by GIDC etc. were discussed. While discussing about the segregation of waste streams and zero liquid discharge (ZLD), PP informed that they will segregate each waste streams at source and will adopt state of the art technology to achieve ZLD. PP also requested to permit them to discharge

the low COD stream to CETP of Saykha whenever it comes in existence to which committee asked PP to go for complete zero liquid discharge in absence of CETP. Committee also emphasized on complete management of by-products and hazardous waste to be generated from the proposed activities.

After deliberation on various aspects, following additional TOR was prescribed for the EIA study covering 10 km radius of the project boundary.

1. Copy of plot holding certificate obtained from GIDC, Saykha.
2. Present land use pattern of the study area shall be given based on satellite imagery.
3. Layout plan of the factory premises. Provision of separate entry & exit and adequate margin all round the periphery for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back. Mark the same in the plant layout.
4. Technical details of the plant/s along with details on best available technologies (BAT), proposed technology and reasons for selecting the same.
5. Details of manufacturing process / operations of each product along with chemical reactions, mass balance, consumption of raw materials etc. Details on strategy for the implementation of cleaner production activities.
6. Chemical name of each proposed product to be manufactured. Details on end use of each product.
7. Detailed mass balance and water balance (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream from the processes.
8. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project. Permission obtained from the GIDC for supply of raw water. Undertaking stating that no bore well shall be dug within the premises.
9. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
10. Qualitative and quantitative analysis of waste water to be generated from the manufacturing process of each product to be manufactured along with mass balance.
11. Segregation of waste streams and details on specific treatment and disposal of each stream.
12. Action plan for 'Zero' discharge of effluent shall be included.
13. Details of ETP including dimensions of each unit along with schematic flow diagram. Inlet, transitional and treated effluent qualities with specific efficiency of each treatment unit in reduction in respect of all concerned/regulated environmental parameters. Inlet effluent quality should be based on worst case scenario considering production of most polluting products that can be manufactured in the plant concurrently.
14. Technical details of MEE including evaporation capacity, steam required for evaporation, adequacy of the proposed boiler to supply steam for evaporation in addition to the steam required for the process etc. Techno-economical viability of the evaporation system. Control measures proposed for the evaporation system in order to avoid/reduce gaseous emission/VOC from evaporation of industrial effluent containing solvents & other chemicals.

15. Technical details of proposed Incinerator, Spray dryer including capacity, fuel to be used, adequacy etc. Techno-economical viability of the proposed Incinerator. Control measures proposed for the Incinerator in order to avoid/reduce gaseous emission/VOC from incineration of industrial effluent containing solvents & other chemicals.
16. Technical details of Reverse Osmosis (RO)/Neno Filtration (NF) system.
17. Undertaking stating that a separate electric meter will be provided for the ETP, RO, Incinerator/Spray Dryer & MEE.
18. Economical viability and technical feasibility of the effluent treatment system to achieve Zero Liquid Discharge (ZLD).
19. Proposal to provide and maintain separate electric meter, operational logbook for effluent treatment systems, online meters for monitoring of flow, pH, TOC/COD, etc.
20. Application wise break-up of effluent quantity to be recycled / reused in various applications like sprinkling for dust control and green belt development etc. In case of land application, details on availability of sufficient open land for utilizing effluent for plantation / gardening. How it will be ensured that treated effluent won't flow outside the premises linked with storm water during high rainy days.
21. Plans for management, collection and disposal of waste streams to be generated from spillage, leakages, vessel washing, used container washing etc. Measures proposed for preventing effluent discharge during unforeseen circumstances.
22. One season Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
23. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 10 km for all the concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.
24. One complete season baseline ambient air quality data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
25. Modeling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modeling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modeling should be superimposed on satellite Image / geographical area map.
26. Baseline status of the noise environment, impact of noise on present environment due to the project and proposed measures for noise reduction including engineering controls.

27. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission, measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
28. Details of soil analysis within the study area including project site, details of ground water table including water quality showing all parameters included in IS:10,500.
29. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Methodology of de-contamination and disposal of discarded containers and its record keeping.
30. Membership of Common Environmental Infrastructure including the TSDF / Common Incineration Facility, if any.
31. Complete management plan for By-products/Spent acids to be generated, along with the name and address of end consumers to whom the by-product/s will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-products/Spent acids from the proposed project.
32. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent. Details of Leak detection and repairing programme (LDAR) for VOCs.
33. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
34. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.
35. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical checkup of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
36. Details on volatile organic compounds (VOCs) from the plant operations and occupational safety and health protection measures.
37. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the facilities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.

38. MSDS of all the products and raw materials.
39. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impacts. This shall include the details of Antidotes also.
40. Details of quantity of each hazardous chemical (including solvents) to be stored, Material of Construction of major hazardous chemical storage tanks, dyke details, threshold storage quantity as per schedules of the Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals, size of the biggest storage tank to be provided for each raw material & product etc. How the manual handling of the hazardous chemicals will be minimized?
41. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
42. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
43. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.
44. Detailed socio-economic development measures including community welfare program most useful in the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.
45. A tabular chart for the issues raised and addressed during public hearing/consultation and commitment of the project proponent on the same should be provided. An action plan to address the issues raised during public hearing and the necessary allocation of funds for the same should be provided.
46. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. (b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
47. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
48. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA Report.
49. Phase wise project implementation schedule with bar chart and time frame, in terms of site development, infrastructure provision, EMS implementation etc.
50. Certificate of accreditation issued by the NABET, QCI to the environmental consultant

should be incorporated in the EIA Report.

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

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for synthetic organic chemical industry shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006.

The draft EIA report shall be submitted to the Gujarat Pollution Control Board for conducting the public consultation process as per the provisions of the EIA Notification, 2006.

The project shall be appraised after receipt of the final EIA report.

13.	SIA/GJ/IND2/10361/2016	M/s. Hindustan Petroleum Corporation Limited, Vadodara Terminal at village: Asoj and Pilol, Ta:Savli, Dist:Vadodara	Screening/Scoping
-----	------------------------	---	-------------------

Project / Activity No.: 6(b)

- M/s: Hindustan Petroleum Corporation Limited herein after Project Proponent – PP) has submitted application for new project on dated 08/03/2016.
- Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: New

Project / Activity Details:

HPCL intends to establish facility for receipt, storage and distribution terminal of POL products at Village Pilol & Asoj, in Vadodara district of Gujarat state. The objective of the project is for installation of Green field marketing storage terminal at Vadodara having capacity of 2.10 Lakh KL to cater the demand of POL products in western and central parts of India i.e. Indore, Surat and Sagar etc. through rail/road transport for further marketing purposes.

Sr NO	Name of Products	Capacity(KL)	No of Tanks	Tank Size (meter)	
				Dia	Height
1	HSD	1,09,500	5	44	13.50
2	MS	75,400	5	40	13.50
3	SKO	13,500	3	22	13.50
4	Ethanol	1000	1	12	9.0
5	Bio-fuel	1000	1	12	9.0
6	Slop & Interface	9600	4	16	13.50

Total	2,10,000	19		
-------	----------	----	--	--

Total plot area is approx 6,07,028 sq. meter and green belt area is 1,51,757 sq. meter. Total cost of the project is 450 Cr. Water will be received from Borewell. Water consumption for domestic and gardening purpose will be 5.0 KLPD and for washing it will be 0.1 KLPD. Waste water generation will be 2.10 KLPD (2 KLPD from domestic usage and 0.1 KLPD from washing). Domestic waste water will be disposed off to septic tank followed by soak pit. Washing waste water will be treated in primary ETP where oil water separator of adequate capacity will be provided for separation of oil and after treatment treated water will be reused for gardening purpose. Total 5 sets of DG set will be provided:

S. No.	No. of DG Sets	Capacity of DG Sets (KVA)
1.	2	1000
2.	1	400
3.	2	160

HSD will be used as fuel for DG set. No process gas emission will be generated from the terminal. Hydrocarbon detector will be provided at adequate location for detection of hydrocarbon release beyond threshold. Oil and sludge will be generated as hazardous waste from bottom of storage tanks during cleaning of Oil Water Separator and will be disposed off through approved vendors or through bio remediation. Cleaning will be carried out once in five years. The POL products will be distributed from proposed Vadodara terminal in western and central part of India through rail/road transport. Construction of this Terminal will significantly reduce the transportation distance of POL products to the demand centers thereby reducing vehicle movement and air pollution. PP has proposed for construction of Green field POL marketing terminal at Pilol, Vadodara having capacity 2.10 Lakh KL. The POL products will be received through Palanpur-Vadodara Spur line of existing Mundra-Delhi Pipeline, stored and distributed from the proposed marketing terminal.

Environmental Sensitivity for the said proposal is as under:

S. No.	Areas	Name/Identity	Aerial distance (within 15 km.) from Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	NA
2	Areas which are important or sensitive for ecological reasons- Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests.	Yes	Mahi river is Approx. 13 km in W from the proposed terminal.
3	Areas used by protected, important or sensitive species of flora or fauna for	No	Jambughoda Wildlife Sanctuary, Approx. 43

	breeding, nesting, foraging, resting, over wintering, migration		km in S-E away from Proposed Vadodara Terminal.
4	Inland, coastal, marine or underground waters	No	NA
5	State, National boundaries	No	NA
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	NA
7	Defense installations	No	None
8	Densely populated or built-up area	Vadodara City	Approx. 8 km, S
9	Areas occupied by sensitive man-made land uses (<i>hospitals, schools, places of worship, community facilities</i>)	Satyam Hospital	Approx. 8 km, SW
		Asoj Gujarati high school	Approx. 1 km, S
		Mukatram Maharaj Temple	Approx. 1 km, NW
10	Areas containing important, high quality or scarce resources (<i>ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals</i>)	No	The proposed terminal surrounded by agricultural land.
11	Areas already subjected to pollution or environmental damage (<i>those where existing legal environmental standards are exceeded</i>)	No	NA
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (<i>earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions</i>)	Earthquake Zone	terminal (Vadodara) falls under seismic zone-III.

Rail and road loading facilities will be provided for distribution of POL products. Terminal operation process includes receipt of POL products through proposed Palanpur-Vadodara Spur Pipeline section of existing Mudra-Delhi Pipeline, its storage in storage tanks and POL products will be distributed thru rail/road movement in western and central parts of India. Studies will be undertaken by PP to ensure optimized operational safety including studies for (1)Risk Assessment(2)HAZOP(3)Emergency Response and Disaster Management PlanGrid electricity power will be adequate to meet the electric requirements for operation of terminal and associated facilities. DG sets of capacity 1000 KVA, 400 KVA and 160 KVA will be provided as back-up for general power failure.

Observations & Discussions:

Technical presentation during meeting included the details regarding need of the project, location of the proposed Vadodara terminal, objective of the project, salient features, environmental sensitivity map, capacity of terminal and details of operation/ process, safety details, water conservation, environment aspects and mitigation measures etc. During meeting committee asked PP to submit

details of land acquisition for the terminal and ROU for laying the pipeline and also asked to install drip irrigation facility for green belt development. PP submitted the copy of application submitted to the Joint Secretary-land/L.Aq, Revenue department, Gandhinagar for permanent land acquisition and also submitted copy of notification by revenue department for social impact assessment. It was further mentioned that the land for Greenfield marketing terminal is under advance stage of acquisition by the Govt. of Gujarat.

Looking to the low pollution potential of the unit, committee unanimously decided to categorize the project under B2 category and following additional information was sought from the project proponent for appraisal of the project.

1. Land possession documents for the green field terminal.
2. Land use pattern for the study area.
3. Details of breather valves to be provided for the storage tanks.
4. Permission from PESO-Nagpur for design of layout, pipelines, instrumentation etc.
5. Submit details of Mutual Aid Plan with other neighbouring units in the area keeping in view the hazardous nature of operations.
6. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impact.
7. Details of quantity of each hazardous chemical to be stored, material of construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals.
8. Details of hazardous processes and their engineering controls.
9. Details of possibility of occupational health hazard from the proposed activities and proposed measures to prevent it.
10. Detailed mass balance and water balance (including reuse-recycle, if any) along with stream wise waste water generation quantity & quality as well as their disposal/reuse & treatment plan.
11. Specific details of (i) Process emission from each unit process as well as emission from the storage tanks with its quantification, (ii) Air pollution Control Measures proposed with technical specifications (iii) Adequacy of the air pollution control measures to achieve the GPCB Norms (iv) Details of the utilities required (v) Flue gas emission rate emission from the utilities along with stack height calculation (v) Air Pollution Control Measures proposed for the utilities along with its adequacy (vi) Sources of fugitive emission from the unit along with its quantification and proposed measures to control it.
12. Measures proposed to be taken for the work area ambient air quality monitoring as per Gujarat Factories Rules.
13. Details of relocation of trees planned from the plot if any and detailed greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map]; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby area and elsewhere.
14. A detailed EMP including the protection and mitigation measures for impacts on human health

and environment as well as detailed environmental monitoring plan with respect to various parameters, environmental management cell proposed for implementation & monitoring of EMP as well as person responsible for the same. This shall include the details of antidotes also.

15. Detailed risk assessment report including the identification of the most hazardous activity, its sub activity, prediction of the worst-case scenario and maximum credible accident scenario, catastrophic failure along with damage distances and preparedness plan to combat such situation and risk mitigation measures. Vulnerable zone demarcation. Detailed fire control plan for flammable substances and processes. Environment Management Plan and On-Site / Off-Site emergency plan including mock drills for the proposed plant.
16. Details of management of the solid waste and hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling and its disposal. How the manual handling of the hazardous wastes shall be minimized.
17. To explore the use of renewable energy to the maximum extent possible.
18. Detailed cleaner production measures to reduce w/w qty, reuse / recycle option if possible in the proposed project & commitment of the management on futuristic development / implementation for the same.
19. Specific safety details / precautionary measures proposed for VOC's in the plant / storage area / warehouse/ including ventilation aligned in the natural wind direction.
20. Hazop study.
21. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers.
22. Details of disaster management plan / emergency management systems during operational phase of the project should also include scenario of natural catastrophe like earth quake, floods in addition to other disasters. The plan should include the details of (i) Emergency evacuation (ii) Emergency lighting system (iii) details of power back up system in the case of emergency (iv) fire fighting arrangements (v) first aid arrangement (vi) Training and Mock drill (vii)Emergency announcement or public address system (viii)Signage's including fluorescent pathways/ exit marker signs (ix)Location of emergency pathways and glow light signs. (x) Emergency response procedures.
23. Details of first aid, fire fighting system and other emergency services to be provided during operation phase including the training to be provided to the staff of the project as first aid facility providers, fire fighters etc. Tie up with emergency services like local fire station, emergency van etc. to be made during the operational phase.
24. Details of automatic fire detection and fire fighting system at project site including provision for flame detectors, temperature actuated heat detectors, location of fire water tanks & capacity based on fire study, separate power system for fire fighting, automatic sprinkler system, fire detection system with alarms & automatic fire extinguishers, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant line passing through the plant premises. Fire control plan for flammable substances and processes based on the flammable area classification.
25. Undertaking stating that sufficient peripheral open passage shall be kept for accessibility of fire tender/ emergency vehicles around the premises.
26. Submit a detailed plan for Corporate social responsibilities, with appropriate budgetary

provisions.

27. Details of water conservation plan, green belt development by use of drip irrigation, rain water harvesting etc.

The project shall be appraised on satisfactory submission of the above mentioned details

14.	SIA/GJ/IND2/10451/2016	M/s. Aarti Industries Ltd. (Unit-I) Plot no. 758/1, 2 & 3, GIDC Estate, Jhagadia, District: Bharuch, Gujarat.393110	Screening & Scoping
-----	------------------------	---	---------------------

Project / Activity No.: 1(d)

- M/s: Aarti Industries Ltd. (Unit-I) (herein after Project Proponent – PP) has submitted application vide their letter dated 02/03/2016.
- Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: Expansion

Project / Activity Details:.

The proposed project is for installation of 6 MW captive power plant. Plot area is 51,071 m². Green belt area of 11,815 m². Estimated cost of proposed expansion is INR: 40 Crores. Details of existing and proposed products are as under:

Sr. No.	Name of existing product	Total Quantity(MT/M)
I	Group A: Mono Nitro Derivatives of Benzenes and Chloro Benzene	
1.	Para Nitro Chloro Benzene	6000 (Sr.no. 1 to 11) (Either one or more than one product) (Total production shall not exceed 6000 MT/Month)
2.	Ortho Nitro Chloro Benzene	
3.	Ortho /Para/Meta –Nitro Cumene	
4.	Nitro Benzene	
5.	2,5-Dichloro Nitro Benzene	
6.	3,4- Dichloro Nitro Benzene	
7.	Ortho Nitro Toluene	
8.	Para Nitro Toluene	
9.	Meta Nitro Toluene	
10.	Meta Nitro Chloro Benzene	
11.	2,4-Dichloro Nitro Benzene	
	Group B: Di Nitro Derivatives of Benzenes and MCB	
1.	Di Nitro Benzenes	3000
2.	Di Nitro Chloro Benzenes	
III	Group C:	
	Diethyl Sulphate	100
IV	Group D: Hydrogenated products: (Reduction)	

1.	Meta Chloro Aniline	5000 (Sr.no. 1 to 35) (In DCA product unit will manufacture 2,3/2,4/2,5/2,6/3,4/3,5 DCA & mixture of 2:3,2:4 / 2:4,2:5 / 2:5, 2:6/ DCA & 2:3,2:4, 2:5, 2:6 DCA. In Cumidine category unit will manufacture Ortho, Para & Meta cumidine).
2.	Para Chloro Aniline	
3.	3,4 Di Chloro Aniline	
4.	2,3 Di Chloro Aniline	
5.	2,5 Di Chloro Aniline	
6.	Meta Phenylene diamine	
7.	Para Phenylene diamine	
8.	Ortho Phenylene diamine	
9.	Ortho Anisidine	
10.	Para Anisidine	
11.	Chloro Fluoro Aniline	
12.	Para Cumidine	
13.	Para Amino Phenol	
14.	Meta Amino Phenol	
15.	Toludines	
16.	Ortho Chloro Aniline	
17.	2,4 Di Chloro Aniline	
18.	2,6 Di Chloro Aniline	
19.	3,5 Di Chloro Aniline	
20.	Mixer of 2,4 / 2,5 DCA	
21.	Mixer of 2,5 / 2,6 DCA	
22.	Mixer of 2,4 / 2,5 /2,6 DCA	
23.	Ortho Cumidine	
24.	Meta Cumidine	
25.	Meta anisidine	
26.	2,4,5 Trichloro Aniline	
27.	Aniline	
28.	Para Floro Aniline	
29.	Meta Floro Aniline	
30.	Ortho Floro Aniline	
31.	Di Floro Aniline (1:3)	
32.	Di Floro Benzene (1:3)	
33.	4-Floro-N-Isopropyl Aniline	
34.	4-Chloro-N-Isopropyl Aniline	
35.	Other reduction products	
	Total from Group A,B,C & D(Excluding By products)	14100
V	Group D: Only Physical Separation	
1.	Ortho / Para / Meta Chloro Toluene	450
2.	2:3 DCNB / 3:4 DCNB	550
	Total of group	1000

List of proposed products with their production capacity

Sr.no.	Name of product	Total quantity
VI	Group E: Power Generation	

1	Co-Generation Power plant	6 MW
---	---------------------------	------

Water will be received from GIDC, Jhagadia and its details of consumption is as under:

Sr. No.	Particulate	Water Consumption in KL/Day		
		As per CCA order no. AWH 59708	Proposed quantity	Total quantity
1	Domestic	25	0	25
2	Industrial			
	Process & washing	40 (fresh)	0	40 (fresh)
	DM Plant	301(fresh)	301(fresh)	602 (fresh)
	Boiler	263 (DM permeate)	263 (DM permeate)	526 (DM permeate)
	Softner	506(fresh)	0	506(fresh)
	Cooling	501 (softner permeate) + 158 (recycled)	69 (recycled)	501 (softner permeate) + 227 (recycled)
	Gardening	20(fresh)	0	20(fresh)
	Total	892 (fresh) + 158 recycled	301 +69 (recycled)	1193 (fresh) + 227 recycled

Details of waste water generation is as under:

Sr. No.	Particulate	Waste water generation in KL/Day		
		As per CCA order no. AWH 59708	Proposed quantity	Total quantity
1	Domestic	5	0	5
2	Industrial			
	Process & washing	91 (40 from process + 51 due to reaction)	0	91(40 from process+ 51 due to reaction)
	Total waste water to ETP	96 (to ETP followed by Process RO)	0	96 (to ETP followed by Process RO)
	DM Plant	38	38	76
	Boiler	11	19	30
	Softner	5	0	5
	Cooling	18	14	32
	Total waste water from utility	72 (to utility R.O.)	71(To Utility RO)	143 (to utility R.O.)
	Condense water from MEE	42(to cooling tower)	15	57(to cooling tower)
	Residue from MEE	1.5 (landfill site or incinerator)	1.5	3(landfill site or incinerator)

About 227 KLD of water is recovered and reused using RO and MEE. Existing solid fuel consumption is 180 MT/Day, Liquid Fuel(F.O) consumption is 850 L/Hr and diesel is 880 litre/Hr.

For proposed expansion, proposed fuel will be solid fuel and consumption will be 17 MT/Hr.

Details of flue gas emission is as under:

Stack No.	Source of emission	Type of emission	Permissible limit	Stack height (m)	Stack diameter (mm)	Pollution control equipment	Fuel used (fuel name & quantity /hour)
Existing as per CCA order no.AWH 59708							
1	Boiler- 1(Oil fired stand by boiler) Capacity = 10 TPH	PM SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm	30	750	-	F.O 850 L/Hr
2	Boiler-2 (IBR water tube boiler) Capacity= 17 TPH	PM SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm	40	1350	Bag filter	Coal 3MT/hr
3	Boiler-3 (IBR water tube boiler) Capacity= 30 TPH	PM SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm	40	1800	ESP	Coal 5 MT/Hr
4	D.G. Set (4 Nos) Capacity= 1010 KVA (Each)	PM SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm	11	250	-	Diesel 220 L/Hr (Each)
5	Thermopack Capacity= 20 LAKH Kcal/hr	PM SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm	30	750	Bag filter	Coal 1MT/Hr
Proposed							
6	Boiler-4 (IBR water tube boiler) Capacity= 60 TPH	PM SO ₂ NO _x	150mg/Nm ³ 100 ppm 50 ppm	40	1800	ESP	Coal 17MT/hr

There will be no process emission due to the proposed expansion of unit.

Details of hazardous waste generation is as under:

Sr. No.	Hazardous waste	Category	Quantity As per Consent-AWH 50363	Proposed Additional Quantity	Total Qty after expansion	Disposal

1.	ETP waste (Gypsum)	34.3	100 MT/Month	0	100 MT/Month	Collection, Storage, Transportation, Disposal at TSDF at BEIL.
2	Spent Oil	5.1	0.184 MT/Month	0.007	0.191 MT/Month	Collection, storage, Transportation, Disposal by selling to registered recyclers.
3	Organic Residue	36.4	40 MT/Month	0	40 MT/Month	Collection, storage, Transportation, Disposal by incineration at CHWIF-BEIL & SEPPL.
4	Spent carbon	35.3	3.4 MT/ Month	0	3.4 MT/ Month	Collection, storage, Transportation, Disposal by incineration at CHWIF-BEIL & SEPPL.
5	Incinerated ash & Evaporated salt	36.2	1.04 MT/Month	0	1.04 MT/Month	Collection, Storage, Transportation, Disposal at TSDF at BEIL
6	Spent Sulphuric Acid (68% -72%)	D-2	7200 MT/Month	0	7200 MT/Month	Collection, Storage, Transportation, Disposal by selling to registered users
7	Discarded Plastic bags, Carboys, drums	33.3	1225 No/ Month	0	1225 No/Month	Collection, Storage, decontamination
8	Spent Catalyst (Dry Basis)	35.3	620 Kg/Month	0	620 Kg/Month	Collection, Storage, Transportation, Disposal by selling to registered supplier for regeneration.
9	Residue from MEE	34.3	0	30 MT/month	30 MT/month	Collection, Storage, Transportation, Disposal at TSDF at BEIL
10	Fly ash	-	0	840 MT/month	840 MT/month	Collection, Storage, Transportation,

Observations/Discussions:

Technical presentation by the project proponent included details of the existing and proposed products, water consumption and waste water generation, water balance details and waste water reuse plant comprising of zero liquid discharge, details of ETP, sources of flue gas emission, process emission, power consumption, hazardous waste management etc.

After detailed discussion regarding the project, the following additional Terms of Reference were prescribed for EIA study to be done covering 10 Km radius from the project boundary.

1. Need for the proposed expansion shall be justified in detail.
2. Present land use pattern within 10 km radius based on satellite imagery.
3. Provision of continuous unobstructed peripheral open path within the project area for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back. Mark the same in the plant layout.
4. Technical details of the proposed power plant along with details of strategy for implementation of cleaner production activities. Generation of waste gases and utilization of waste heat have to be set out.
5. Copy of letter of permission / commitment obtained from GIDC for supply of water to meet with the requirement for the proposed expansion. Methods adopted / to be adopted for the water conservation.
6. Detailed water balance (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream to be generated from all sources including Clarifier Blowdown, RO reject, U/F reject, MB regeneration, Boiler blow down, cooling tower blowdown etc.
7. Characteristics of untreated and treated wastewater. A detailed effluent treatability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated along with adequacy and efficacy report.
8. Details of the ETP units including its capacity, size of each unit, retention time and other technical parameters.
9. Work out the complete treated wastewater reuse plan with characteristics of each stream, application wise break-up of treated effluent quantity to be recycled / reused in various applications like sprinkling on roads, coal storage yard and green belt development etc. Details about availability of open land for utilizing increased quantum of effluent due to the proposed power plant for plantation / gardening.
10. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
11. One complete season AAQ data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall include PM₁₀, PM_{2.5}, SO₂, and NO_x. The location of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors including reserved

forests. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.

12. Impact of the project on the AAQ of the area. Details of the model used and the input parameters used for modeling should be provided. The air quality contours may be plotted on a location map showing the location of project site, habitation, sensitive receptors, if any. The wind roses should also be shown on this map. Air quality modeling to be carried out considering the partial and complete failure of the ESP.
13. Quantity of the fuel requirement, its source and transportation, storage, handling and management along with the environmental management to be adopted for this. Fuel analysis to be provided (sulphur, ash content and heavy metals including Pb, Cr, As and Hg).
14. A confirmed fuel linkage along with the supportive documents of long term supply of coal for the project requirements should be provided.
15. Specific details of (i) Details of the utilities required (ii) Quantity and characteristics of each fuel along with analysis report and its source (iii) Flue gas emission rate from each utility (iv) Air Pollution Control Measures proposed to each of the utility along with its adequacy.
16. Technical details of ESP proposed to be installed as air pollution control system along with its adequacy, details of its operational controls with DCS system for online monitoring of the pollutants from the stack etc. Details of provisions to be kept in ESP to ensure that in any case the air emission does not cross the standards mentioned in the Notification by MoEF&CC vide no. S.O. 3305 (E) dated 07/12/2015 including provision of standby field in the ESP, preventive maintenance, failure / tripping control system, guarantee from the ESP supplier, alternative arrangements in case of the failure / tripping of the ESP etc.
17. List of all the sources of fugitive emission. Detailed plan for prevention and control of fugitive emission / dusting at each and every stage of fuel handling including unloading / loading at port, transportation from port to plant, unloading / loading / stacking / conveyance / transfer at plant etc. Detailed specifications and schematic diagram of water sprinkling system including number of sprinklers to be installed, pipe diameter and nozzle diameter of the sprinklers, quantity of water to be consumed by sprinklers etc.
18. Explore the possibility of installing opacity meter with an arrangement to reflect the online monitored data on the company's server, which can be accessed by the GPCB on real time basis.
19. Impact on local transport infrastructure due to the project such as transportation of fuel, ash etc. Base line status of the existing traffic, projected increase in truck traffic as a result of the project in the present road network, impact on it due to the project activities, carrying capacity of the existing roads and whether it is capable of handling the increased load. Arrangement for improving the infrastructure like road etc. if any should be covered. Whether any additional infrastructure would need to be constructed and the agency responsible for the same with time frame.
20. Existing status of soil quality, flora, fauna etc. in the study area and impacts of the proposed activities on the same along with mitigation measures.
21. Details on hazardous / solid waste generation, handing, storage, utilization and disposal, for

each type of waste.

22. Detailed plan of ash evacuation, handling, storage and utilization should be provided. Undertaking stating that ash pond shall not be constructed and it shall be stored in closed silos only should be incorporated.
23. Copy of membership certificate of Common Environmental Infrastructure like TSDF, if any taken, should be incorporated. Copies of MOU / agreements done with actual consumers regarding utilization of fly ash, bottom ash etc. should also be incorporated.
24. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimisation, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
25. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided to the workers. Detailed work area monitoring plan. Plan for periodic medical examinations of the workers exposed.
26. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenario related to fire issues due to storage and use of fuel should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point in time. The risk contours should be plotted on the plant layout map clearly showing which of the activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site emergency plan should be provided. Measures to guard against fire hazards including details of automatic fire detection and control system & detailed fire control plan showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc. should also be provided.
27. Details of fire fighting system including provision for flame detectors, temperature actuated heat detectors with alarms, automatic sprinkler system, location of fire water tanks & capacity, separate power system for fire fighting, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant network.
28. Detailed greenbelt development plan as per CPCB guidelines giving details of number of trees, types of species to be planted, area of the green belt marked on the lay out plan, and the year wise schedule of green belt development and budgetary outlay should be incorporated.
29. Proposal for socio-economic development activities including community welfare program most useful in the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.
30. Details of scheme for surface as well as roof top rain water harvesting and ground water recharge with proper scientific calculations considering rainfall in the region, catchment area, land / soil characteristics, ground water recharge rate, duration of rain water harvesting etc. Details of provisions of pre-treatment of the rainwater in the case of surface run off is to be

harvested. Location of recharge percolation wells on the layout plan.

31. Plan for compliance of the EP Rules and CREP guidelines for the proposed power plant.

These additional TORs should be considered for the preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006.

The project shall be appraised on receipt of the EIA report.

15.	SIA/GJ/IND2/9867/2016	M/s. Mahendra Chemicals, B1/217-218/2, GIDC, Estate, Naroda, Ahmedabad 382330	Screening/Scoping
-----	-----------------------	---	-------------------

Project / Activity No.: 5(f)

- M/s: Mahendra Chemicals herein after Project Proponent – PP) has submitted application for new project on dated 18/02/2016.
- Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: Expansion

Project / Activity Details:

The proposed production activity falls in the project/activity 5(f) as per the schedule of the EIA Notification-2006. Total plot area is 1258 m². Green belt area is 250 m². Total cost of project is Rs. 1.0 Crore (Existing) + Rs. 50 Lac (Proposed). Proposed product is as under:

Name of Product	Existing Capacity	Proposed Change	Proposed total capacity
Lidocaine base USP	2.0 MT/Month	-2.0 MT/Month (product merged)	Nil
Lidocaine base / Lidocaine HCl	Nil	15.0 MT/Month	15.0 MT/Month

Water source is GIDC and details of water consumption is as under:

Sr. No	Source	Water Consumption, L/day			Waste Water Generation, L/day		
		Existing	Addition	Proposed Total	Existing	Addition	Proposed Total
1.	Domestic	1500	0	1500	1200	0	1200
2.	Gardening	700	0	700	0	0	0
3.	Process	3000	4500	7500	3000	4500	7500
4.	Boiler	1000	1200	2200	100	150	250
5.	Cooling	2100	2100	4200	200	250	450
	Total	8300	7800	16100	4500	4900	9400

Treated waste water will be disposed off to CETP/MEE.

Details of flue gas emission is as under:

Flue Gas Emission (Existing)				
Sr. No.	Type of Emission	Fuel	APCM	Details of Stack
1.	Thermic Fluid Heater (1 Lac Kcal/hr) & Boiler(200 kg/h)	Natural Gas	NA	12 m
Flue Gas Emission (Proposed)				
1.	Steam Boiler (600 kg /hour)	Natural Gas	NA	12 m
2.	D. G. Set- 125 KVA	HSD (15 Lit/ Hr)	Adequate stack height	9 m

Natural gas consumption will be 1000 SCM/Day. There is no process gas emission.

Details of hazardous waste is as under:

Sr. No	Detail of Hazardous Waste	Category	Quantity		Management of Waste
			Existing	Proposed total	
1.	ETP Sludge	34.3	20 Kg/Month	150 Kg/Month	Collection, Storage, transportation disposal at TSDf approval by board
2.	Used oil/spent oil	5.1	2 Kg/Month	5.0 Kg/Month	Collection, Storage, transportation disposal by selling to registered reprocess or used as lubricant in plant
3.	Discarded container (Beg and drum)	33.3	15 No./Month	1 MT./Month	Collection, Storage, decontamination, transportation disposal by selling to authorised recycler
4.	Distillation residue	--	100 Kg/Month	250 Kg/Month	Collection, Storage, transportation disposal at NECL approved by board

As part of safety measures, it is proposed to provide fire extinguishers in plant, flame proof motors and flame proof lights in manufacturing plant and ware house. Workers are provided gum boot, hand gloves as personal protective equipment. For noise controls (1)Loading/unloading shall be done from minimum height (2)Proper lubrication and other maintenance shall be undertaken periodically in all the moving parts of machinery (3)Green belt will be developed along the periphery (4)Ear-muffs, Ear Plug will be provided to the workers in the high noise area (5) Noise is controlled by installing machine on vibration damping base and separate isolation of noisy machine.

Observations & Discussions:

Technical presentation was made during the meeting by project proponent and committee noted that unit is using PNG of 1000 SCM/day for TFH and boiler and water consumption is less than 25 KLPD. Looking to the small scale, location and low pollution potential of the project, after detailed deliberation, the project was categorized as B2 and following additional information was sought from the project proponent for appraisal of the project.

1. Copy of plot holding certificate obtained from GIDC, Naroda.
2. Need for the proposed expansion should be justified in detail.
3. Layout plan of the factory premises showing the proposed expansion activities on the same. Provision of separate entry & exit and adequate margin all round the periphery for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back. Mark the same in the plant layout.
4. Demarcation of proposed expansion activities in lay out of the existing premises. Exact details about additional infrastructural facilities, plant machineries etc. required for the proposed expansion.
5. Monthly consumption of each raw material (Product wise).
6. Detailed manufacturing process of each product along with chemical reactions, mass balance and schematic diagram.
7. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the proposed expansion. Copy of permission letter obtained from the GIDC for supply of raw water as per the requirement of the proposed expansion.
8. Water balance (including reuse-recycle, evaporation if any)
9. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes generation and to conserve fresh water.
10. Undertaking to install separate reaction vessels for each of the product and not to carry out any washing activity.
11. Stream wise qualitative and quantitative assessment of the wastewater. A detailed treatability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated including performance of CETP, Naroda.
12. Plan for management and disposal of waste streams to be generated from spillage, leakages etc. Measures proposed for preventing effluent discharge during unforeseen circumstances.
13. Feasibility and adequacy of treatment of waste water in ETP including reuse/recycle proposal for RO permeate in process.
14. Details of possibility of chemical seepage & consequent soil contamination & mitigation measure proposed for the same.
15. Specific details of (i) Details of the utilities required, (v) Types of fuel to be used and quantity of the each fuel, (vi) Flue gas emission rate from each utility along with stack height, (vii) Air Pollution Control Measures proposed along with its adequacy, (viii) List the sources of fugitive emission from the unit along with its quantification and proposed measures to control it. (All these details should be in tabular format with comparative data of existing and proposed data).
16. Specific details of fugitive emission from the unit along with measures proposed to monitor

VOC within work area. Details of ventilation system proposed in the work area. Measures proposed to keep the work area environment as per the norms of GFR. Details of leak detection repairing programme (LDAR) for VOCs.

17. Details of measures proposed for noise pollution abatement & its monitoring.
18. Details of management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling and its disposal. How the manual handling of the hazardous wastes will be minimized? (All these details should be in tabular format with comparative data for existing and proposed activity).
19. Methodology of de-contamination and disposal of discarded containers and its record keeping.
20. Measures proposed to be taken for the work area ambient air quality monitoring as per Gujarat Factories Rules.
21. Copy of membership certificate from Common Environmental Infrastructure including the TSDF / Common Hazardous Waste Incineration facility for disposal of hazardous wastes to be generated from the proposed project.
22. A detailed EMP including the protection and mitigation measures for preventing impacts on human health and environment as well as detailed monitoring plan with respect to various parameters and responsible head for the environmental management cell and environmental management cell proposed for implementation and monitoring of EMP.
23. A detailed Green Belt Development Program including annual budget, types & number of trees to be planted, area under green belt development [with map]; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the GIDC area and elsewhere.
24. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impacts. This shall include the details of Antidotes also.
25. Details of quantity of each hazardous chemical to be stored, Material of Construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of the Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals. How the manual handling of the hazardous chemicals will be minimized?
26. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed.
27. Specific safety details / provisions for various hazardous chemicals including solvents to be used in the process along with onsite emergency plan.
28. Details of possibilities of occupational health hazards from the proposed manufacturing activities and proposed measures to prevent them.
29. Detailed risk assessment report including prediction of the worst-case scenario and maximum credible accident scenario along with damage distances and preparedness plan to combat such situation and risk mitigation measures. Vulnerable zone demarcation.
30. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
31. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE,

mfg utility staff for safety related measures.

32. Environment clearance for the existing unit issued by the concerned authority (reasons, if not obtained)

33. Status of the existing Consent to Operate and Authorization accorded by the SPCB. Compliance status of the existing unit with respect to various conditions of CC&A order obtained from the Gujarat Pollution Control Board (GPCB).

34. Records of any legal breach of Environmental laws i.e. details of show- cause notices, closure notices etc. served by the GPCB to the existing unit in last five years and actions taken then after for prevention of pollution.

The project shall be appraised on satisfactory submission of the above.

16	SIA/GJ/IND2/9900/2016	M/s. SHV Energy Private Limited, Plot No. 74, Village Jawar, Porbandar, District Porbandar, Gujarat	Screening/Scoping
----	-----------------------	---	-------------------

Project / Activity No.: 6(b)

- M/s: SHV Energy Private Limited herein after Project Proponent – PP) had submitted application for new project on dated 15/02/2016.
- Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: Expansion

Project / Activity Details:

This is an expansion of storage facility and details are as under:

Parameter	Existing	Proposed	Total
Storage LPG in MT	4000	4500	8500
Storage Propane in MT	4000	4500	8500
Ethyl Mercaptan in MT	-	2	2
Total Storage capacity in MT	8000	9002	17002

Storage details of the facility is as under:

S. No.	Chemicals	State	Hazard Involved	Means of Storage	Operating Condition (Storage)		Capacity of Each Tank	Safety Measures involved
					Press Kg/Cm ²	Temp °C		
1	Liquefied Petroleum Gas (LPG)	Liquid	Flammable	3 Nos. of Horton Spheres	5-8	Ambient (26-30)	1365	<ul style="list-style-type: none"> • Excess Flow check Valves of Sizes

								250,150,100,40 mm <ul style="list-style-type: none"> • Safety Relief Valve (1 working+ 1 standby) of size 150mmX200mm
2	Liquid Propane	Liquid	Flammable	3 Nos. of Horton Spheres	5-8	Ambient (26-30)	1280	<ul style="list-style-type: none"> • Excess Flow check Valves of Sizes 250, 150, 100, 40 mm • Safety Relief Valve (1 working+ 1 standby) of size 150mmX200mm

The proposed activity falls in the project/activity 6(b) as per the schedule of the EIA Notification-2006. Total plot area available is 1,21,406 m². Green belt area is 57,121 m². Estimated cost of proposed expansion is Rs. 250 Crore. Water source is through road tankers. Details of water consumption is as under:

S. No.	Description	Water Consumption in KLD		
		Existing	proposed	Total
1	Processing	10	0	10
2	Gardening	10	0	10
3	Domestic	10	10	20
Total		30	10	40

Details of waste water generation is as under:

S. No.	Description	Wastewater Generation in KLD		
		Existing	proposed	Total
1	Processing	0	0	0
2	Gardening	0	0	0
3	Domestic	3	1	4
Total		3	1	4

No industrial waste water will be generated. Domestic wastewater will be disposed off in to soak pit via septic tank.

Details of source of flue gas emission is as under:

S. No.	Stack Attached to	Capacity	Stack Nos.	Type of Fuel used	Fuel consumption
Existing					
1	Standby DG set	2 X 250 KVA	2	HSD	14 Ltr/ hrs at full load
2	Fire water Engine pumps	8 X 410 m ³	8	HSD	12 Ltr/ hrs at full load
Proposed					
No flue gas stack will be added after proposed expansion					

Fuel used will be HSD: 0.624 KL/day (26 lit/ hr.).

Details of hazardous waste generation will be as under:

S. No.	Hazardous Waste	Hazardous Waste Category	Quantity in MTPA			Management
			Existing	Proposed	Total	
1	Used Oil	5.1	0.450	0	0.450	Send to authorized recycler
2	Tank cleaning Sludge	3.3	0	2	2	Sent to authorized CHWIF for incineration
3	Discarded Containers	33.3	0	100	100	Sell to registered vendor

Observations & Discussions:

Technical presentation during the meeting included details of project including its need, demand-supply gap, location map showing area is located in notified port area, site plan, tentative CRZ map, water consumption, waste water generation, air emission details, DG set requirement, proposed quantity of the LPG and propane, power requirement, details of hazardous waste etc.

Looking to the low pollution potential of the unit, committee unanimously decided to categorize project under B2 category and following additional information was sought from the project proponent for appraisal of the project.

1. Land use pattern for the study area.
2. CRZ clearance from the competent authority.
3. Copy of Notified Port area mentioning proposed unit is located in the notified port area.
4. Details of breather valves to be provided on the storage tanks.
5. Permission from PESO-Nagpur for design of layout, pipelines, instrumentation etc.
6. Submit details of Mutual Aid Plan with other neighbouring units in the area keeping in view the hazardous nature of operations.

7. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impact.
8. Details of quantity of each hazardous chemical to be stored, material of construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals.
9. Details of hazardous processes and their engineering controls.
10. Details of possibility of occupational health hazard from the proposed activities and proposed measures to prevent it.
11. Detailed mass balance and water balance (including reuse-recycle with source details if any) along with stream wise waste water generation quantity & quality as well as their disposal & treatment plan.
12. Specific details of (i) Process emission from each unit process as well as emission from the storage tanks with its quantification, (ii) Air pollution Control Measures proposed with technical specifications (iii) Adequacy of the air pollution control measures to achieve the GPCB Norms (iv) Details of the utilities required (v) Flue gas emission rate emission from the utilities along with stack height calculation (vi) Air Pollution Control Measures proposed for the utilities along with its adequacy (vii) Sources of fugitive emission from the unit along with its quantification and proposed measures to control it.
13. Measures proposed to be taken for the work area ambient air quality monitoring as per Gujarat Factories Rules.
14. Details of relocation of trees planned from the plot if any and detailed greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map]; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby area and elsewhere.
15. A detailed EMP including the protection and mitigation measures for impacts on human health and environment as well as detailed environmental monitoring plan with respect to various parameters, environmental management cell proposed for implementation & monitoring of EMP as well as person responsible for the same. This shall include the details of antidotes also.
16. Detailed risk assessment report including the identification of the most hazardous activity, its sub activity, prediction of the worst-case scenario and maximum credible accident scenario, catastrophic failure along with damage distances and preparedness plan to combat such situation and risk mitigation measures. Vulnerable zone demarcation. Detailed fire control plan for flammable substances and processes. Environment Management Plan and On-Site / Off-Site emergency plan including mock drills for the proposed plant.
17. Details of management of the solid waste and hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling and its disposal. How the manual handling of the hazardous wastes shall be minimized.
18. Details of decontamination process of mercaptan container and its associated environment management plan.

19. To explore the use of renewable energy to the maximum extent possible.
20. Detailed cleaner production measures to reduce w/w qty, reuse / recycle option if possible in the proposed project & commitment of the management on futuristic development / implementation for the same. Also provide details for the use of lead free paints for storage tanks/LPG bottles in the proposed project.
21. Specific safety details / precautionary measures proposed for VOC's in the plant / storage area / warehouse/ including ventilation aligned in the natural wind direction.
22. HAZOP study.
23. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers.
24. Details of disaster management plan / emergency management systems during operational phase of the project should also include scenario of natural catastrophe like earth quake, floods in addition to other disasters. The plan should include the details of (i) Emergency evacuation (ii) Emergency lighting system (iii) details of power back up system in the case of emergency (iv) fire fighting arrangements (v) first aid arrangement (vi) Training and Mock drill (vii)Emergency announcement or public address system (viii)Signage's including fluorescent pathways/ exit marker signs (ix)Location of emergency pathways and glow light signs. (x) Emergency response procedures.
25. Details of first aid, fire fighting system and other emergency services to be provided during operation phase including the training to be provided to the staff of the project as first aid facility providers, fire fighters etc. Tie up with emergency services like local fire station, emergency van etc. to be made during the operational phase.
26. Details of automatic fire detection and fire fighting system at project site including provision for flame detectors, temperature actuated heat detectors, location of fire water tanks & capacity based on fire study, separate power system for fire fighting, automatic sprinkler system, fire detection system with alarms & automatic fire extinguishers, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant line passing through the plant premises. Fire control plan for flammable substances and processes based on the flammable area classification.
27. Undertaking stating that sufficient peripheral open passage shall be kept for accessibility of fire tender/ emergency vehicles around the premises.
28. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions.
29. The project shall be appraised on satisfactory submission of the above mentioned details.

The project shall be appraised on satisfactory submission of the above.

17.	SIA/GJ/IND2/10190/2016	Gujarat Alkalies and Chemicals Ltd. Plot No. 3 GIDC Dahej, Taluka: Vagra, District: Bharuch,	Screening & Scoping
-----	------------------------	---	------------------------

		Gujarat	
--	--	---------	--

Project / Activity No.: 4 (d) and 5(f)

- M/s: Gujarat Alkalies and Chemicals Ltd. (herein after Project Proponent – PP) has submitted application vide their letter dated 22/03/2016.
- Proposal was scheduled for screening and scoping during SEAC meeting on 23/03/2016.

Project status: Expansion

Project / Activity Details:

Project proponent proposes to expand the production as under.

S. No.	Products	Existing capacity (MTPM)	Additional Proposed (MTPM)	Total after expansion (MTPM)
A	Caustic Soda Plant (Expansion)			
1	Caustic Soda (100%) Lye/Prills/Flakes	23550	9000	32550
2	Chlorine Gas	20784	7942	28726
3	Hydrochloric acid	7260	2790	10050
4	Hydrogen Gas	600	240	840
5	Sodium Hypochlorite	1019	387	1406
6	Dilute Sulphuric acid (78-80%)	589	225	814
7	Gypsum	780	297	1077
B	Chlorotoluene (New)			
1	Benzyl chloride	0	1100	1100
2	Benzyldehyde	0	600	600
3	Benzyl Alcohol	0	800	800
4	Benzoyl chloride	0	80	80
5	Cinemic aldehyde	0	80	80
6	Benzyl acetate	0	200	200
	Intermediate product			
1	Benzal chloride	0	1050	1050
	By Product			
1	Sodium benzoate	0	48	48
2	Di benzyl ether	0	80	80
3	Hydrochloric acid	0	2090	2090
C	Hydrazine Hydrate (New)			
1	Hydrazine Hydrate (80 % w/w)	0	720	720
D	Mono Chloro Acetic Acid (MCA) (New)			
	Mono Chloro Acetic Acid	0	3000	3000

Details of Production capacity of Existing (No-Expansion) Products:

S. No.	Products	Existing capacity (MTPM)
E	Phosphoric Acid Plant	
1	Phosphoric Acid (100% P ₂ O ₅ basis)	1725
2	Phosphoric Acid (85% H ₃ PO ₄ basis)	2790
3	High Boiling Material	6
4	Calcium Chloride	17400
F	Hydrogen Peroxide	
	Hydrogen Peroxide (100%)	2493
G	Poly Aluminum Chloride Plant	
1	Poly Aluminum Chloride (18%)	3750
2	Poly Aluminum Chloride (30%)	1080
H	Anhydrous Aluminum Chloride Plant	
1	A.A.C (Granules/ Powder)	1890
2	Sodium hypochlorite (10-13% Cl ₂ basis)	755
3	Non- Ferrous Alum	6
I	Stable Bleaching Powder	1250
J	Sodium Chlorate Plant	1800

Details of Existing Captive Power Plant (CPP) is as under:

S. No.	Plant	Existing capacity (MW)
a	Power	70,560 MWH/M
b	Steam	120 TPH HP 24 TPH IP

Details of Raw material used are as under:

S. No.	Raw Material	Proposed Quantity (MTPA)
A. Caustic Soda		
1	Salt	164835
2	Sodium Carbonate	1249
3	Sulphuric acid	1748

4	Sodium Bisulphate	40
5	Alpha cellulose	40
6	Caustic soda (internal)	1399
7	Hydrochloric acid (internal)	2098
8	Flocculent	2
B. Chlorotoluene		
1	Toluene	48180
2	Chlorine	58400
3	Soda ash	638.75
4	Caustic soda lye	182.5
5	Stabilizer	109.5
6	Ferric chloride	91.25
C. Hydrazine Hydrate		
1	Hydrogen Peroxide (50%)	13600.0
2	Methyl Ethyl Ketone (MEK) (96%)	3680.0
3	Acetamide (95.5%)	800.0
4	Ammonia	7840.0
5	Ethylene Diamine Tetra Acetic Acid (EDTA)	0.1
6	Ammonium Acetate	0.2
D. Monochloro Acetic Acid		
1	Acetic acid	21600
2	Acetic anhydride	1440
3	Chlorine	31680
4	Hydrogen	288
5	Caustic lye as 100 %	1800

The project falls under Category B of project activity 4(d) and 5(f) as per the schedule of EIA Notification 2006. Plot area is approx. 9,93,860 m². (99.386 ha). Green belt area of 2,06,000 m² (20.6 ha) consisting of 33,326 Nos. of trees and 78841 sq. m. garden area has been developed at existing site. Estimated cost of proposed expansion is INR: 825 Crore. Fresh water requirement for domestic purpose is 40 KLPD and for industrial purpose is 5140 KLPD. Waste water generation from domestic use will be 20 KLPD and industrial waste water generation will be 1220 KLPD. Entire demand of fresh water will be met from GIDC water supply. Domestic waste water will be used for gardening. Industrial waste water will be treated in ETP and disposed into sub sea through existing

discharge outlet/ disposal line. Existing DG set of 1 MW is provided at within the existing premises.

Details of process and flue gas emission are as under:

S. No.	Stack Attached to	Stack Height (m)	Stack Diameter (m)	Pollutants	Mitigation measures
Process Stacks					
A. Caustic Soda Plant					
1	HCl Synthesis Unit	30	0.15	HCl, Cl ₂	Single Stage DM Water Scrubbing System
2	Waste air De-Chlorination Unit	30	0.4	Cl ₂	3 Stage Caustic Scrubbing System
B. Chlorotoluene Plant					
1	Scrubbing unit	30	0.4	HCl, Cl ₂	Caustic Soda Scrubber
C. Monochloro Acetic Acid Plant (MCA)					
1	From Caustic scrubber vent after HCl Absorber	30	0.4	HCL, Cl ₂	Caustic Soda Scrubber
2	From Hydrogenator Vent after caustic scrubbing	30	0.4	H ₂	Hydrogen vent free from Cl ₂

Details of hazardous waste generation and its management is as under:

S. No	Waste Name	Category	Existing Quantity MTPA	Proposed Quantity MTPA	Source	Disposal Method
Hazardous Waste						
1	High M.P Liquid Impurities	26.1	--	1500	Chlorotoluene Plant	Collection storage, reception within factory premises and transportation to common incinerator of M/s BEIL
2	Process Residue	26.1	--	400	Distillation Column in Concentration Section of Hydrazine Hydrate Plant	Collection storage, reception within factory premises and transportation to common incinerator of M/s BEIL
Non-Hazardous Waste						

1	Brine Sludge	--	28000	8760	Caustic Soda Plant	Disposed to owned TSDf site
---	--------------	----	-------	------	--------------------	-----------------------------

Project proponent has obtained a Membership with M/s BEIL for Hazardous waste disposal and Incineration.

Observations/Discussions:

Technical presentation during the meeting included details of the company, eco friendly practices adopted, site location map, prefeasibility report, area breakup of the project, area sensitivity study, request to drop 120 MW coal based captive power plant, details of proposed production capacities with existing product details, raw material consumption details for existing and proposed products, water consumption, waste water generation after the proposed expansion, details of sources of air emission along with anticipated pollutants, details of existing SLF and incinerator ,green belt details and standard TOR.

The project proponent presented that they have already started baseline environmental monitoring in the winter 2014-2015 and requested to allow them to use the same for the preparation of the EIA report which was agreed to by the committee

After detailed deliberations on various aspects of the project following TORs were prescribed in addition to the draft TOR proposed, to carry out EIA study covering 10 km radius from the project boundary of the proposed site :

1. Need for the proposed expansion should be justified in detail.
2. Demarcation of proposed expansion activities in lay out of the existing premises.
3. Exact details about additional infrastructural facilities, plant machineries etc. required for the proposed expansion.
4. Technical details of the plant/s along with details on best available technologies (BAT), proposed technology and reasons for selecting the same.
5. Detailed manufacturing process along with chemical reactions and mass balance (including reuse-recycle, if any) for each product to be manufactured. Details on end use of each product.
6. Technical details of the proposed plants along with details of strategy for implementation reuse / recycle and other cleaner production options for reduction of wastes.
7. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the proposed expansion. Copy of permission obtained from GIDC for additional water supply.
8. Water consumption and consumption of each raw material per MT of each product.
9. Water balance diagram (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream to be generated. A detailed treatability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated.
10. Explore the possibility to achieve minimum effluent discharge by reuse / recycle of treated effluent within the premises. Revised water balance diagram showing reduced fresh water requirement in case of reuse / recycle of treated effluent.
11. Complete waste water management plan for existing as well as proposed production. Detailed effluent treatment scheme and disposal method. Technical details of the ETP & STP including size of each unit, retention time etc. including modifications / up gradation to be done in existing ETP to take care of increased effluent quantity along with its adequacy report.

- Provision of online flow meter at the final outlet of the ETP & STP.
12. Undertaking stating that a separate electric meter will be provided for the ETP.
 13. Qualitative and quantitative analysis of each product and stream wise effluent to be generated from the project along with the treatment scheme proposed.
 14. Details of segregation of the wastewater streams to be carried out, if any and plans for management and disposal of different waste water streams to be generated.
 15. Application wise breakup of treated water utilization.
 16. Plan for management and disposal of waste streams to be generated from spillage, leakages, occasional reactor washing and exhausted media from Scrubber etc.
 17. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
 18. One season site-specific meteorological data including temperature, relative humidity, hourly wind speed and direction and rainfall shall be provided.
 19. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 5 km for all the concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.
 20. One complete season AAQ data (except monsoon) to be given along with the dates of monitoring. Parameters to be considered shall be in accordance with the revised national ambient air quality standards. Project specific parameters like CS₂, H₂S, SO₂, Cl₂, HCl etc. shall be considered in addition to general parameters (PM₁₀, PM_{2.5}, SO_x, NO_x etc.). The location of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
 21. Impact of the project on the AAQ of the area. Details of the model used and the input parameters used for modeling should be provided. The air quality contours may be plotted on a location map showing the location of project site, habitation, sensitive receptors, if any. The wind roses should also be shown on this map.
 22. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate emission from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it (ix) Details on tail gas treatment.
 23. Impact on local transport infrastructure due to the project such as transportation of raw material, finished product, Fuel (Imported Coal) etc. Base line status of the existing traffic, projected increase in truck traffic as a result of the project in the present road network, impact on it due to the project activities, carrying capacity of the existing roads and whether it is capable of handling the increased load. Details regarding arrangement for improving the infrastructure like road etc. if any should be covered. Whether any additional infrastructure would need to be constructed and the agency responsible for the same with time frame.
 24. Type of fuel (Quality of Imported Coal) to be used for the project and copies of confirm fuel linkage/agreement.
 25. Specific details of fugitive emission from the unit along with measures proposed to monitor

VOC within work area. Details of ventilation system proposed in the work area. Measures proposed to keep the work area environment as per the norms of GFR along with Leak detection and repairing programme (LDAR) for VOCs.

26. Details and time bound program for installation of online monitoring system in the existing as well as proposed plants for monitoring of the pollutants from the treated effluent, stacks and process vents with a software and an arrangement to reflect the online monitored data on the company's server, which can be accessed by the GPCB on real time basis.
27. Details of possibility of chemical seepage & consequent soil contamination & mitigation measure proposed for the same for the proposed project.
28. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized.
29. Methodology of de-contamination and disposal of discarded containers along with the details on its record keeping, management of effluent to be generated from decontamination of the discarded containers etc.
30. Detailed plan of ash evacuation, handling, storage, capacity of silos for ash storage and utilization should be provided. Undertaking stating that ash pond shall not be constructed and it shall be stored in closed silos only should be incorporated.
31. Membership of Common Environmental Infrastructure including the TSDF / Common Hazardous Waste Incineration facility along with an assessment to accommodate the additional quantity of wastes to be generated. Copies of MOU / agreements done with actual consumers regarding utilization of fly ash, bottom ash etc. should also be incorporated.
32. Management plan for By-products (if any) to be generated, along with the name and address of end consumers to whom the by-product/s will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-product/s from the proposed project.
33. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent.
34. Data on air emissions, wastewater generation and solid / hazardous waste generation and management for the existing plant should also be incorporated.
35. Details of measures proposed for the noise pollution abatement and its monitoring.
36. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
37. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided to the workers. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical check up of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
38. MSDS of all raw materials and products.
39. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impact.
40. Details of quantity of each hazardous chemical to be stored, material of construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of

Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals.

41. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the map clearly showing which of the facilities and surrounding units would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
42. Details of fire fighting system including provision for flame detectors, temperature actuated heat detectors with alarms, automatic sprinkler system, location of fire water tanks & capacity, separate power system for fire fighting, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant network.
43. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
44. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.
45. Detailed socio-economic development measures including community welfare program most useful in the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.
46. Copies of analysis report of the water samples from final outlet of ETP collected by GPCB with gist of parameters analyzed, results against prescribed standard.
47. Consent to Establish, Consent to Operate orders obtained in past along with point wise compliance status of all the conditions stipulated therein. In case of noncompliance, details of noncompliance, and its mitigation measures to prevent recurrence.
48. Copy of Environmental Clearance obtained, if any, for the existing project and a certified report of the status of compliance of the conditions stipulated in the environmental clearance for the existing operation of the project by the Regional Office of the MoEF.
49. Records of any legal breach of Environmental laws i.e. details of show- cause notices, closure notices etc. served by the GPCB to the existing unit in last five years and actions taken then after for prevention of pollution.
50. Details of fatal / non-fatal accidents, loss of life or man hours, if any, occurred in the existing unit in last three years and measures proposed to be taken for avoiding reoccurrence of such accidents in future.
51. A tabular chart for the issues raised and addressed during public hearing/consultation and commitment of the project proponent on the same should be provided. An action plan to address the issues raised during public hearing and the necessary allocation of funds for the same should be provided.
52. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
53. (b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
54. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this

system may be given.

55. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA Report.
56. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.
57. An undertaking by the Project Proponent on the ownership of the EIA report as per the MoEF&CC OM dated 05/10/2011 and an undertaking by the Consultant regarding the prescribed TORs have been complied with and the data submitted is factually correct as per the MoEF&CC OM dated 04/08/2009. (Compliance of OM dated 05/10/2011 & 04/08/2009).
58. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for "Synthetic Organic Chemicals" and "Chlor-Alkali Industry" shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006.

The draft EIA report shall be submitted to the Gujarat Pollution Control Board for conducting the public consultation process as per the provisions of the EIA Notification, 2006.

The project shall be appraised after receipt of the final EIA report.

18.	SIA/GJ/IND2/9616/2016	Kandla Port trust ,Tuna, Kandla Port Area	Screening & Scoping Case
<p>Project / Activity No.: 7(e)</p> <ul style="list-style-type: none"> • Project Proponent submitted application for screening and scoping in Form I on 15/02/2016. The proposed project is having cargo handling capacity of 4.56 MMTPA (Less than 5MMTPA). <p>Project / Activity Details: New</p> <p>The proposal is for expansion of facility by waterfront of 260m for floating jetty in addition to existing 240m RCC jetty along with back up area. Proposed Capacity: 4.56 MMTPA of Dry Cargo (Existing capacity - 1.2 MMTPA, & Total proposed Capacity - 4.56 MMTPA).Existing facilities at Kandla Port includes 14 Dry Cargo Berths (13th & 15th C.B. and Captive Barge Jetty by IFFCO also started Commercial Operation), 6 Oil Jetties, Barge Jetties (Bunder Basin & IFFCO captive),4 moorings for mid stream handling of cargoes.</p> <p>The proposed project falls in the project/activity 7(e) as per the schedule of the EIA Notification, 2006.Proposed cost of project is Rs. 93.82 Cr. Total 16 Ha which is already available within the Kandla Port Trust Limit. There is no any land acquisition. Green belt area is 5000 sq. meter. Approximate 8 KLD water will be required. Water will be supplied through 18" pipeline of Gujarat Water supply and Sewerage Board. Consumption of water for domestic purpose is 2.4 KLPD. Waste water generation from domestic use will be Approximate 1.92 KLPD and will be disposed off</p>			

to soak pit. Proposed project does not involve production of any kind of hazardous waste. Details of environmental sensitivity as under: (1)No Biosphere Reserves, Wildlife sanctuary, National Park or area of Cultural importance is present near the projects, (2)The project site comes under coastal zone and CRZ Clearance is required, (3)The project site does not touch any State or National boundary(4) Proposed site comes under Seismic Zone-V. Salient features of the proposed project is as under:

Particulars	Details
Name of Project	Up-gradation, Maintenance And Operation Of Existing Barge Jetty At Tuna, Kandla Port On BOT Basis Under PPP Mode For Thirty (30) Years
Category of Project	Category-B
Location of the Project	Existing Tuna Barge Jetty
Optimal Capacity of Terminal	4.56MMTPA (Existing capacity - 1.2 MMTPA, Proposed Capacity – 4.56 MMTPA & Total Capacity - 4.56 MMTPA).
Capital Cost of the Project	Rs. 93.82 Crores
Quay Length	240m Existing RCC jetty (constructed by KPT to be handed over to BOT operator) and Additional Waterfront of 260 m for floating jetties
Barges Nos. at a time	6 Nos. of barges
Maximum Barge Size to be Catered	Up to 2200 DWT
Land Area to be License out	Appx. 16 ha. (Inc. Existing backup area of 3.6 ha)
Dredging	Capital and Maintenance dredging to be carried out by the BOT operator
Tentative Dredging Quantity	Capital dredging – 5,14,000 cum. Maintenance dredging - @ 20% per annum
Applicability of:	

The Forest (Cons.) Act, 1980	No
The Wildlife (Prot.) Act, 1972	No
The CRZ Notification, 1991	Yes
Seismic Zone	Zone-V (As per IS 1893:2002)

Observation and discussion:

Technical presentation included details of existing facilities at Tuna, need of the project, social benefits of the project, layout map of the proposed project, comparison of new and existing proposal, resource requirement and environmental sensitivity. During meeting, on asking about the mangrove patch in the proposed site, PP informed that there is no mangrove in the proposed site. However, Committee asked to carry out careful field survey and to identify Valued Environmental Components and likely impacts due to proposed project. During presentation, the project proponent was asked to prepare comprehensive EIA report. PP requested to exempt them from public hearing as KPT has already conducted the public hearing for the project in KPT limit on 18.12.2013 including Tuna Barge Jetty which was agreed to the committee. Further PP also requested regarding consideration of baseline data collected during March 2012-February 2013 by M/S Mantec Consultant Pvt. Limited, New Delhi which was not agreed to the committee and PP was asked to collect one season baseline data (Except Monsoon) for EIA study.

After detailed deliberations on various aspects of the project following TORs were prescribed in addition to the draft TOR proposed, to carry out EIA study covering 10 km radius from the project boundary of the proposed site.

1. Present land use pattern within 10 km radius from the project boundary based on satellite imagery.
2. A map showing distance of the nearest fishing port, fishermen hutments, village, salt pans, mangrove patch, migratory corridors of birds, National Parks/Sanctuaries/Bio sphere Reserves, sand dune areas etc. from the project boundary.
3. Distance of the jetty from the Low Tide Line. Authenticated details on High Tide height, time duration of high tide availability etc.
4. Phase wise project implementation details in terms of site development, infrastructure provision, EMS implementation etc. Phase wise project implementation schedule with bar chart including resources, manpower and time frame etc.
5. Details of the activities to be undertaken in the CRZ area and their impact on marine ecosystems and mitigation measures proposed in this regard.
6. Copy of CRZ map or map prepared by one of the authorized agencies authorized by the MoEF for carrying out the CRZ demarcation, on which the project boundary / facilities are superimposed and clearly indicating the proposed project location.

7. Status of application for CRZ clearance, recommendation from the Gujarat Coastal Zone Management Authority under the CRZ Notification.
8. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project. Copy of permission obtained from the concerned authority for water supply.
9. Detailed mass balance and water balance (including reuse-recycle, if any).
10. Details of the proposed ETP and stream wise analysis of the waste water likely to be generated as well as the stream wise treatment proposed with ETP adequacy and efficacy report. Details of segregation of the wastewater stream to be carried out and plans for management and disposal of concentrated streams to be generated from spillage, leakages etc. A detailed treatability study for untreated effluent & treated effluent vis-à-vis adequacy of the treatment facilities proposed for the wastewater likely to be generated. The characteristic on which treatability is based shall also be stated.
11. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of water conservation measures including reuse, recycle, use of low water consuming devices. Explore reuse of total treated waste water if possible.
12. Specific measures proposed to conserve water and plans for the future in this regard.
13. Exact cargo handling capacity for the proposed project in addition to the existing project, Scope of the project in terms of types of equipment to be fabricated along with bifurcation of tonnage of each category based on maximum/ peak rated capacity of the project in terms of cargo handling, technology, equipment, manpower, resource use, etc.
14. Finalization of the exact scope of the off shore / waterfront facilities out of various options i.e. access bund / RO-RO ramp / Jetty / Basin and technical details of the same.
15. Details of the berthing facility if any to be provided along with class of vessels envisaged. Ship simulation to be done in respect of stability. Details of handling of each cargo, its impact and management plan.
16. Detailed study for shore protection works. Details of proposed reclamation and / or dredging for protection of the water front and/or maintaining the channel depth. Details regarding dredging depth, dredge material characteristics as well as the dredged quantity, its disposal & and reclamation. The chances of erosion / accretion due to proposed dredging and/or reclamation and mitigation measures should be incorporated.
17. Measures to prevent further deterioration of the estuarine river water quality and coastal ecology due to the proposed project. Cumulative impact taking into consideration other project activities in the vicinity.
18. Whether any blockage of creek is envisaged due to the proposed project and if so, remedial measures. Impact on the natural drainage system if any. It shall be ensured that free flow of water from the catchment area is not hampered due to the proposed project.
19. Hydro-dynamics of estuary / creek from shoreline erosion perspective. The hydro-dynamic studies shall be undertaken for assessing whether the proposed activities shall have any significant impact to the shoreline abutting the project as well as significant impact on the ecologically sensitive areas along the stretch or not.
20. Whether project activities will lead to any shoreline changes. Hydrodynamics of the coast

abutting the project site from shoreline erosion perspective. The hydrodynamic studies for assessing whether the proposed activities shall have any significant impact on the shoreline abutting the project along the stretch or not. Details of precautions to be taken to ensure that there will be no adverse impact on the drainage of the area.

21. Comprehensive modeling study of accretion, erosion / deterioration on nearby coastline & elsewhere due to the proposed project and its mitigation measures. Submit details of stability analysis of coast. The study shall be got vetted by CWPRS.
22. Details of the sand dune areas and ecologically sensitive areas in the vicinity.
23. Anticipated environmental impacts and mitigation measures due to the ship traffic including discharges from vessels and cargo operations.
24. Details of existing sea vessel traffic management and predicted increase in vessel traffic due to the proposed project along with its impacts.
25. Details of vessel traffic management system framed for the proposed project considering the guidelines and provisions of Vessel Traffic Management System devised for Gulf of Cambay. Measures proposed to ensure that there will be no any hindrance to the movement of fishing vessels or fishermen.
26. Impact of project construction/operation on the noise and vibration due to construction equipment, cargo handling equipment and road traffic. Mitigation measures for the same.
27. Impact on marine life and fishing activities in the surrounding region.
28. Impacts of the proposed activities on fishing in the surrounding region as well as on livelihood of fishermen, saltpan workers, farmers, villagers etc. How it would be ensured that fishing area will not be affected due to the project activities.
29. Commitment from the management for extensive mangrove plantation as well as mangrove associated species in the area with year wise plan. Explore co-ordination with ecology commission / social forestry division for the same.
30. Details of hazardous characteristics of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impact.
31. Details on quantity of each hazardous chemical to be stored, material of construction of storage tanks, threshold storage quantity as per schedules of Manufacture, Storage & Import of Hazardous Chemicals Rules.
32. Details of hazardous processes and their engineering controls.
33. Details of possibility of occupational health hazard from the proposed manufacturing activities and proposed measures to prevent it.
34. Measures proposed to arrest the micronized fine particles generated during the painting process. Disposal of waste paint / paint residue.
35. Details for the use of lead free paints in the proposed project. Undertaking for use of only lead free paints in the project.
36. Submit the details of storage yard and dust suppression measures.
37. The details with respect to number of fishermen (including the pagarias) living and / or fishing within the study area along with the exact distance of their habitation from the proposed facilities. Details of fish production in the region in last five years as per the records of

fisheries department. Impacts of the proposed activities on the fishery in the region. How, it would be ensured that fishing area will not be affected due to the project activities.

38. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 10 km for all the concerned/identified VECs and likely impacts will have to be assessed for their magnitude in order to identify mitigation measures.
39. Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
40. Base line ambient air quality data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
41. Modelling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modelling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modelling should be superimposed on google map / geographical area map.
42. Apart from terrestrial EIA study, Marine EIA study should be conducted through reputed institute in order to assess impacts of the proposed activities on the marine environment as well as fishery and according to the same, mitigation measures shall be planned.
43. Baseline status of flora, fauna and marine biodiversity including that of phytoplankton and zooplankton in the study area shall be elaborated. Impact of the proposed activities on the marine biodiversity shall be elaborated. In case of any scheduled fauna, conservation plan should be provided.
44. Actual field survey shall be carried out for ascertaining base line status of coastal and marine flora, fauna, including that of phytoplankton and zooplankton. Impacts of the proposed activities on the marine flora, fauna; especially on endangered and rare species shall be elaborated.
45. Include coastal geo-morphology in the EIA study report.
46. Base line status of the noise environment, impact of noise on present environment due to the project and proposed measures for noise reduction including engineering controls.
47. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate, emission from each utility (vii) Air Pollution Control Measures

proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it. (iv) Air pollution due to the sand /grit blasting operation.

48. Details of mangrove along with its species in the jetty area & fabrication plant area.
49. Measures proposed to be taken for the work area ambient air quality monitoring as per Gujarat Factories Rules.
50. Detailed greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map]; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby area and elsewhere.
51. Copy of membership certificate of Common Environmental Infrastructure like TSDF, if any taken, should be incorporated. Copies of MOU / agreements done with actual consumers regarding utilization of fly ash, bottom ash etc. should also be incorporated.
52. A detailed EMP including the protection and mitigation measures for the impacts on human health and environment as well as detailed environmental monitoring plan with respect to various parameters, environmental management cell proposed for implementation & monitoring of EMP as well as person responsible for the same. The EMP should also include the concept of waste-minimisation, energy conservation, and natural resource conservation. Plan to ensure that the existing environmental condition is not deteriorated due to discharges from the vessels / boats, disposal of sewage, etc.
53. Premises/Factory lay out showing open unobstructed peripheral margin, green belt, separate gates for entry and exit, parking area for tankers / trucks / visitors etc.
54. Detail risk assessment report including prediction of the worst-case scenario and maximum credible accident scenario, catastrophic failure along with damage distances and preparedness plan to combat such situation and risk mitigation measures. This shall also include hazardous area classification & vulnerable zone demarcation. Detailed fire control plan for flammable substances and processes. Environment Management Plan and On-Site / Off-Site emergency plan for proposed plant.
55. Details of management of the solid waste and hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling and its disposal. How the manual handling of the hazardous wastes shall be minimized.
56. Methodology of de-contamination and disposal of discarded containers and its record keeping.
57. Specific safety details /provisions for various solvents to be used in the process including onsite / offsite emergency plan.
58. Detailed odour control and management plan.
59. To explore the use of renewable energy to the maximum extent possible.
60. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, mfg utility staff for safety related measures.
61. Details of likely heat stress to the workers. Radiation heat level in & around the furnace, monitoring and mitigation measures for the same.

62. Specific safety details / precautionary measures proposed for VOC's in the plant / storage yard / warehouse/ including ventilation aligned in the natural wind direction.
63. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers.
64. Details of existing traffic density on main road as well as secondary road in the vicinity, prediction of impact of additional traffic from the project on those roads along with carrying capacity of the said roads.
65. Details of flood data considered to avoid flooding at the proposed site & preventive measures envisaged for the same.
66. Details of monitoring / supervision cell to monitor environmental aspects during construction and operational phases. Appointment of Construction Safety Officer during the construction phase as well as a detailed environment management plan.
67. Details of provisions to make the project energy-efficient through of energy efficient devices and adoption of modes of alternative eco friendly sources of energy, solar water heater, solar lighting etc. Measures proposed to comply with the ECBC norms and other measures proposed for energy conservation.
68. Details of dust suppression measures proposed during the construction period. Noise mitigation measures during construction activity from the proposed activity.
69. Details of the seismic design aspects to be adhered to in the project.
70. Details on use of eco-friendly building materials including fly ash bricks, fly ash paving blocks, RMC etc.
71. Details of disaster management plan / emergency management systems during operational phase of the project should also include scenario of natural catastrophe like earth quake, floods and tsunami in addition to other disasters. The plan should include the details of (i) Emergency evacuation (ii) Emergency lighting system (iii) Details of power back up system in the case of emergency (iv) Fire fighting arrangements (v) First aid arrangement (vi) Training and Mock drill (vii) Emergency announcement or public address system (viii) Signage's including fluorescent pathways/ exit marker signs (ix) Location of emergency pathways and glow light signs. (x) Emergency response procedures.
72. Details of fire fighting system at the jetty as well as fabrication unit including provision for flame detectors, temperature actuated heat detectors, location of fire water tanks & capacity, separate power system for fire fighting, automatic sprinkler system, fire detection system with alarms & automatic fire extinguishers, location of fire lift and fire retardant staircases, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site, etc. Submit line diagram of the fire hydrant line passing through the plant premises. Fire control plan for flammable substances and processes based on the flammable area classification.
73. Details of first aid, fire fighting system and other emergency services to be provided during operation phase including the training to be provided to the staff of the project as first aid facility providers, fire fighters etc. Tie up with emergency services like local fire station, provision of emergency van etc. to be made during the operational phase.
74. Details of the D.G. sets with location, fuel consumption & storage and details of the acoustic measures to abate noise pollution.

75. Details of the debris management plan along with the use/disposal of excavated soil during construction phase and top soil conservation plan.
76. The details of the basic amenities and welfare facilities to be provided to the construction workers to ensure that they do not ruin the existing environment.
77. Undertaking from the management regarding maximum employment to the local people.
78. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions.
79. Distance of the nearest mangrove patches from the project site. Details of mangrove along with its species in the jetty area & approach road area.
80. Details of five year greenbelt development program. Commitment from the management for extensive mangrove plantation as well as mangrove associated species in the area with year wise plan.
81. Details of use of eco-friendly building material including fly ash bricks, fly ash paving blocks. Use of RMC in the project.
82. The details of the basic amenities and welfare facilities to be provided to the construction workers to ensure that they do not ruin the existing environment.
83. Details of registration and provisions to be made by the project proponent to follow Building and other Construction Workers Acts and Rules and undertaking for the same.
84. An action plan showing list of socio-economic upliftment activities based on socio-economic profile of the surrounding villages and need base field assessment along with the fund allocation for the five years, shall be incorporated in the EMP.
85. A tabular chart for the issues raised and addressed during public hearing/consultation held on 18.12.2013 applicable to this project and commitment of the project proponent on the same should be provided. An action plan to address the issues raised during public hearing and the necessary allocation of funds for the same should be provided.
86. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
87. (b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
88. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
89. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA Report.
90. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.
91. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for category 7(e), "Ports, Harbours" shall be considered as

generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006.

The project shall be appraised after receipt of the final EIA report.

19	SIA/GJ/MIS/10238/2016	Palsana Enviro Protection Limited (PEPL) Block No. 527-528, Opp. McDonald's, NH No.8, Near Kadodara Char Rasta,Vill. Umbhel,Ta. Kamrej, Di. Surat PIN - 394325	Screening and Scoping
<p>Project / Activity No.: 7(h)</p> <ul style="list-style-type: none"> • M/s: Palsana Enviro Protection Limited (PEPL) herein after Project Proponent – PP) has submitted application for expansion project on 10/03/2016 for Treatment Capacity Enhancement of CETP from 150 MLD to 200 MLD and Installation of additional treated wastewater recycling system of 50 MLD totalling to 100 MLD recycling capacity. • Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016. <p>Project status: Expansion</p> <p>Project / Activity Details:</p> <ul style="list-style-type: none"> • This is an existing CETP and proposed for treatment Capacity Enhancement of CETP from 150 MLD to 200 MLD and Installation of additional treated wastewater recycling system of 50 MLD totalling to 100 MLD recycling capacity. • The proposed activity falls in the project/activity 7(h) as per the schedule of the EIA Notificaiton-2006. • PEPL is proposing expansion of the present plant treatment capacity from 150 MLD to 200 MLD. Proposed expansion shall be available for existing member industries, new textile processing industries and its ancillary units such as water jet looms, yarn dyeing units etc. • PEPL will ensure that raw waste water characteristics from expansion of existing members and new industrial units will similar and will be within the inlet norms specified for CETP. • PEPL is proposing recycling a total of 100 MLD treated waste water to their member industries. Thus additional waste water accepted by PEPL will not result in discharge of additional treated waste water at existing discharge point by CETP. • Treated waste water from CETP, after tertiary treatment will be suitable for various applications of textile processing industries such as first wash of cloth, blanket and screen washing and other similar non critical process applications. Present member units have shown their willingness to accept treated waste water from CETP. 			

Sections of CETP		Prior to Enhancement of CETP (i.e. Treatment Capacity 100 MLD)	Enhancement of CETP treatment Capacity to 150 MLD	Enhancement of CETP treatment Capacity to 200 MLD
I	Conventional Treatment Section	100 MLD	150 MLD	75 MLD (converted to SBR)
II	SBR based treatment section-1	0 MLD	50 MLD	50 MLD
III	SBR based treatment section-2	0 MLD	0 MLD	75 MLD
Treatment Capacity (total)		100 MLD	150 MLD	200 MLD
Recycling Capacity (total)		0 MLD	50 MLD (work under progress)	100 MLD
Treated WW Disposal Quantity		100 MLD	100 MLD	100 MLD

- Total plot area is 76718 Sq.m. and unit has developed 26000 trees over 1,70,000 Sq. meter area for green belt under social forestry programme and at Antroli village additional 6000 trees are proposed. Estimated cost of proposed expansion is Rs100 cr with existing project cost of Rs.100 cr with total project cost of Rs.200 crore. Water consumption and waste water generation detail is as under.

Water consumption (Source : Recycled water, Ground water will be used in extreme condition only)			
	Existing MLD	Additional MLD	Proposed Total MLD
Domestic	0.1	0.1	0.2
Industrial	1.0	0.3	1.3*
Total	1.1	0.4	1.5
Waste water generation			
Domestic	0.04	0.01	0.05
Industrial	150	50	200
Total	150.04	50.01	250.05**

Note : * Recycled water shall be used, for proposed (total) expansion to minimized fresh water intake for industrial use. In extreme case ground water shall be used.

** Waste water generated from expansion (100 MLD = 50 MLD existing + 50 MLD proposed expansion) shall be recycled to back to member industries.

Out of 200 MLD, 100 MLD is disposed off to Kadodara Khadi and 100 MLD will be recycled back to the member units after treatment. Domestic waste water will be sent to collection sump and after treatment it will be discharged along with industrial effluent.

Detail of air emission is as under.

A FLUE GAS EMISION			
Sr No	Capacity	Stack Height & Diameter	Air Pollution Control System
1.	D. G. Set (Stand By) – 5 nos (500x3 KVA 725x1 KVA & 1010x1 KVA) and Proposed 8 Nos. (500x4 KVA, 725x3 KVA, 1010x1 KVA)	Height : 12 Meters	As Diesel is used as a fuel, adequate stack height is provided.
2.	Biomass Furnace for Chemical Sludge Drying Equipment – 2 Nos, 10 TPD each	Height : 12 Meters	Multicyclone Separator

There is no process gas emission. Details of hazardous waste generation is as under:

Existing hazardous waste generation:

Category No	Description	Existing Qty	Disposal
34.3	ETP sludge (Mixed :Chemical & Biological)	118 MT/day (20% DS)	Collection / Storage / Transportation / send to TSDF site for secured land filling
5.1	Used Oil	600 L/yr	Collection / Storage / Transportation / send to registered recycler
33.3	Discarded Containers / barrels	5000 Nos./month	Collection / Storage / Transportation / send to registered recycler / sent back to supplier
35.3	Spent carbon from activated carbon filter	4.5 MT/Month	Collection / Storage / Transportation / Send to manufacturer for regeneration / will be sent to TSDF site

Proposed hazardous waste generation

Category No	Description	Proposed Total Qty	Disposal
34.3	ETP sludge (Chemical)	16 MT/Day (80% DS)	Drying / Collection / Storage / Transportation / send to TSDF site for secured land filling
5.1	Used Oil	1000 L/yr	Collection / Storage / Transportation / send to registered recycler
33.3	Discarded Containers / barrels	15000 Nos./month	Collection / Storage / Transportation / send to registered recycler / sent back to supplier
35.3	Spent carbon from activated carbon filter	6.0 MT/Month	Collection / Storage / Transportation / Send to manufacturer for regeneration / will be sent to TSDF site

Proposed non hazardous waste

Sr. No	Description	Proposed Total Qty	Disposal
1	ETP sludge (Biological) NON-HAZARDOUS	24 MT/Day (80% DS)	Drying through solar sludge drying plant, Collection, Storage, sell for use as Fertilizer Additive, Fuel Additive or alternate fuel.

Details Of Hazardous Waste Storage Area

Details of Sludge storage area for hazardous waste is existing:1300 SQ. M, proposed:.1200 SQ. M and total is 2500 SQ. M. The sludge storage area is covered with roof from top and has impervious flooring with proper leachate collection system and is closed with four –side boundary.

Details Of Disposal Of Hazardous Wastes

PEPL has taken membership of TSDF sites operated by M/s. Saurashtra Enviro Protection Pvt. Ltd. (SEPPL) & M/s. Bharuch Enviro Projects Pvt. Ltd. (BEIL) for the disposal of Hazardous Waste

Energy conservation system includes following:

- Solar Sludge Drying System for Drying of Bio Sludge has been installed
- Heat Recovery from Dried biomass will be utilized in Drying of Chemical Sludge
- Waste heat recovery from the Blower Air shall be utilized for Sludge Drying
- The Automatic Power Factor Controller (APFC) shall be provided to optimize the power factor to unity to reduce the reactive power flow.
- The transformers of minimum 80 % efficiency and motors of minimum 85 % efficiency shall be installed.
- Complete automation of plant and treatment process through SCADA under process

EMERGENCY MANAGEMENT

- The CETP operational staff are trained for fire fighting, emergency management
- The CETP have provided training to staff and security persons for first aid and emergency management services
- First aid kit with trained persons is provided at CETP
- Personal Protective Equipments are provided to workers in sufficient numbers
- Carbon dioxide extinguishers of adequate capacity are installed at required places

Observations & Discussions:

Technical presentation was made by the project proponent included point wise details including need of the project, treated waste water management plan, planning for the future for expansion, details on request received by CETP for increase in effluent load corresponding to increase in production capacity, CETP outlet norms for the proposed and present scenario, design parameters for the waste water treatment and quality of treated waste water for recycling, mode of disposal of treated waste water after capacity enhancement and treated waste water disposal point, effluent collection network from the member units, general information of the project, water balance, details of air environment and hazardous waste generation/disposal, sludge handling system, details of energy conservation with solar sludge drying system, emergency management plan and proposed TOR etc.

The TOR proposed by the project proponent was accepted and project proponent was asked to include the following TOR in the EIA report for the study to be done covering 10 km radius from the project boundary.

1. Whether necessary permission from the state highway / national highway authorities has been obtained for road crossing of augmentation of the existing pipeline network on either side of the existing road if any.
2. Details of adequacy of existing collection pipeline network to ensure that there is no overflow and there is smooth functioning of the pipeline.
3. Details of pipeline network for recycling the treated effluent to member units & measures proposed to ensure that no cross linkages occurs.
4. Detailed layout of effluent conveyance pipeline up to the final discharge point along with distances and all technical specifications, line diagram and total capacity of the pipeline to convey effluent with justification after the proposed expansion. Whether any up-gradation / laying of new pipeline is planned for the proposed expansion. Details of pumping stations, pumping capacity in each pumping station etc if any shall also be furnished.
5. Whether the area wise effluent conveyance feeder pipelines from the individual units will be able take the cumulative / additional effluent load or not corresponding to the existing units located in that area as well as new units likely to come up in the area.
6. List of the CETP members, their production capacity, effluent generation capacity, effluent characteristics and effluent quantity booked in PEPL. Whether any future projections are envisaged for finalization of the CETP capacity and conveyance pipeline.
7. CETP performance data for the last one year including data of GPCB & PEPL. In case of noncompliance, furnish details of corrective action taken.
8. Specific monitoring plan to ascertain that all the CETP member units send their effluent [contracted / booked quantity] to the CETP and the effluent does not overflow or is not by-passed or not leaked from the conveyance systems.
9. Monitoring scheme of inlet parameters.
10. Techno-feasibility & detailed treatability studies for treating 200 MLD effluent [for existing treatment units & proposed treatment units including tertiary units for reuse] including the concerns for the COD, BOD and TDS. Design calculation & technical parameters for individual treatment components for the proposed expansion to achieve the GPCB norms at the outlet.
11. Explore the use of Best Available Technology incorporating latest features for the proposed expansion instead of providing identical treatment units.
12. Confirmation regarding capacity of the existing conveyance pipeline including structural stability to accommodate the proposed additional 50 MLD effluent load quantitatively.
13. Provision of flow meter at the outlet of PEPL to ensure that discharge quantity never exceeds the prescribed limit.
14. Details of the monitoring plan of the member units to ensure compliance with the inlet norms of the CETP as well as to avoid shock loading / acidic effluent in the system.
15. Details including the proposed inlet norms of the CETP.
16. Justification / capacity of the project keeping in view the future effluent load from the additional member units.

17. Complete water analysis including heavy metals, bioassay test] of the Kadodara khadi, and the final receiving body. Impact, if any, of the proposed expansion of the CETP on the final receiving body.
18. Details of steps proposed to avoid excess chlorination of the treated effluent proposed for recycling.
19. Methodology of de-contamination and disposal of discarded containers and its record keeping.
20. CETP emergency management system in case of malfunction of major components; include most likely malfunction / disruption / worst case scenario for assessing the impact & mitigation measures.
21. Existing natural drainage pattern of the project site and likely impact on it due to proposed expansion. Measures to prevent flooding of the CETP in the rainy season.
22. Socio-economic / CSR activities of PEPL based on the needs/requirement of the surrounding people.
23. Compliance of the CC& A from GPCB as well as any notices / legal action against PEPL for the last three years from the environment point of view.
24. Detailed odour and VOC control plan.
25. Details of hazardous characteristics including toxicity of hazardous chemicals to be handled and the control measures proposed to ensure safety and avoid the human health impact.
26. Details of quantity of each hazardous chemical to be stored, material of construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of the Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals. How the manual handling of the hazardous chemicals will be minimized?
27. Detailed Greenbelt Development Program including annual budget, types & number of trees to be planted, area under green belt development; along with commitment of the management.
28. Detailed risk assessment report including prediction of the worst-case scenario and maximum credible accident scenario along with damage distances and preparedness plan to combat such situation and risk mitigation measures for the hazardous chemicals to be used in the CETP.
29. Details of management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling and its disposal. How the manual handling of the hazardous wastes will be minimized?
30. Details of CETP management and maintenance of the CETP during operation phase including infrastructure, model of management, role of each stake holder, CETP effluent quality monitoring scheme etc.
31. Impact of the CETP installation and treated effluent conveyance & disposal system on the environment including the local hydrology, soil condition, floral and faunal bio-diversity of the region and the mitigation measures proposed.
32. Detailed Environmental Management Plan along with the post project environmental monitoring programs and eco-development activities, greenbelt development plan and the socio-economic activities proposed under the Corporate Social Responsibility.
33. Risk Assessment and Disaster Management Plan of the project. Also risk assessment for related mechanical & electrical risk arising out of the project.

34. Justification of the economic viability of the project. Additional cost details for the recycling of 50 MLD treated effluent to the members.
35. Details of measures proposed to comply with CETP guidelines issued by CPCB.
36. Details of R&D to be initiated by the CETP management for effective and viable treatment of the effluent received.
37. Details of total power load required for the CETP after the proposed expansion as well as details of dedicated power back up / D.G.Sets provided / proposed to take care of power requirements during power supply failure, to ensure that treatment units operate uninterrupted.
38. CETP management manual covering various management aspects during the effluent collection, transportation, treatment and disposal aspects for best management practices. The member units shall abide by various clauses in this regard to check problems during the collection, transportation, treatment and disposal of the effluent.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF&CC's sector specific EIA Manual (for common effluent treatment plant under category 7(h)) shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006.

The draft EIA report shall be submitted to the Gujarat Pollution Control Board for conducting the public consultation process as per the provisions of the EIA Notification, 2006.

The project shall be appraised after receipt of the final EIA report..

20	SIA/GJ/IND2/7276/2016	M/s Alliance Chemicals, Plot No. C-156, GIDC Industrial Phase Dahej-1, Village- Shykha, Taluka- Vagra, District- Bharuch, Gujarat.	Screening /Scoping
----	-----------------------	--	--------------------

Project / Activity No.: 5(f)

- M/s: Alliance Chemicals herein after Project Proponent – PP) has submitted application for new project on 09/11/2015.
- Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: New

Project / Activity Details:

The proposed production activity falls in the project/activity 5(f) as per the schedule of the EIA Notification-2006. Total plot area is 5000 m². Area of green belt is 1800 m². Total cost of project is 400 Cr. Proposed product and raw materials are as under:

List Of Products	Name Of Raw Materials	Name Of Suppliers (Source)
PRODUCT-1	CETIRIZINE DI HCL	
Production:	Para Chlorobenzo phenone	Vipson Chemicals -Anand

4 Tons/month	Sodium Borohydride	Imported Available - Ankleshwar
	Piperazine Anhydrous	Imported Available - Ankleshwar
	2- Chloro Ethanol	Viswat Chemicals -Boiser Maharashtra
	Sodium Mono Chloro Acetate	Karnavati Chemicals - Ahmedabad
	Potassicum Hydroxide	GACL -Vadodara
	HCL	Available in Ankleshwar
	Acetone	Available in Ankleshwar
PRODUCT-2	METOCLOPRAMIDE, HYDROCHLORDIE	
Production: 1 Tons/month	5, Chloro Methopabate	Mick Pharmaceuticals - Ahmdabad
	N. N Diethyl Ethylenediamine	Madhav Chemicals - Ankleshwar
	Para Toluene Sulphonic Acid	Tatva Chintan Chemicals - Ankleshwar
	IPA (ISO Propyl Alcohol	Available in Ankleshwar
PRODUCT-3	MICONAZOL E NITRATE	
Production: 2 Tons/month	2,2,4, Trichloro Aceto Phenone	Imported Available - Ankleshwar
	Sodium Borohydride	Imported Available - Ankleshwar
	Imidazole	Imported Available - Ankleshwar
	Caustic Soda Flakes	GACL Vadodara
	2,4, Dichlorobenzylchloride	Imported Available - Ankleshwar
PRODUCT-4	DIPHENHYDRAMINE HCL	
Production: 5 Tons/month	Diphenyl Methane	Vipson Chemicals -Anand Gujarat
	LIQ Bromine	Element Chemicals - Ankleshwar
	Mono Chlorobenzene	Dayaram Chemicals - Ankleshwar
PRODUCT-5	CHLOR PHENIRAMINE MALEATE	
Production:	Chlor Pheniramine Base	Available in Ankleshwar

7 Tons/month	Maleic Acid	Salvi Chemicals -Boiser Maharashtra
	IPA	Available in Ankleshwar
PRODUCT-6	PIROXICAM	
Production: 2 Tons/month	2-Amine Pyridine	Jubliant Life Sciences -Dahej - Gujarat
	Ester	Jubliant Life Sciences -Dahej - Gujarat
	O- Xylene	Available in Ankleshwar
PRODUCT-7	MELOXICAM	
Production: 2 Tons/month	5- Methyl 2 Aminothiazole	Available in Ankleshwar
	O- Xylene	Available in Ankleshwar
	HCL	Available in Ankleshwar
	Caustic Soda Flakes	Available in Ankleshwar

Requirement of the project proposed is as under:

PARTICULARS	REQUIREMENT	REMARKS
Land Requirement	5000 sq. m.	Land on lease of 99 years from GIDC Dahej-1
Water Requirement and its Source	10.0 KLD	GIDC water supply.
Electricity Requirement and its source	60 KWH	Source: Dakshin Gujarat Vij Company Ltd. and in case of Power failure, D. G. set of 50 KVA will be provided to fulfill the power requirement.
Manpower Requirements	23	Local People will be given preference wherever possible as per experience and qualification.
Fuel Requirement	520 Kg/Hr Biomass and Diesel i.e. 25 Lit/Hr	Will be purchased from the nearest petrol pump.

Water will be received from GIDC and details of consumption is as under:

S. No.	Category	Water Consumption L/day	Wastewater Generation L/day	Remark

1	Domestic	1500	1150	Soak pit/septic tank
2	Gardening	1000	NIL	
3	Industrial			
	a. Process	1600	1400	To ETP
	b. Cooling	1000	NIL	
	c. Boiler	4000	NIL	
	d. Total Industrial	6600	1400	
4	Miscellaneous	900	NIL	
Total		10,000	2,550	

For waste water treatment following measures are proposed:

- ❖ ETP and MEE are proposed for waste treatment.
- ❖ Treated water will be re-used for floor washing and irrigation, cooling tower, etc. This will reduce the fresh water consumption.
- ❖ All solvents are recovered to the extent possible and reused in the process.
- ❖ ETP sludge (1500 Kg/month) is sent to Authorized Disposed Agency to treatment.
- ❖ Boiler ash (2.0 Ton/month) are sent to Cement Manufacturing Unit.
- ❖ Waste/Used Oil (10 Lit/month) is sent to Authorized Waste/Used Oil Reprocessing Unit.

For air pollution control measures, following measures are proposed:

- ❖ To install NOx scrubbing system for Nitric Acid.
- ❖ To control other air pollutants, air pollution control measure will be installed.
- ❖ The stack height will be as per GPCB norms.
- ❖ Green belt (36% of the total area) will be developed with 450 No's native species as per the soil conditions.

For Noise control, following measures are proposed:

- ❖ All the equipment in the plant are designed to have a total noise level not exceeding 75 dB(A) as per the requirement of OSHA (Occupational Safety and Health Administration).
- ❖ DG sets will be used at the time of power failure.
- ❖ The Noise levels of the DG sets (50 KVA- Standby) will remain well within limit as it is proposed to install DG with acoustic enclosures.
- ❖ Green belt (36% of the total area) will be developed with 450 Nos. native species as per the soil conditions and GPCB list

For hazardous waste, following measures for handling and management of hazardous waste are proposed:

Sr No:	Type Of Hazardous Waste	Quantity	Waste Category	Source	Management Details	
					Reuse/ Recycle	Disposal

1.	ETP Sludge	1500 Kg/month	34.3	Effluent Treatment Plant	-	Sent to TSDF-Bharuch Enviro Infrastructure Ltd.
2.	Used/spent Oil	10 Lit/month	5.1	Prime Movers	reuse in plant for lubrication	Balance will be selling to authorized recyclers.
3.	Boiler Ash	2.0 Ton/month	-	steam Boiler & THF	-	Sent to Brick Manufacture
4.	Discarded Containers	0.3 MT/month	33.3	Haz. Waste flue gas cleaning residue	-	Sell to GPCB Authorized Vendor/s only.

Observations & Discussions:

Technical presentation by the PP included general information, details of location, project requirement, details of products and raw materials, Waste generation, lay out plan, material balance of the products, manufacturing process, possible environmental impacts and mitigation measures, water consumption details, waste water management plan, plan for green belt development and proposed TOR for EIA studies. The project proponent mentioned that they have already started baseline environmental monitoring since 1st December 2015 (Dec 2015-February 2016) and requested to allow them to use the same for the preparation of the EIA report which was agreed to by the committee. After deliberation on various aspects, following additional TOR was prescribed for the EIA study covering 10 km radius of the project boundary.

1. Copy of plot holding certificate obtained from GIDC, Dahej.
2. Present land use pattern of the study area shall be given based on satellite imagery.
3. Layout plan of the factory premises. Provision of separate entry & exit and adequate margin all round the periphery for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back. Mark the same in the plant layout.
4. Technical details of the plant/s along with details on best available technologies (BAT), proposed technology and reasons for selecting the same.
5. Details of manufacturing process / operations of each product along with chemical reactions, mass balance, consumption of raw materials etc. Details on strategy for the implementation of cleaner production activities.
6. Chemical name of each proposed product to be manufactured. Details on end use of each product.
7. Detailed mass balance and water balance (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream from the processes.
8. Assessment of source of the water supply with adequacy of the same to meet with the requirements for the project. Permission obtained from the GIDC for supply of raw water. Undertaking stating that no bore well shall be dug within the premises.

9. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
10. Qualitative and quantitative analysis of waste water to be generated from the manufacturing process of each product to be manufactured along with mass balance.
11. Segregation of waste streams and details on specific treatment and disposal of each stream.
12. Action plan for 'Zero' discharge of effluent shall be included.
13. Details of ETP including dimensions of each unit along with schematic flow diagram. Inlet, transitional and treated effluent qualities with specific efficiency of each treatment unit in reduction in respect of all concerned/regulated environmental parameters. Inlet effluent quality should be based on worst case scenario considering production of most polluting products that can be manufactured in the plant concurrently.
14. Technical details of MEE including evaporation capacity, steam required for evaporation, adequacy of the proposed boiler to supply steam for evaporation in addition to the steam required for the process etc. Techno-economical viability of the evaporation system. Control measures proposed for the evaporation system in order to avoid/reduce gaseous emission/VOC from evaporation of industrial effluent containing solvents & other chemicals.
15. Technical details of proposed Incinerator, Spray dryer including capacity, fuel to be used, adequacy etc. Techno-economical viability of the proposed Incinerator. Control measures proposed for the Incinerator in order to avoid/reduce gaseous emission/VOC from incineration of industrial effluent containing solvents & other chemicals.
16. Technical details of Reverse Osmosis (RO)/Neno Filtration (NF) system.
17. Undertaking stating that a separate electric meter will be provided for the ETP, RO, Incinerator/Spray Dryer & MEE.
18. Economical viability and technical feasibility of the effluent treatment system to achieve Zero Liquid Discharge (ZLD).
19. Proposal to provide and maintain separate electric meter, operational logbook for effluent treatment systems, online meters for monitoring of flow, pH, TOC/COD, etc.
20. Application wise break-up of effluent quantity to be recycled / reused in various applications like sprinkling for dust control and green belt development etc. In case of land application, details on availability of sufficient open land for utilizing effluent for plantation / gardening. How it will be ensured that treated effluent won't flow outside the premises linked with storm water during high rainy days.
21. Plans for management, collection and disposal of waste streams to be generated from spillage, leakages, vessel washing, used container washing etc. Measures proposed for preventing effluent discharge during unforeseen circumstances.
22. One season Site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall should be incorporated.
23. Anticipated environmental impacts due to the proposed project/production may be evaluated for significance and based on corresponding likely impacts VECs (Valued Environmental Components) may be identified. Baseline studies may be conducted within the study area of 10 km for all the concerned/identified VECs and likely impacts will have to

be assessed for their magnitude in order to identify mitigation measures.

24. One complete season baseline ambient air quality data (except monsoon) to be given along with the dates of monitoring. The parameters to be covered shall be in accordance with the revised National Ambient Air Quality Standards as well as project specific parameters. Locations of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone and sensitive receptors. There should be at least one monitoring station in the upwind direction. There should be at least one monitoring station in the pre dominant downwind direction at a location where maximum ground level concentration is likely to occur.
25. Modeling indicating the likely impact on ambient air quality due to proposed activities. The details of model used and input parameters used for modeling should be provided. The air quality contours may be shown on location map clearly indicating the location of sensitive receptors, if any, and the habitation. The wind rose showing pre-dominant wind direction should also be indicated on the map. Impact due to vehicular movement shall also be included into the prediction using suitable model. Results of Air dispersion modeling should be superimposed on satellite Image / geographical area map.
26. Baseline status of the noise environment, impact of noise on present environment due to the project and proposed measures for noise reduction including engineering controls.
27. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission, measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
28. Details of soil analysis within the study area including project site, details of ground water table including water quality showing all parameters included in IS:10,500.
29. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Methodology of decontamination and disposal of discarded containers and its record keeping.
30. Membership of Common Environmental Infrastructure including the TSDF / Common Incineration Facility, if any.
31. Complete management plan for By-products/Spent acids to be generated, along with the name and address of end consumers to whom the by-product/s will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-products/Spent acids from the proposed project.
32. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent. Details of Leak detection and repairing programme (LDAR) for VOCs.
33. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management

cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.

34. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.
35. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment to be provided. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical checkup of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
36. Details on volatile organic compounds (VOCs) from the plant operations and occupational safety and health protection measures.
37. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the facilities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
38. MSDS of all the products and raw materials.
39. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impacts. This shall include the details of Antidotes also.
40. Details of quantity of each hazardous chemical (including solvents) to be stored, Material of Construction of major hazardous chemical storage tanks, dyke details, threshold storage quantity as per schedules of the Manufacture, Storage & Import of Hazardous Chemicals Rules of major hazardous chemicals, size of the biggest storage tank to be provided for each raw material & product etc. How the manual handling of the hazardous chemicals will be minimized?
41. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
42. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
43. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.
44. Detailed socio-economic development measures including community welfare program most useful in the project area for the overall improvement of the environment. Submit a detailed plan for social corporate responsibilities, with appropriate budgetary provisions for the next five years and activities proposed to be carried out; specific to the current demographic status of the area.

45. A tabular chart for the issues raised and addressed during public hearing/consultation and commitment of the project proponent on the same should be provided. An action plan to address the issues raised during public hearing and the necessary allocation of funds for the same should be provided.
46. (a) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. (b). Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions ? If so, it may be detailed in the EIA.
47. What is the hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions. Details of this system may be given.
48. Does the company have a system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA Report.
49. Phase wise project implementation schedule with bar chart and time frame, in terms of site development, infrastructure provision, EMS implementation etc.
50. Certificate of accreditation issued by the NABET, QCI to the environmental consultant should be incorporated in the EIA Report.
51. A tabular chart with index for point-wise compliance of above TORs.

The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF's sector specific EIA Manual for category 5(f) of synthetic organic chemical industry shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006.

The draft EIA report shall be submitted to the Gujarat Pollution Control Board for conducting the public consultation process as per the provisions of the EIA Notification, 2006.

The project shall be appraised after receipt of the final EIA report.

21	M/s. Kroma Paints, Survey No. 582, Dhamatwan,Daskroi, Dist: Ahmedabad, GUJARAT	Screening/Scoping
<p>Project / Activity No.: 5(h)</p> <ul style="list-style-type: none"> • M/s: Kroma Paints herein after Project Proponent – PP) has submitted application for new project on 23/06/2015. • Proposal was scheduled for screening/scoping on the SEAC meeting held on 09/09/2015 and committee asked certain information regarding location of the proposed unit for 		

expansion and decided to consider the proposal after submission of the said details.

- PP submitted the details asked by the committee on 08/12/2015. Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: Expansion

Project / Activity Details:

This is an existing project for making of decorative and industrial paints by ball mill and PP has proposed to expand for proposal of making resin. The proposed production activity falls in the project/activity 5(h) as per the schedule of the EIA Notificaiton-2006.Total plot area is 19,439 m². Land available for Proposed Resin Plant is 7055 m². Green belt area is 2330 m². Total cost of project is Rs. 2.50 Crores.Details of products are as under:

Sr. No.	Name of Products	Proposed Quantity	Total Quantity
1	Quick Drying Alkyd resin	550 MT/Month	550 MT/Month
2	Alkyd resin for Decorative Product		
3	Poly Urethane Resin		
4	Epoxy Resins	50 MT/Month	50 MT/Month

Details of existing products:

Sr. No.	Name of Products	Existing Quantity	Total Quantity
1	Decorative Paints & Industrial Paints (By Ball Mill)	2500 KL/Month	2500 KL/Month

The source of water for the proposed project will be from bore well. Total water requirement for the proposed project will be 5.1 m³/day and after proposed project it will be 15.5 m³/day . The total waste water generation after proposed project from Industrial will be 2.6 m³/day. 1.3 m³/day Domestic effluents shall be disposed through septic tank& soak pit. Industrial waste water of 2.60 m³/day will be treated in ETP and passed the treated effluent through RO system from where 2.0 m³/day permeate shall be reused in washing and cooling tower and rejected of the RO @ 0.6 m³/day will be evaporated. The proposed ETP is shown below:

Sr. No.	Description	Water Consumption (m ³ /day)			Waste Water Generation (m ³ /day)		
		Existing	Proposed	After Proposed	Existing	Proposed	After Proposed

I	Domestic	1.0	0.50	1.50	0.90	0.40	1.30
II	Gardening	1.0	1.00	2.00	0.00	0.00	0.00
III	Industrial						
a.	Process	6.0	0.00	6.00	0.00	1.60	1.60
b.	Cooling	1.8	1.80	3.60	0.00	0.04	0.04
c.	Boiler	0.0	1.60	1.60	0.00	0.16	0.16
d	Washing	0.6	0.20	0.80	0.60	0.20	0.80
Total Industrial		8.4	3.60	12.00	0.60	2.00	2.60
Total Overall (Industrial + Domestic)		10.4	5.10	15.50	1.50	2.40	3.90

Note:*Domestic Waste Water will be discharged off to the septic tank / soak pit system. After the reuse of treated RO permeate effluent @ 2 m³/day to Cooling Tower the water consumption shall reduce to 13.5 m³/day

Source of power is as under:

Sr. No.	Source	Proposed	Total
1.	Torrent Power Ltd.	100 hp	100 hp
2.	D. G. Set (Stand by)	65 KVA	65 KVA

Source of flue gas emission is as under:

Sr. No.	Description	Fuel	Proposed	APCM
1.	Steam Boiler (0.5 TPH)	LDO	50 Lit/hr	-
2.	Thermic Fluid Heater (4 lacs kcal/hr)	LDO	50 Lit/hr	
3.	Evaporator	-	-	
4.	D. G. Set – 65 KVA (Stand by)	Diesel	10 Lit/hr	

Hazardous waste generation details is as under:

Sr. No.	Type/Name of Hazardous waste	Source of generation	Quantity	Disposal Method
1	ETP Sludge	ETP Plant	4.80 MT/Annum	Disposal at TSDF site

2	Evaporation Residue	Evaporator	1.2 MT/Annum	Disposal at TSDF site
3	Used Oil	Machineries	0.36 MT/Annum	Sell to Registered Re processor
4	Discarded Drum	Material Storage	8400 Nos/Annum	Sold to Registered Recycler
	Discarded Bags	Material Storage	6000Nos/Annum	

Observations & Discussions:

During SEAC meeting held on 09/09/2015, after presentation committee sought following details for further consideration of the proposal.

1. Exact aerial distance of project site from the boundary of the Critically Polluted area of Vatva GIDC. Give latitude and longitude with satellite image.
2. Project site specific details such as distance of the project site from the nearest (1) Village-Nearest residential area (2) Water Body: Creek / Nallah / Lake / Pond / Reservoir / Canal (3) National Highway (4) State Highway (5) Railway line (6) Heritage site (7) National Park / Wild Life Sanctuary (8) Aanganwadi/School/College/Institute etc. and likely impact on them due to the proposed project along with the mitigation measures proposed to minimize the likely impact. Give satellite image of 5 KM radius.
3. Copy of CTE obtained from GPCB for formulation of Paint items.

On 08/12/2015 PP submitted the details of location of the proposal. In submission, it is mentioned that proposed unit is located at the shortest aerial distance of 6.28 km from the boundary of critically polluted area of Vatva GIDC. PP also submitted latitude and longitude of the said project. PP has further submitted the following site specific details:

Sr NO	Location	Distance from project site (km)
1	Village: Dhamatwan	1.20
2	Lake: Dhamatwan	0.75
3	Express highway (Ahmedabad-Vadodara)	0.90
4	State highway 144	0.96
5	Railway station,,Vatwa	8.45
6	Heritage site	Not within 10 km radius
7	National Park,Wild life sanctuary	Not within 10 km radius
8	School Dhamatwan	1.19

PP has submitted copy of CTE obtained from GPCB for formulation of Paint items for 2500 KL/Month. On 10/09/2015, PP submitted request for correction in category mentioning that their project falls under integrated paint industry, category of the project shall be corrected as 5 (h) in place of 5(f) to which committee agreed.

After presentation on 23/03/2016, PP requested to consider the project as B2 category project. The request was considered by the committee looking to the low pollution potential in terms of air & water and the following additional information was sought for appraisal of the project.

1. Land possession document with copy of 7/12, 8A, 6A and certified copy of distance certificate of the nearest human habitation from the concern authority.
2. Details of surrounding industrial with details like Name and address of the unit, type and nature of industrial activity etc.
3. Legal Undertaking stating that unit is complying the three conditions [i.e. water consumption less than 25 M3/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989] as per the amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014.
4. Demarcation of proposed activities in lay out plan. Exact details about infrastructural facilities, plant machineries etc. required for the proposed project.
5. Detailed manufacturing process along with chemical reactions and mass balance (including reuse-recycle, if any) for each product to be manufactured. Details on end use of each product. Give full name and chemical formula of all the raw materials and products.
6. Copy of permission obtained from concern authority for water supply.
7. Water consumption and consumption of each raw material per MT of each product.
8. Water balance diagram (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream to be generated. A detailed treatability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated and its evaporation for ZLD.
9. Treated effluent management plan during monsoon period when evaporation of treated effluent is not feasible. Detailed treated waste water management plan for the monsoon period.
10. Technical details of the ETP including size of each unit, retention time etc.
11. Action plan for 'Zero' discharge of effluent shall be included. Give qualitative and quantitative data with feasibility report for reuse of Mother Liquor in process again. Submit an undertaking in this regard.
12. Plan for management and disposal of waste streams to be generated from spillage, leakages, occasional reactor washing and exhausted media from Scrubber etc.
13. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
14. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate emission from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
15. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Explore the possibilities for co-processing of the Hazardous waste/Solid waste prior to disposal into TSDF/CHWIF. Methodology of de-contamination and disposal of discarded containers and its record keeping.
16. Membership of Common Environmental Infrastructure including TSDF, Common Hazardous Waste Incineration Facility (CHWIF) along with an assessment to accommodate the additional quantity of wastes to be generated.
17. Complete Management plan for By-products/spent acid to be generated, (if any) from the

- project including their quantity, quality, characteristics, end use etc. along with the name and address of end consumers to whom the by-product will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-products/spent acids from the proposed project.
18. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent. Leak detection and repairing programme (LDAR)for VOC
 19. Data on air emissions, wastewater generation and solid / hazardous waste generation and management for the existing plant should also be incorporated. (Comparative data in tabular format).
 20. Details of measures proposed for the noise pollution abatement and its monitoring.
 21. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
 22. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment (PPE) to be provided to the workers. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical check up of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
 23. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impact. MSDS of all the products and raw materials to be used. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.
 24. Details of quantity of each hazardous chemical to be stored, material of construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of Manufacture, Storage & Import of Hazardous Chemicals (MSIHC) Rules of major hazardous chemicals.
 25. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
 26. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the map clearly showing which of the facilities and surrounding units would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
 27. Details of fire fighting system including provision for flame detectors, temperature actuated heat detectors with alarms, automatic sprinkler system, location of fire water tanks & capacity, separate power system for fire fighting, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant network.
 28. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of

HSE, manufacturing utility staff for safety related measures.

29. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.

30. A tabular chart with index for point-wise compliance of above.

The project shall be appraised on satisfactory submission of the above.

22	SIA/GJ/IND2/1191/2015	M/S. Charon Pharma Chem Industries., S. No: 183, At - Hardesan, Ta & Dist: Mehsana, Gujarat	Screening/Scoping
----	-----------------------	---	-------------------

Project / Activity No.: 5(f)

- M/s: Charon Pharma Chem Industries herein after Project Proponent – PP) has submitted application for new project on dated 09/09/2015.
- Proposal was scheduled for screening and scoping in the SEAC meeting held on 17/11/2015. and addition and additional information was sought. PP submitted the additional information on 27/11/2015.
- Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016.

Project status: New

Project / Activity Details:

This is a new project and proposed products are as below:

Sr. No.	Name of Proposed Products	Proposed Quantity MT/ month
1.	Poly Acrylate	100
2.	Poly Acrylate Dispersion	50
3.	Poly Methacrylates	25
4.	Poly Methacrylates Dispersion	50
Total		250

List of raw materials to be used are as under:

Sr. No.	Name of Raw Material	Total Consumption (MT/Month)

1.	Ethyl Acrylate	87.6
2.	Acrylic Acid	63.9
3.	Methyl Methacrylate	41.1
4.	Methacrylic Acid	34.85
5.	Solvents (Benzene / IPA) only Loss Qty.	0.625
6.	Emulsifier	1.0
7.	D.M. Water	100

The proposed production activity falls in the project/activity 5(f) as per the schedule of the EIA Notificaiton-2006.Total cost of project is Rs. 2.65 Crores. Total plot area is 8296 m²,green belt area is 3000 m². Based on the LD₅₀ (mg/Kg) the toxic chemicals used in our unit are Acrylic Acid, Ethyl Acrylate, Methacrylic Acid etc and pp informed tht they will make provision for safety goggles, face mask, rubber hand gloves to the workers during handling of this chemical.

Water source is though tanker. Consumption of industrial water will be 14.5 klpd and domestic water consumption will be 1 klpd. Industrial waste water generation will be 0.9 klpd and domestic waste water generation will be 0.7 klpd. Treated effluent will be used for gardening and plantation purpose. Domestic wastewater will be disposed off in to soak pit. Source of flue gas emission is as under:

Stack No	Stack Attached To	Stack Height (meter)	Parameter	Permissible Limit
1	IBR Boiler (Capacity: 1000 kg /hr)	33	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
2	Thermic Fluid Heater -1 (Capacity: 2lacs kcal)	11	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
3	Hot Air Generator	11	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm

4	D.G. Set -1 125 KVA	9	SO ₂	100 ppm
---	------------------------	---	-----------------	---------

Fuel consumption will be as under:

Sr. no.	Fuel used	Fuel Consumption
1	wood	500 Kg/day
2	Diesel	20 Liter /Hr

Process
gas

emission will be from spray drier of capacity 300 litre per hour with APCM as multi cyclone and bag filters.

Sr. No.	Stack attached To	Stack Height	Air Pollution Control System	Pollutants
1.	Spray Dryer Capacity: 300 liter	20 m	Multi cyclone dust collector followed by Bag Filter	SPM < 150 mg/NM3

Details of hazardous waste will be as under:

Sr. No.	Type of Waste	CATEGORY	Quantity	Management and handling
1.	ETP Waste	34.3	0.6 MT/Year	Generation, Collection, storage , transportation and disposed off to TSDF
2.	Discarded Drums and Containers	33.3	2.0 MT/year	Collection ,storage, and sale to registered recycler.
3.	Used Oil	5.1	15 L/ year	Collection, storage, and sale to registered recycle.

PP has informed that their proposal does not include chemicals having major accident hazards(MAH).

Observations & Discussions:

During SEAC meeting held on 17/11/2015, technical presentation included project details, raw materials and its quantity, properties of the products etc. Committee observed that the proposed project is located outside the notified area and PP could not reply satisfactorily regarding nearest habitat, natural water bodies etc from the proposed site. Committee noted that based on the satellite image submitted by PP, there is a possibility of human habitats near the project site which is not clearly shown in the satellite image. At this, Committee felt that the exact distance of residential area, natural water bodies etc. shall be submitted by project proponent. After detailed deliberations during SEAC meeting on 17/11/2015,It was decided to reconsider the project for screening / scoping in one of the upcoming meetings only after submission of the following:

1. Satellite image and map showing nearest residential area/habitats from the outer periphery of the proposed site. Submit distance certificate from the concern authority.
2. Satellite image of project site with specific details such as distance of the project site from the nearest (1) Anganwadi, School, College, Institute etc. (2) Water Body: Creek / Nallah / Lake / Pond / Reservoir / Canal (3) National Highway (4) State Highway (5) Railway line (6) Heritage site (7) National Park / Wild Life Sanctuary etc. and impact of proposed project.
3. Land possession document.
4. Legal Undertaking stating that unit is complying the three conditions for small unit [i.e. water consumption less than 25 M3/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989] as per the amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014

Reply of additional information was submitted by PP on 27/11/2015.The project proponent was called for presentation during the meeting of SEAC held on 23/03/2016.PP clarified the aforesaid information before the committee as under:

- During presentation, PP informed that Village: Hardesan is located 995.53 meter from the outer periphery of our proposed site.
- Distance of project from various entities as per the satellite map is mentioned below:

Sr. No.	Name of Place	Distance from the project Site
1	Village - Hardesan	995.53 Meter
2	Hardesan Primary School	1.25 km
3	River – Rupen	890.11 Meter
4	River Pushpavati	6.09 km
5	Mehsana By Pass Road	4.36 km
6	State Highway	1.82 km
7	Panchot railway station	3.5 km
8	Dhinoj railway station	5.3 km

9	Mehsana Jn railway station	7.9 km
10	Mehsana Airport	7.9 Km
11	Heritage Site	No
12	National park	No

- Regarding land possession documents, PP has submitted raja chitthi of Sarpanch, Hardsan Gram Panchayat, copy of NA, Approval of plan from the office of commissioner, Food and drugs control administration have been submitted. Copies of land possession with copy of 7/12, 8A, 6A and legal undertaking stating that unit is complying the three conditions for small unit [i.e. water consumption less than 25 M3/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989] as per the amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014 is not submitted.

After presentation before the SEAC on 23/03/2016, project proponent requested to consider the project as B2 category project. The request was considered by the committee looking to the location of the project, low pollution potential in terms of air & water and the following additional information was sought for appraisal of the project.

- Land possession document with copy of 7/12, 8A, 6A and certified copy of distance certificate of the nearest human habitation from the concerned authority.
- Details of surrounding industrial with details like Name and address of the unit, type and nature of industrial activity etc.
- Legal Undertaking stating that unit is complying the three conditions [i.e. water consumption less than 25 M3/day; Fuel consumption less than 25 TPD; and not covered in the category of MAH units as per the Management, Storage, Import of Hazardous Chemical Rules (MSIHC Rules), 1989] as per the amendment to EIA Notification, 2006 vide SO 1599 (E) dated 25.06.2014.
- Demarcation of proposed activities in lay out plan. Exact details about infrastructural facilities, plant machineries etc. required for the proposed project.
- Detailed manufacturing process along with chemical reactions and mass balance (including reuse-recycle, if any) for each product to be manufactured. Details on end use of each product. Give full name and chemical formula of all the raw materials and products.
- Copy of permission obtained from concern authority for water supply.
- Water consumption and consumption of each raw material per MT of each product.
- Water balance diagram (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream to be generated. A detailed treatability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated.
- Treated effluent management plan during monsoon season when utilization of treated effluent for gardening & plantation purpose is not feasible. Detailed study report considering Percolation rate of the land available for gardening & plantation. Ensure that land is suitable for utilization of treated waste water for plantation & gardening.
- Technical details of the ETP including size of each unit, retention time etc.
- Action plan for 'Zero' discharge of effluent shall be included. Give qualitative and quantitative data with feasibility report for reuse of Mother Liquor in process again. Submit an undertaking in this regard.

12. Plan for management and disposal of waste streams to be generated from spillage, leakages, occasional reactor washing and exhausted media from Scrubber etc.
13. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
14. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate emission from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
15. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Explore the possibilities for co-processing of the Hazardous waste/Solid waste prior to disposal into TSDF/CHWIF. Methodology of de-contamination and disposal of discarded containers and its record keeping.
16. Membership of Common Environmental Infrastructure including TSDF, Common Hazardous Waste Incineration Facility (CHWIF) along with an assessment to accommodate the additional quantity of wastes to be generated.
17. Complete Management plan for By-products/spent acid to be generated, (if any) from the project including their quantity, quality, characteristics, end use etc. along with the name and address of end consumers to whom the by-product will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-products/spent acids from the proposed project.
18. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent. Leak detection and repairing programme (LDAR)for VOC
19. Data on air emissions, wastewater generation and solid / hazardous waste generation and management for the existing plant should also be incorporated. (Comparative data in tabular format).
20. Details of measures proposed for the noise pollution abatement and its monitoring.
21. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
22. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment (PPE) to be provided to the workers. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical check up of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
23. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impact. MSDS of all the products and raw materials to be used. Permission from PESO,

- Nagpur for storage of solvents, other toxic chemicals, if any.
24. Details of quantity of each hazardous chemical to be stored, material of construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of Manufacture, Storage & Import of Hazardous Chemicals (MSIHC) Rules of major hazardous chemicals.
 25. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
 26. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the map clearly showing which of the facilities and surrounding units would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
 27. Details of fire fighting system including provision for flame detectors, temperature actuated heat detectors with alarms, automatic sprinkler system, location of fire water tanks & capacity, separate power system for fire fighting, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant network.
 28. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
 29. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.
 30. A tabular chart with index for point-wise compliance of above.

The project shall be appraised after satisfactory submission of the aforesaid additional details.

23	M/s Achal Chemical, S. NO: 202/13 Paiki, Village-Sokhada, Ta- Khambhat, Dist- Anand, Gujarat	Screening/Scoping
<p>Project / Activity No.: 5(f)</p> <ul style="list-style-type: none"> • M/s: Achal Chemical herein after Project Proponent – PP) has submitted application for new project on 13/11/2014. • Proposal was scheduled for screening in the SEAC meeting held on 24/02/2015 and additional information was sought. • PP submitted additional information on 13/05/2015. The proposal was further considered in the SEAC meeting held on 19/08/2015. After meeting, PP was further asked to submit the additional information. • Subsequently, on 20/01/2016, PP submitted the required information • Proposal was considered for screening and scoping during SEAC meeting held on 23.03.2016. <p>Project status: New</p>		

Project / Activity Details:

The proposed production activity falls in the project/activity 5(f) as per the schedule of the EIA Notificaiton-2006. Total plot area is 4000 m². Area of green belt is 1350 m². Total cost of project is 0.64 Cr.

Proposed product and raw materials are as under:

No.	Name of Product	Total Quantity (MT/Month)
1	Acetyl chloride	80
2	Chloroacetyl chloride	50
3	4-Chlorobutyryl chloride	50
4	Benzoyl chloride	80
5	Benzotrichloride (Captive Use)	100
6	2 Ethyl Hexonoyl chloride	50
7	Methoxy acetyl chloride	40
8	Octanoyl chloride	30
9	Lauroyl chloride	30
10	Lauryl chloride	30
11	3 – chloro propionyl chloride	50
Total		590

No.	Name of Byproduct	Total Quantity (MT/Month)
1	Sodium Bisulfite	583

Raw materials consumption will be as below:

Sr. no.	Name of Raw Material	MT/Month
1	Benzotrichloride	328.68
2	Acetic Anhydride	58.24
3	Chloroacetic Acid	22
4	Gammabutyro lactones	30.7
5	Thionyl chloride	185.83
6	Sodium hydroxide	60.79
7	Toluene	47.1
8	Chlorine	108.2
9	2-ethyl hexanoic acid	43.9
10	Methoxy acetic acid	32.72
11	Octanoic acid	21.75
12	Lauric acid	27.3
13	Lauryl alcohol	27.09
14	Acrylic acid	28.55
Total		1022.85

Water will be received from GIDC and details of consumption is as under:

Particulars	Water Consumption (Lit/Day)	Wastewater generation (Lit/Day)
Domestic	1500	1000
Gardening	2500	0
Industrial		
Process	500 (Recycle Boiler and Cooling Blow down)	0
Boiler	4000	300 (Reuse in Process)
Scrubber	13,000 (1000 Fresh + 12000 Condensate Recycle from inorganic plant)	0 (*30% HCl for reuse @ 18460 Lit/Day)
Cooling	2000	200 (Reuse in process)
Condenser		12000 (Condensate recycle to scrubber)
Total	23500 (11000 Fresh+12500 Recycle)	13500 (1000 Soak pit 12500 Recycle)

Details of flue gas emission is as under:

No.	Stack attached To	Capacity	Stack Ht (m)	APC Measures	SPM	SO ₂	NO _x
01	Themic Fluid Heater	6 Lakh Kcal/Hr	30 m	Multi cyclone dust collector	< 150 ³ mg/NM ³	< 100 ppm	< 50 ppm
02	Boiler	1 MT/Hr	30 m				
02	D.G.Set	100 KVA	5 m		--	< 100 ppm	--

Details of fuel consumption is as below:

Sr. No	Name of Fuel	Quantity
1	Bio fuel/Lignite	2 MT/Day
2	Diesel	10 Lit/Hr

Details of process gas emission is as below

No.	Stack attached To	Stack Ht (m)	APC Measures	Parameters	Permissible Limits
01	Process Vessel	11 m	Two Stage Scrubber System	HCl SO ₂	20 mg/NM ³ 40 mg/NM ³

1. Regarding complete details about the characteristics and treatability of the effluent with mode of disposal, PP informed that they have decided to achieve zero generation of process effluent by dropping 4 out of 5 effluent generating products (Namely Propionyl

Chloride, N-Valeryl Chloride, Iso butyryl chloride, trimethyl acetate chloride) and changing manufacturing process of remaining 1 product (Namely Chloro Acetyl Chloride) so that it does not generate process effluent. Further PP mentioned that they will use generated 30% HCl for manufacturing of inorganic products in their unit as a raw material, Boiler and Cooling blow down will be reused in process. PP clarified that inorganic products will be sold in dry solid form. Hence, PP will evaporate water/moisture part and recycle condensate water for manufacturing of organic products.

Sr.	Product	MT/Month Production	Water/moisture part need to evaporate		Condensate recycle	
			KL/Month	KL/Day	KL/Month	KL/Day
1	Potassium Chloride	300 MT/Month Alternative	413.51	16.54	289	12
2	Calcium Chloride		500.00	20.00	350	14
3	Zinc Chloride		414.18	16.57	290	12

PP informed the committee that about 486 MT/Month HCl will be required as a raw material for inorganic product. Whereas HCl generation from organic plant will be around 462 MT/Month. Hence, PP will require to purchase HCl as a raw material from outside for inorganic products. It was further stated by PP that in worst case, inorganic plant is not in operation, HCl may not be reused and under the circumstances, PP will not take production of organic product.

Details of Waste water generation and its reuse plan is as below:

Type	Particulars	Quantity (KL/Day)	Treatment	Management
Domestic waste water		1.0	--	Soak Pit
Industrial waste water	Cooling blow down	0.2	--	Reuse in process
	Boiler Blow Down	0.3	--	Reuse in process
	Scrubbing effluent	18.46	--	Reuse in manufacturing process of inorganic products.
	Condensate from inorganic plant	12	--	Reuse in scrubber

During presentation PP mentioned that there will not be discharge of treated waste water, Boiler and Cooling Blow Down will be reused in process, Scrubbing effluent will be 30% HCl, which will be reused in manufacturing process of inorganic products, Condensate from inorganic plant will be reused in scrubber and therefore unit shall pursue zero discharge protocol.

Regarding Soil analysis report of proposed project location at different places covering response level of contaminants including heavy metals to ensure that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants, PP informed that previously they proposed to use treated effluent for plantation purpose. Now, they have decided to achieve zero waste water generation of process by dropping 4 out of 5 effluent generating products and

changing manufacturing process of remaining 1 product so that it does not generate process effluent. Moreover scrubbing effluent is 30% HCl will be reused in manufacturing process of inorganic products. condensate generated and collected from inorganic plant will be recycled in organic plant. Boiler and Cooling blow down will be reused. PP further informed that they will use fresh water for Gardening purpose as per above reply.

PP submitted details of industries within 5 km vicinity as under:

Sr. No.	Industry name and Address	Nature of Industry	Nature of Industry
1	Vipson Chemicals Industries	S.No.202/9, Sokhada , Tal-Khambhat	Chemical Manufacturers
2	Shiv Organo Synthesis	S.No.193 , Sokhada , Tal-Khambhat	Chemical Manufacturers
3	Baroque Pharmaceuticals Pvt.Ltd	S.No.192/2 , Sokhada , Tal-Khambhat	Pharma Industry
4	Gujarat Industrial chemical Co.Pvt.Ltd	S.No.194/1 , Sokhada , Tal-Khambhat	Chemical Manufacturers
5	Sheetal Chemical Industries	S.No.194/1 , Sokhada , Tal-Khambhat	Chemical Manufacturers
6	Cambay Organics Pvt.Ltd	S.No.194/1 , Sokhada , Tal-Khambhat	Chemical Manufacturers
7	Tulsi Intermediates Pvt. Ltd	S.No.194/1 , Sokhada , Tal-Khambhat	Intermediates Manufacturers
8	Savita intermediates	S.No.194/1 , Sokhada , Tal-Khambhat	Intermediates Manufacturers
9	Unity Dye Chem Pvt.Ltd	S.No.194/2 , Sokhada , Tal-Khambhat	Dyes Manufacturers
10	Ambica chemical industries	S.No.299 ,Lunej , Tal-Khambhat	Chemical Manufacturers
11	Gujarat Halogen Petrochem Corpn.	S.No.293 ,Lunej , Tal-Khambhat	Chemical Manufacturers
12	Bromchem Labrotories Pvt.Ltd	S.No.292 ,Lunej , Tal-Khambhat	Chemical Manufacturers
13	Ambe Barium Industries	S.No.335 ,Lunej , Tal-Khambhat	Chemical Manufacturers
14	Technichem Organics Pvt.Ltd	S.No.347 ,Lunej , Tal-Khambhat	Chemical Manufacturers
15	Trans Atlantic Packaging Pvt.Ltd	S.No.263 ,Lunej , Tal-Khambhat	Packaging

PP has informed that onsite emergency plan will be prepared before the operation of the unit. Separate storage area will be provided for flammable materials like Acetic Anhydride, N-Valeric Acid, Iso-Butyric Acid, Toluene, Chlorine, Acrylic Acid, etc. As their flash point is below 98°C. PP mentioned that they will make provision of vent and stack gas detector with alarm where necessary. Based on the LD₅₀ (mg/Kg) the toxic chemicals used in unit will be as follows. Further it

was mentioned that provision for safety goggles, face mask, rubber hand gloves to the workers will be provided during handling of following chemicals:

Sr.No.	Name of Chemical	LD ₅₀
1.	3-Chloro Propionyl Chloride	1.2 mg/kg
2.	Gammabutyro Lactone	>=5 mg/kg
3.	Lauryl alcohol	12.8 mg/kg

PP has informed that they will appoint Qualified safety officer. and will maintain form – 37, GFR (Indicative of workplace pollution) for factory.

PP has submitted following details of hazardous waste generation:

Sr. No.	Type of Waste With Category No.	Total Quantity of Waste
01	ETP Waste (Category no.: 34.3)	1.2 MT/Year
02	Used Oil (Category no.: 5.1)	10 Liter/Year
03	Discarded Container/ Bags (Category no.: 33.3)	4 MT/Month
04	Distillation Residue (Category no.: 36.4)	1.0 MT/Month

Details of hazardous waste management is as under:

No	Type of Waste	Source of Generation	Collection	Treatment	Storage	Disposal

01	ETP Waste	ETP	H.D.P.E bags	Solar drying	Solid Waste Storage area	Collection, Storage, Transportation, Disposal at T.S.D.F Site
02	Used Oil	Lubrication of plant machineries	H.D.P.E. Carboys	---	Solid waste storage area	Sell to registered recycler
03	Discarded Containers /Bags	Raw material section	---	---	Solid waste storage area	Return back to raw material supplier/ authorized recycler/ Reuse for packing of ETP waste
04	Distillation Residue	Production area	H.D.P.E bags	---	Solid waste Storage area	Collection, Storage, Transportation, Disposal to CHWIF.

PP informed the following control measures will be provided:

Type of ETP Provided	Type of Air Pollution Measurement & control System	Type of Solid waste disposal
1.CollectionTank 2.Neutralization Tank. 3.PrimarySettlin Tank. 4. Holding Tank. 5. Holding Tank for HCl reuse. 6. Sludge Drying Bed	→ For Flue Gas emission: Multi cyclone dust collect → For Process gas emission: Two stage scrubber system	1.ETP Waste- disposal to TSDF Site 2.Used Oil- Sell to registered recycle 3.Discarded Containers/bags- Return back to raw material suppliers or will be reuse for packing of ETP waste or sale to registered recycler. 4.Distillation Residue- Disposal to CHWIF.

Details of storage of chemicals is as under:

RAW MATERIAL STORAGE DETAILS						
No.	Raw Material	Consumption per Month (MT)	Consumption per Week (MT) (At a time storage)	Sch-1	Threshold Quantity(MT)	
					Sch-2	Sch-3
1	Benzotrichloride	293.68	70.48	Sr.No .64(part II,Sch 1 of MSIHCR,1989	NA	NA
2	Acetic Anhydride	58.24	13.98	Sr.No .3(part II,Sch 1 of MSIHCR,1989	NA	NA
3	Chloroacetic Acid	42.15	10.12	Sr.No .115(part II,Sch 1 of MSIHCR,1989	NA	NA
4	Gammabutyrolactones	30.70	7.37	Not mentioned in MSIHCR but F.P.=98°C, Not flammable	NA	NA
5	Thionyl chloride	185.83	44.60	Sr.No .620(part II,Sch 1 of MSIHCR,1989	NA	NA
6	Sodium hydroxide	60.79	14.59	Sr.No .571(part II,Sch 1 of MSIHCR,1989	NA	NA
7	Toluene	47.10	11.30	Sr.No .628(part II,Sch 1 of MSIHCR,1989	NA	NA
8	2-ethyl hexanoic acid	43.90	10.54	Not mentioned in MSIHCR but F.P=79°C, Flammable	15,000	5000
9	Chlorine (Storage for 2 days: 1 Chlorine tonner is of 900kg, so 10	108.20	9	Sr.No .119(part II,Sch 1 of MSIHCR,1989	10	25

	tonners will be kept, so 9MT storage max)					
10	Methoxy acetic acid	32.72	7.85	Not mentioned in MSIHCR but F.P=28°C, Highly Flammable	10,000	2500
11	Octanoic acid	21.75	5.22	Not mentioned in MSIHCR but F.P=75°C, Flammable	15,000	5000
12	Lauric acid	27.30	6.55	Not mentioned in MSIHCR but F.P=140°C, Not flammable	NA	NA
13	Lauryl alcohol	27.09	6.50	Not mentioned in MSIHCR but F.P=121°C, Not flammable	NA	NA
14	Acrylic acid	28.55	6.85	Not mentioned in MSIHCR but F.P=50°C, Highly flammable	10,000	2500
15	Trimethyl acetic acid	46.44	11.15	Not mentioned in MSIHCR but F.P=-23°C & B.P=60°C, Very Highly flammable	7000	1500

Observations & Discussions:

After technical presentation and referring to the submission of PP dated 13/05/2015 and 20/01/2016, committee noted that waste water generating products have been dropped and there will not be waste water generation. Further undertaking has been submitted by the PP w.e.t.OM of MoEF&CC dated 25/06/2014 that their water consumption is less than 25 KLPD, fuel consumption is less than 25 MTPD and their unit is not covered under MAH category, committee considered the project under B2 category and the following additional information was sought for appraisal of the project.

1. Revised Form 1 and prefeasibility report.
2. Land possession document with copy of 7/12, 8A, 6A and certified copy of distance certificate of the nearest human habitation from the concern authority.
3. Details of surrounding industrial with details like Name and address of the unit, type and nature of industrial activity etc.
4. Demarcation of proposed activities in lay out plan. Exact details about infrastructural facilities, plant machineries etc. required for the proposed project.
5. Detailed manufacturing process along with chemical reactions and mass balance (including reuse-recycle, if any) for each product to be manufactured. Details on end use of each product. Give full name and chemical formula of all the raw materials and products.
6. Copy of permission obtained from concern authority for water supply.
7. Water consumption and consumption of each raw material per MT of each product.
8. Water balance diagram (including reuse-recycle, if any) along with qualitative and quantitative analysis of the each waste stream to be generated. A detailed treatability study vis-à-vis the adequacy and efficacy of the treatment facilities proposed for the wastewater to be generated.
9. Treated effluent management plan during monsoon season when utilization of treated effluent for gardening & plantation purpose is not feasible. Detailed study report considering Percolation rate of the land available for gardening & plantation.
10. Technical details of the ETP including size of each unit, retention time etc.
11. Action plan for 'Zero' discharge of effluent shall be included. Give qualitative and quantitative data with feasibility report for reuse of Mother Liquor in process again. Submit an undertaking in this regard.
12. Plan for management and disposal of waste streams to be generated from spillage, leakages, occasional reactor washing and exhausted media from Scrubber etc.
13. Explore the possibility of reuse / recycle and other cleaner production options for reduction of wastes. Details of methods to be adopted for the water conservation.
14. Specific details of (i) Process gas emission from each unit process with its quantification, (ii) Air pollution Control Measures proposed for process gas emission, (iii) Adequacy of the air pollution control measures for process gas emission measures to achieve the GPCB norms (iv) Details of the utilities required (v) Type and quantity of fuel to be used for each utility (vi) Flue gas emission rate emission from each utility (vii) Air Pollution Control Measures proposed to each of the utility along with its adequacy (viii) List the sources of fugitive emission along with its quantification and proposed measures to control it.
15. Details on management of the hazardous wastes to be generated from the project stating detail of storage area for each type of waste, its handling, its utilization and disposal etc. How the manual handling of the hazardous wastes will be minimized. Explore the possibilities for co-processing of the Hazardous waste/Solid waste prior to disposal into TSDF/CHWIF. Methodology of de-contamination and disposal of discarded containers and its record keeping.
16. Membership of Common Environmental Infrastructure including TSDF, Common Hazardous Waste Incineration Facility (CHWIF) along with an assessment to accommodate the additional quantity of wastes to be generated.
17. Complete Management plan for By-products/spent acid to be generated, (if any) from the project including their quantity, quality, characteristics, end use etc. along with the name and address of end consumers to whom the by-product will be sold. Copies of agreement / MoU / letter of intent from them, showing their willingness to purchase said by-products/spent acids from the proposed project.

18. Name and quantity of each type of solvents to be used for proposed production. Details of solvent recovery system including mass balance, solvent loss, recovery efficiency feasibility of reusing the recovered solvents etc. for each type of solvent. Leak detection and repairing programme (LDAR)for VOC
19. Data on air emissions, wastewater generation and solid / hazardous waste generation and management for the existing plant should also be incorporated. (Comparative data in tabular format).
20. Details of measures proposed for the noise pollution abatement and its monitoring.
21. A detailed EMP including the protection and mitigation measures for impact on human health and environment as well as detailed monitoring plan and environmental management cell proposed for implementation and monitoring of EMP. The EMP should also include the concept of waste-minimization, recycle/reuse/recover techniques, energy conservation, and natural resource conservation. Total capital cost and recurring cost/annum earmarked for environment pollution control measures.
22. Occupational health impacts on the workers and mitigation measures proposed to avoid the human health hazards along with the personal protective equipment (PPE) to be provided to the workers. Provision of industrial hygienist and monitoring of the occupational injury to workers as well as impact on the workers. Plan for periodic medical check up of the workers exposed. Details of work place ambient air quality monitoring plan as per Gujarat Factories Rules.
23. Details of hazardous characteristics and toxicity of raw materials and products to be handled and the control measures proposed to ensure safety and avoid the human health impact. MSDS of all the products and raw materials to be used. Permission from PESO, Nagpur for storage of solvents, other toxic chemicals, if any.
24. Details of quantity of each hazardous chemical to be stored, material of construction of major hazardous chemical storage tanks, threshold storage quantity as per schedules of Manufacture, Storage & Import of Hazardous Chemicals (MSIHC) Rules of major hazardous chemicals.
25. Details of the separate isolated storage area for flammable chemicals. Details of flame proof electrical fittings, DCP extinguishers and other safety measures proposed. Detailed fire control plan for flammable substances and processes showing hydrant pipeline network, provision of DG Sets, fire pumps, jockey pump, toxic gas detectors etc.
26. Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios should be carried out. The worst-case scenario should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the map clearly showing which of the facilities and surrounding units would be affected in case of an accident taking place. Based on the same, proposed safeguard measures including On-Site / Off-Site Emergency Plan should be provided.
27. Details of fire fighting system including provision for flame detectors, temperature actuated heat detectors with alarms, automatic sprinkler system, location of fire water tanks & capacity, separate power system for fire fighting, details of qualified and trained fire personnel & their job specifications, nearest fire station & time required to reach the proposed site. Submit line diagram of the fire hydrant network.
28. Submit checklist in the form of Do's & Don'ts of preventive maintenance, strengthening of HSE, manufacturing utility staff for safety related measures.
29. Detailed five year greenbelt development program including annual budget, types & number of trees to be planted, area under green belt development [with map], budgetary outlay; along with commitment of the management to carry out the tree plantation activities outside

the premises at appropriate places in the nearby areas and elsewhere.
30. A tabular chart with index for point-wise compliance of above.

The project shall be appraised after satisfactory submission of the aforesaid additional details with reference to revised Form 1 and PFR.

24. A.P.Process, Block NO: 413 paiki, Jornang-Jamnapur Road, At: Jornang, Post: Ambaliyasan, Ta & Dist: Mehsana, PIN: 382732

The above mentioned project proponent did not remain present during the meetin. It was decided to call them in one of the upcoming meetings of SEAC.

REPLY OF THE ADDITONAL INFORMATION SOUGHT

The additional information received from the project proponents, which was sought during various SEAC meetings for granting Environmental Clearance to the projects. The said submissions by the project proponents were considered by the committee during the meeting and as it was found satisfactory, the committee decided to recommend the following projects for grant of environmental clearance.

Sr. no.	Name & Address of the Project
1	M/s: Thermax Limited (Unit-I), Plot No. 903/1, GIDC Estate, Jhagadia, Dist.: Bharuch
2.	M/s: Valora Ply Wood Pvt. Ltd., S.no.1408/1, Vill. Bhachau, Ta.: Bhachau, Dist.: Kutch
3.	M/s: Ashapura Perfoclay Ltd., S.No.167,Vill:Ler, Bhuj, Kutch.
4	M/s: Kutch Plywood Industries, Survey.no.284, Village: Chopdava, Ta.: Bhachau, Dist.:Kutch
5	M/s: Josh Resins & Chemicals, Plot.No.1307/9, Phase-IV, GIDC- Naroda, Dist.: Ahmedabad.
6.	M/s: Laxmi Chemicals, Plot No.264, GIDC-II At: Dediyanan, Ta & Dist: Mahesana
7.	M/s: Tridev Industries, Plot no. D-2/CH/134, GIDC-Dahej, Ta.: Vagra, Dist.: Bharuch
8.	M/s: Kejriwal Integrated Textile Park Pvt. Ltd.Vill:Kareli, Plot No: 340, 341, 342, 328, 333, 357, 358, Ta.: Palsana, Dist.: Surat
9.	M/s: Shanti Integrated Textile Park Private Limited, S.No.338,339,340,341,342, 343,344,345, Navi Pardi, Ta.: Kamrej, Dist.: Surat
Replies received from the following cases were considered which were referred back by SEIAA in various meetings.	
10	Dorf Ketel Speciality Catalysts Pvt. Ltd., Survey no. 141(Part), Mundra Port & SEZ Ltd. (MPSEZ Ltd.), Mundra, Dist.: Kutch.

Project Details:

This is an existing unit engaged in manufacturing of various specialty chemicals with total production capacity of 55,000 MT/Annum and storage facility for ammonia - 150 MT. The unit is now proposing expansion by installation of one Ethylene Oxide (EO) storage tank within the existing premises. Existing activities as well as proposed expansion is as below:

Sr. No.	Name of Product	Capacity (MT / Annum)
	Existing	
1	TETRA - ISOPROPYL TITANATE (TPT)	10000
2	TPT BASED TITANATES : (i) TnBT (ii) ET-80 (Tetra Ethyl Titanate), (iii) Insocat-SD (Ehtyl Aceto Acetate Titanate Chelate) (iv) Insocat-SI (Ehtyl Aceto Acetate Isobutyl Titanate Chelate) (v) Insocat-TE (Tetra Triethanol Amine Titanate) (vi) Insocat-C6 (Tetra Ethyl Hexanol Titanate)	10000
3	COLD FILTER PLUG POINT (CFPP) PRODUCT: (i) SR 1649 (Ethylene - Vinyl Acetate Co-polymer in Solvent)	10000
4	PROCESS CHEMICALS : (i) SR 1008, NBMA (Antifoulants) (N-Butoxy Methacrylate) (ii) SR 1200 (Corrosion Inhibitors) (Imidazoline in Solvent) (iii) SR 2008 Long Chain Alkyl Carboxylic Acid (Lubricity Improver) (C16-C18 Fatty Acid in Solvent) (iv) SR 1125 (Demulsifier) (Blend of PB563, KB1303, KB3341 and Methanol) (v) SR 1795 (Antistatic Additives) (Blend of Dodecylbenzene Sulphonic Acid)	20000
5	HYDROGENATED ANTI OXIDANTS : (i) UOP 5 (N-N Disecbutyl Phenylene Diamine)	5000

	(ii) UOP 225 (N-N Butylamino Bisphenyl) (iii) CL 1000 (4-4" Butylamino Biscyclohexane)	
6	SALT OF AMMONIUM CHLORIDE (BY-PRODUCT)	11220
	Storage of Chemicals	
Sr. no.	Item	Storage Capacity
	Existing	
1	Storage Facility for Ammonia	150 MT
	Proposed	
2	Ethylene Oxide	24.3 MT

The proposed expansion activities fall in the project activity no. 6(b) of the schedule of Environment Impact Assessment Notification, 2006. As the unit is located in the Mundra Port & SEZ Ltd., it falls in category "B" of the schedule.

This proposal was recommended to SEIAA, Gujarat for grant of Environmental clearance vide dated 12/01/2016. The case was referred back by the SEIAA vide their letter no. SEIAA/GUJ/EC/6(b)/06/2016 dated 27/01/2016 for reconsideration to the SEAC based on the discussion in the SEIAA meetings held on 16/01/2016 with the following point: (1) Purpose of installation of proposed EO Storage tank. (2) Purpose of installation of additional TFH of 15 Lac K Cal / Hr (3) Details of water consumption and waste water generation with respect to the proposed expansion.

Project proponent vide their letter dated 22/02/2016, submitted the reply as below:

SR. No	Additional Information Required	Reply by Project proponent
1	Purpose of installation of proposed EO Storage tank.	<ul style="list-style-type: none"> The unit has a valid Environmental Clearance vide Ref No SEIAA/GU/EC/5(f) & 6(b)/28/2011 Dated 8 Feb 2011 for manufacturing 55,000 MT / Annum. The development was to be done phase wise. We had covered all the products, By Products, Water consumption, Waste Water Generation of Phase I & Phase II in the existing environmental clearance. In the phase I only 30,000 MT / Annum of the Product was planned to be manufactured. Based on the same for phase I the CCA – Ref AWH – 42532 Dated 29.06.2011 was also taken for 30,000 MT/ Annum. Now as a part of the Phase II they wish to achieve the

		<p>full manufacturing capacity of 55,000 MT/Annum as mentioned in the existing Environmental Clearance.</p> <ul style="list-style-type: none"> • One of the Product covered as per the existing Environmental Clearance SR-1125 was not being manufactured in Phase I. Now as a part of Phase II they are going to manufacture the same. • This requires EO to be procured from Reliance Industries as a raw material. • For the same, the additional Storage of Ethylene Oxide 24.3 MT is required. • Products and Capacities to remain the same as per the existing Environmental Clearance.
2	Purpose of installation of additional TFH of 15 Lac K Cal / Hr	<ul style="list-style-type: none"> • The unit has a valid Environmental Clearance vide Ref No SEIAA/GU/EC/5(f) & 6(b)/28/2011 Dated 8 Feb 2011 for manufacturing 55,000 MT / Annum. • The development was to be done phase wise. • In the phase I only 30,000 MT / Annum of the Product was planned to be manufactured. • Based on the same for phase I the CCA – Ref AWH – 42532 Dated 29.06.2011 was also taken for 30,000 MT/ Annum. • Now as a part of the Phase II they wish to achieve the full manufacturing capacity of 55,000 MT/Annum as mentioned in the existing Environmental Clearance. • Existing capacity of the Thermic fluid heater is inadequate for the manufacturing on full capacity as per the existing environmental clearance. • Hence a new Thermic fluid heater of 15 Lac K.Cal. /Hr. has been proposed. • The existing Thermic fluid heater of 4 Lac K.Cal./Hr. will be kept as standby.
3	Details of water consumption and waste water generation with respect to the proposed expansion.	<ul style="list-style-type: none"> • The unit has a valid Environmental Clearance vide Ref No SEIAA/GU/EC/5(f) & 6(b)/28/2011 Dated 8 Feb 2011 for manufacturing 55,000 MT / Annum. • The development was to be done phase wise. • We had covered all the products, By Products, Water consumption, Waste Water Generation of Phase I & Phase II in the existing environmental clearance. • Products and Capacities to remain the same as per the existing Environmental Clearance. – No Change • Water consumption (600 KLD) & waste water discharge (85 KLD Industrial + 15 KLD Domestic) to remain same as per the existing Environmental Clearance. – No Change.

The said reply was considered by the committee. During the meeting, committee noted that PP has submitted reply of point raised by SEIAA. The committee was satisfied with the clarification given by the project proponent and decided to forward the same to SEIAA for the grant of environment clearance with the same conditions which were prescribed earlier in the recommendation letter dated 12/01/2016:

11. **Atul Ltd.**, Survey no. 274, 275 & 276, At & Post : Atul, Dist.: Valsad.

Project Details:

This is an existing chemical manufacturing complex and unit has applied for additional CPP as tabulated below:

Sr. no.	Product Name	Production Capacity		
		Existing	Proposed	After Expansion
1.	Captive Power plant (CPP)	34 MW	22 MW	56 MW

The project falls under the category 'B' of project / activity no. 1(d) in the Schedule of the EIA Notification, 2006.

This proposal was recommended to SEIAA, Gujarat for grant of Environmental clearance vide dated 17/02/2016. The case was referred back by the SEIAA vide their letter no. SEIAA/GUJ/EC/1(d)/164/2016 dated 24/02/2016 for reconsideration to the SEAC based on the discussion in the SEIAA meetings held on 19/02/2016 with the following point: (1) Detailed action plan for ZLD considering the waste water characteristics at different stage including feasibility to reuse completely with scientific calculations. (2) Justification regarding reuse of waste water in fire hydrant top up. (3) Action plan for ZLD during monsoon season. (4) Details of waste water management for the existing (i.e. 34 MW) and proposed (i.e. 22 MW) CPP. (5) Latest compliance status for ToR no. 43.

Project proponent vide their letter dated 11/03/2016, submitted the reply as below:

Points/Issues	Reply by Project proponent
(1) Detailed action plan for ZLD considering the waste water characteristics at different stage including feasibility to reuse completely with scientific calculations.	<p>After proposed expansion, total 270 KLD of wastewater will be generated from industrial activity. Total quantity of wastewater will be reused for coal quenching, ash quenching and fire hydrant top up. Hence, no wastewater will be disposed outside the factory premises in order to achieve zero discharge norms. Stage wise characteristics of wastewater are submitted. This wastewater can be utilized for the above said purposes. Detailed action plan for ZLD is given in EIA report Page no: 284-285, chapter-8.</p> <p>Scientific Calculation for reuse of wastewater</p> <p>(a) Waste water required for coal quenching – 100 KLD Coal consumption – 552 MT/Day & Average water requirement while feeding of coal - 55 KLD (10% of coal consumption) 15 Days coal stock – 8280 MT & average water required for spraying on coal - 82 KL (1%). Total water required for Coal quenching & coal feeding is – 137 KLD (55 KLD+82 KLD).</p> <p>(b) Waste water required for Ash quenching– 90 KLD Ash generation- 220.8 MTD (about 40% of coal consumption). Bed ash Gen- 20% of total ash generated = 44 MT & Water spray for bed ash</p>

	<p>quenching – 22 KL (50 % of 44 MT). Fly ash Generation – 80% of total ash generation = 177 MT. Water required for fly ash - 63 KL (35% of 177 MT). Water for sprinkler arrangement - 10 KL. Total water required – 95 KL (22 KLD + 63 KLD + 10 KLD).</p> <p>(c) Water for other fire hydrant top up & other purposes - 80 KL/ day It is being used for gardening, road cleaning, plants floor cleaning and Fire hydrant sump make up For Gardening - 40KL/ Day, Plants floor cleaning – 20 KL/Days, Sump make up – 20 KL/DAY (to meet the evaporation loss and trial runs). Total water required – 80 KLD (40 KLD + 20 KLD + 20 KLD).</p>
(2) Justification regarding reuse of waste water in fire hydrant top up.	Quantity of water for fire hydrant top up & other purposes - 80 KL/ day. It is being used for gardening, road cleaning, plants floor cleaning and Fire hydrant sump make up. For Gardening - 40KL/ Day, Plants floor cleaning – 20 KL/Days, Sump make up – 20KL/DAY (to meet the evaporation loss and trial runs). Total water required – 80 KLD (40 KLD + 20 KLD + 20 KLD).
(3) Action plan for ZLD during monsoon season.	During monsoon, the waste water consumption will be as below: (a) For coal – 100KL/day. (b) For ash – 90 KL/Day (a) For fire hydrant top up & other purposes - 80 KL/ day. The above quantity of wastewater will be required during monsoon also, as coal will be stored in closed storage yard and ash in silo. Hence, water will be required for coal quenching before feeding, sprinkling on the coal stock in the storage yard and ash quenching. Hence the wastewater consumption quantity is justified during monsoon also.
(4) Details of waste water management for the existing (i.e. 34 MW) and proposed (i.e. 22 MW) CPP.	<p>From the existing 34 MW CPP, wastewater generation will be 2749 KLD. Out of this, wastewater will be partially reused for coal quenching, ash cooling and remaining will be treated in the existing 20 MLD ETP.</p> <p>For the proposed 22 MW CPP, wastewater generation will be 270 KLD, out of which 100 KLD will be reused for coal quenching, 90 KLD for ash cooling and 80 KLD will be reused for fire hydrant top up and other purposes.</p>
(5) Latest compliance status for ToR no. 43.	<p>Compliance status of existing unit with respect to EC, CC&A orders and records of notices are submitted.</p> <p>PP has already closed their Mercury based Caustic plant since 20/10/2015. A letter sent to CPCB in this regard is submitted.</p>

The said reply was considered by the committee in the meeting of the SEAC held on 23/03/2016. During the meeting, committee noted that PP has submitted reply of point raised by SEIAA. The committee was satisfied with the clarification given by the project proponent and decided to forward the proposal to SEIAA for the grant of environment clearance by putting additional specific condition as below and with rest of conditions same as prescribed earlier in the recommendation letter dated 07/02/2016:

1. All measures shall be taken to prevent soil and ground water contamination.

2. The project proponent shall submit the detailed study report to Gujarat Pollution Control Board (GPCB) at least once in a year comprising details of percolation rate of surface water, ground water analysis and observations of contamination to soil & ground water (If any) and mitigation measures to curb ground water & Soil contamination.

12. Birla Cellulosic (A Unit of Grasim Industries) at Survey no.155-181,183,184,202,205,219, Birladham, Kharach, Kosamba (R.S.), Dist: Bharuch

Project Details:

This is a proposal for setting up of solvent spun cellulosic fibre plant with a production capacity of – 1,09,500 TPA and coal based Captive Power Plant of 71 MW (15 MW + 56 MW) capacity within the existing premises of Birla Cellulosic plant at Kharach. The proposed activities fall in the project/activities 5(d) and 1(d) respectively. Proposed products are listed as below:

Sr. no.	Name of Products	Quantity
1.	Solvent Spun Cellulosic Fibre	109500 MT/Annum
2.	Captive Power Plant	71 MW

This proposal was recommended to SEIAA, Gujarat for grant of Environmental clearance vide dated 09/02/2016. The case was referred back by the SEIAA vide their letter no. SEIAA/GUJ/EC/5(d) & 1(d)/153/2016 dated 19/02/2016 for reconsideration to the SEAC based on the discussion in the SEIAA meetings held on 16/01/2016 with the following point: (1) Capacity and Condensate recovery of MEE.

Project proponent vide their letter dated 22/03/2016, submitted the reply as below:

The water requirement for the proposed cellulosic fibre plant and new CPP will be about 12069 m3/d. Water requirement of 7962 m3/d will be obtained from Kim River and balance water requirement shall be met through recycled water from RO and condensate from multiple effect evaporators (MEEs). Out of total effluent generation of 7149 m3/d, 4149 m3/d will be fed to RO and balance 3000 m3/d will be treated in the ETP comprising of primary and secondary treatment facility. RO permeate 3319 m3/d will be reused back in the process and RO reject will be routed through MEEs (evaporation capacity of 28 m3/h). The Industry has planned to install 2 nos. of MEE which will have a combined capacity to process 1344 m3/d (672 m3/d capacity each). 788 m3/d of condensate will generate from this operation. Condensate (788 m3/d) from MEE will be reused for sprinkling on coal heaps/cooling/process depending on condensate characteristics, while the salts after drying will be disposed off in the authorized land filling facility TSDF BEIL-Ankleshwar. The treated effluent from ETP will be discharged into the Kim estuary (latitude is 21° 27' 35" North and longitude is 72° 45' 01"East) through 24 km long existing pipeline. The water balance for existing plant as well as for proposed expansion is submitted. The industry has an existing effluent treatment facility designed for treatment of 24000 m3/d of wastewater generated from the existing process operations. The treatment facility comprises clarifiers 2 nos. of 700 m3 capacity each collecting wastewater from spinning zone. The effluent is then routed to pump suction pit. The wastewater emanating from viscose, spg, auxiliary units, CS2/H2SO4, WTP and Demineralization plant is routed through screening and grit removal to pump suction pit. From here the combined effluent is again routed through screens to primary clarifier of 2900 m3 capacity further to equalization tank of 300 m3 capacity. Urea and DAP are added as nutrients and the effluent is further routed to aeration tank for removal of organic matter. The aeration tank is

provided with 12 aerators 4 of 20 HP & 8 of 40 HP capacity for oxygenation and mixing. The mixed liquor after secondary clarification in secondary clarifiers of 2900 m³ capacity is collected in final effluent pump house from where it is discharged into Kim estuary for final disposal. The sludge collected from clarifiers is thickened in sludge thickener 2 nos. each of 300 m³ capacity and then routed to belt filter press for further dewatering. The leachates are again routed pump suction pit while the dried cakes are sent to TDSF BEIL-Ankleshwar for final disposal. The performance of existing effluent treatment facility was assessed by collecting effluent samples from inlet and outlet of ETP and analyzed for various physico-chemical parameters. The final treated effluent conforms to the discharge standards stipulated by GSPCB. The wastewater generation from existing plant is 11500 m³/d while the anticipated wastewater generation from proposed expansion is 7149 m³/d of which only 3000 m³/d will be treated in a separate effluent treatment facility comprising primary settling followed by extended aeration activated sludge process. Further, the anticipated treated effluent quantity of 14500 m³/d (existing 11500 m³/d and proposed 3000 m³/d), including expansion, will not exceed the design capacity of 16000 m³/d of the laid 24 km pipeline due to proposed expansion.

The said reply was considered by the committee in the meeting of the SEAC held on 23/03/2016. During the meeting, committee noted that PP has submitted reply of point raised by SEIAA. Committee noted that due to reuse of MEE condensate requirement of fresh water will be reduced. The committee was satisfied with the clarification given by the project proponent and decided to forward the proposal to SEIAA for the grant of environment clearance by replacing the Condition No. 3 and 9 as below and with rest of conditions same as prescribed earlier in the recommendation letter dated 09/02/2016:

Condition no. 3

“Water requirement for the proposed expansion shall not exceed 12069 KL/day. Additional fresh water requirement shall be 7962 KL/day as unit shall reuse RO permeate 3319 KL/day from RO plant and 788 KL/day of MEE Condensate.”

Condition no. 9

“R.O permeate (3319 KL/day) shall be reused back in the process and R.O reject (830 KL/day) shall be subjected to MEE (Multiple Effect Evaporator). Condensate (788 KL/day) from MEE shall be reused and MEE salts after drying shall be disposed off in the authorized TSDF site.”

The following project proponent has requested for ToR amendment which was considered by the Committee.

13. Grasim Industries Ltd.(Chemical Division), Plot No-1,GIDC Industrial Estate ,Vilyat, Taluka-Vagra, Dist.: Bharuch.

This project was issued TOR on the 266th meeting of SEAC dated 27/11/2015 at sr. no. 23 and was communicated to project proponent vide letter no. EIA-10-2015-7235-E-302 dated 11/02/2016.

Project proponent has requested to amend the TOR vide their letter no. NIL dated 22/02/2016 for correction regarding Public Hearing.

Committee noted that the Vilayat Industrial estate was notified area which was established before EIA Notification 2006. The project is located within the notified industrial estate of Vilayat and hence does not require public consultation as per para 7(i) III (b) of EIA Notification 2006. Committee noticed that typographical error has inadvertently been made and Public hearing was included in the minutes of said

project in the SEAC meeting dated 27/11/2015. After deliberation, committee decided to amend the ToR of said project as below:

TOR no. 61 shall be treated as cancelled and last paragraph of the ToR shall be read as follows:

“The above mentioned project specific TORs/additional TORs and the model TORs available in the MoEF’s sector specific EIA Manual for CETP shall be considered as generic TORs for preparation of the EIA report in addition to all the relevant information as per the generic structure of EIA given in Appendix III in the EIA Notification, 2006. The project shall be appraised on receipt of the EIA report.”

Meeting was ended with thanks to the Chair and the Members.

Minutes approved by:

1.	Shri T. P. Singh, Chairman, SEAC.	
2.	Shri V. C. Soni, Vice Chairman, SEAC.	
3.	Shri R. J. Shah, Member, SEAC.	
4.	Dr. V. K. Jain. Member, SEAC.	
5	Shri V.N. Patel, Member, SEAC.	
6	Hardik Shah, IAS, Secretary, SEAC	