Minutes of the 551st meeting of the State Level Expert Appraisal Committee held on 25/09/2019 at Committee Room, Gujarat Pollution Control Board, Sector 10-A, Gandhinagar.

The 551st meeting of the State Level Expert Appraisal Committee (SEAC) was held on 25th September 2019 at Committee Room, Gujarat Pollution Control Board, Sector 10-A, Gandhinagar. Following members attended the meeting:

1. *Dr. Dinesh Misra, Chairman, SEAC*
2. *Shri S. C. Srivastav, Vice Chairman, SEAC*
3. *Shri V. N. Patel, Member, SEAC*
4. *Shri Rajesh I Shah, Member, SEAC*
5. *Shri A.K. Muley, Member, SEAC*
6. *Shri N.M. Tabhani, Secretary, SEAC*

The agenda of TOR/Scoping cases, Reconsideration cases and Appraisal were taken up. The applicants made presentations on the activities to be carried out along with other details furnished in the Form-1, PFR, EIA-EMP reports and other reports.

07.	SIA/GJ/IND2/34142/2019	**M/s. Omega Pharmaceuticals** Plot No. 119,120,121,122,123,149, 150,151 GIDC Estate, Wadhwan City, Dist - Surendranagar	Appraisal

Category of the unit : 5(f)

Project status: Expansion

- PP has submitted online application vide no. SIA/GJ/IND2/34142/2019 dated 13/09/2019 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 25/06/2019.
- Project proponent has submitted EIA Report prepared by M/s: Excel Enviro tech based on the TOR issued by SEIAA
- This is an existing unit engaged in Synthetic organic chemicals and now proposes for expansion as tabulated below:

Sr. no.	Name of the Products	CAS no. / CI no.	Quantity kg/Month			End-use of the products
			Existing	Proposed	Total	
1	Tablets	--	24 Lakh/Month (2880 kg/month)	--	24 Lakh/Month (2880 kg/month)	Healthcare
2	Capsules	--	5.8 Lakh/Month	--	5.8 Lakh/Month	Healthcare

			(350 kg/month)		(350 kg/month)		
3	Liquid Orals	--	30,000 Bottle/Month (9000 kg/month)	--	30,000 Bottle/Month (9000 kg/month)	Healthcare	
4	Ointments	--	150 kg/Month	--	150 kg/Month	Healthcare	
5	Buprenorphine Hydrochloride/ Buprenorphine Base	53152-21-9/52485-79-7	--	50	50	Healthcare	
6	Eflornithine Hydrochloride	67037-37-0	--	100	100	Healthcare	
7	Fentanyl Citrate/ Fentanyl Base	990-73-8/437-38-7	--	3	3	Healthcare	
8	Naloxone Hydrochloride	23277-43-2	--	50	50	Healthcare	
9	Naltrexone Hydrochloride	51481-60-8	--	50	50	Healthcare	
10	Methadone Hydrochloride	1095-90-5	--	100	100	Healthcare	
		Total	**12380**	**353**	**12733**		

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- PP was called for presentation in the SEAC meeting dated 25/09/2019
- Salient features of the project are as under:

Sr. No.	**Particulars**	**Details**
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	Existing: 2.3 Crores Proposed: 2 Crores Total: 4.3 Crores
B	**Total Plot area** (sq. meter)	Existing: 5985 Sq. m. Proposed: 0 Sq. m. Total: 5985 Sq. m.
	Green belt area (sq. meter)	Existing: 120 Sq. m. Proposed: 1855 Sq. m. Total: 1975 Sq. m.
C	**Employment generation**	Existing: 28 Proposed:12 Total:40
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	Wadhwan Nagarpalika
	Status of permission from the concern authority.	Water available from local authority

ii **Water consumption (KLD)**

Category	Existing KLD	Proposed (Additional) KLD	Total after Expansion KLD	Remarks
(A) Domestic	0.9	1	1.9	-
(B) Gardening	0	5	5	-
(C)Industrial				
Process	0.3	1.4	1.7	-
Washing	0	0.2	0.2	-
Boiler	0	2.4	2.4	-
Cooling	-	-	-	-
Others	-	-	-	-
Industrial Total	0.3	4	4.3	-
Grand Total (A+B+C)	**1.2**	**10**	**11.2**	-

Note - **: Will include the reuse quantity of treated domestic waste water.

1) **Total water requirement** for the project: 11.2 KLD
2) Quantity to be **recycled**: 0.0 KLD
3) Total **fresh water** requirement: 11.2 KLD

iii **Waste water generation (KLD)**

Category	Existing KLD	Proposed (Additional) KLD	Total after Expansion KLD	Remarks
(A) Domestic	0.7	0.8	1.5	Septic tank/soak pit
(B) Gardening	-	-	-	
(C)Industrial				
Process	0.5	1.5	2	Primary treatment & Evaporation
Washing	0	0.2	0.2	
Boiler	0	0.3	0.3	
Cooling	-	-	-	
Others	-	-	-	
Industrial Total	**0.5**	**2**	**2.5**	
Grand Total (A+B+C)	**1.2**	**2.8**	**4**	

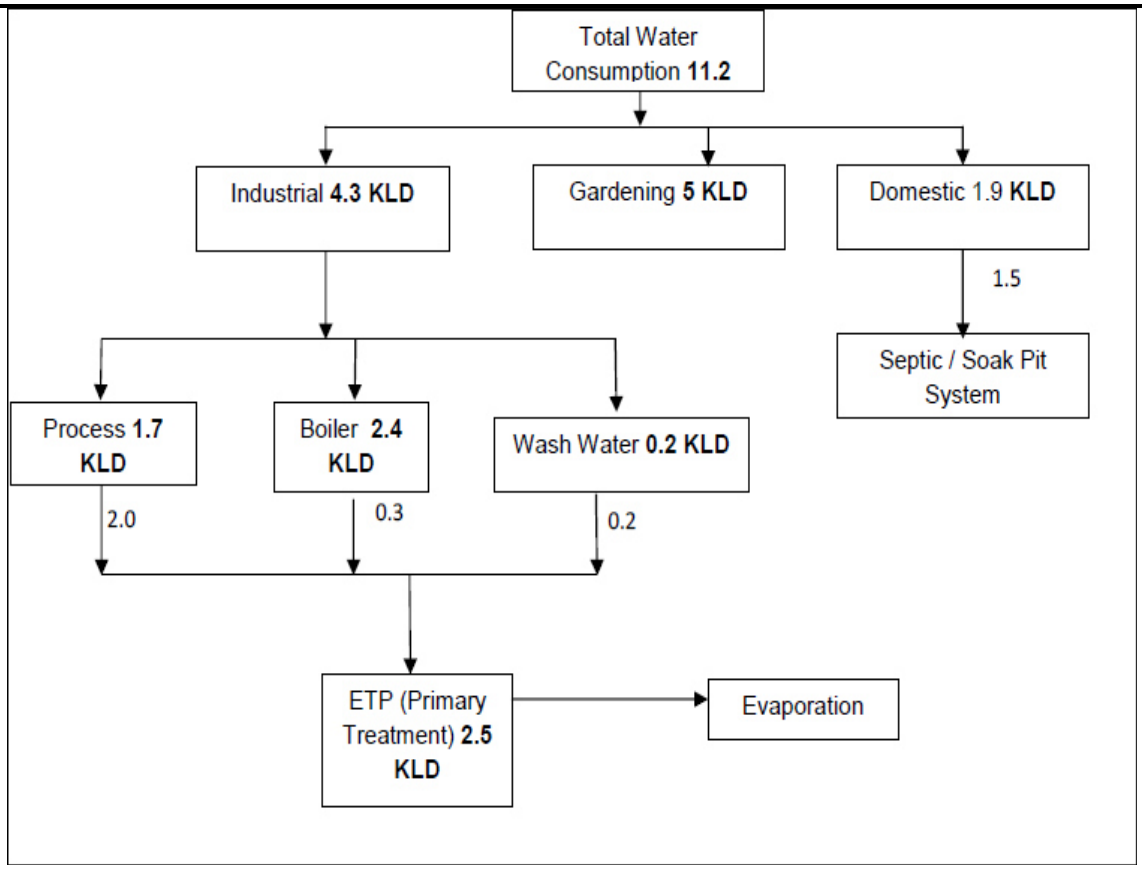
Waste water from process and APCM will be neutralized in ETP and then evaporated in MEE. The concentrate from MEE shall be further treated in ATFD and condensate from MEE after treatment shall be reused.

iv Treatment facility within premises with **capacity**

[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc.

- ETP (Primary Treatment) – 2.50 KLD Capacity
- Collection cum Neutralization Tank – 1.44 m^3
- Filter Press – 0.5 m^3 / hour
- Storage Tank – 2.64 m^3
- Evaporator – 500 L/hour (5 Hours working)

	Treatment scheme including segregation at source. • Effluent generated would be collected in collection cum neutralization tank and neutralized. From neutralization tank it would be taken to filter press where solids would be removed and then evaporated in in-house evaporator.	
	Note: (In case of CETP discharge) : **Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP.** ➢ Not Applicable	
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ There would not be any discharge into environment. The wastewater generated shall be evaporated in in-house evaporator. The domestic effluent shall be treated in septic tank / soak pit system.	
v	Mode of Disposal & Final meeting point	
	Domestic:	Soak Pit/Septic tank
	Industrial:	Evaporation in in-house evaporator
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ **NOT APPLICABLE.**	
	Membership of Common facility (CF) **(For waste water treatment) NOT APPLICABLE.**	
vii	**Simplified water balance diagram with reuse / recycle of waste water**	



viii Reuse/Recycle details (KLD)

Total reuse 0 KLD

Source of waste water for reuse with quantity in KLD	Application area with quantity in KLD	Remarks regarding feasibility to reuse i.e. w/w characteristics (COD, BOD, TDS etc.)
None		

E Air

i Flue gas emission details

No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc.

Sr. No.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1	Boiler	12 Meter	Agrowaste / Briquettes	70 kg/hour	PM < 150 mg/Nm3 SO2 < 100 ppm NOx < 50 ppm	Multicyclone

-

ii Process gas emission details i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)

Sr. no.	Specific Source of emission(Name of the Product & Process)	Type of emission	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
Not Applicable				

iii **Fugitive emission** details with its mitigation measures:

- Regular sprinkling of water, pacca road shall be constructed & green belt shall be provided within premises to prevent fugitive emissions due to vehicular movement. Regular maintenance of vehicles.
- General control measures like routine & regular inspection to identify leakage, preventive maintenance and operational maintenance, provision of leak detection and repair system (LDAR).
- Management to ensure proper handling of the spillages during transfer, charging operation and provision of a Dust Collection System for collection of the air borne material wherever applicable.
- Preventive maintenance of flange connections and glands of pumps.
- Management will also ensure proper usage of the Personnel Protective Equipment by the workers.
- Closed handling system shall be provided for chemicals.
- Reflux condenser to be provided over the reactor.
- The acids shall be taken from storage tanks to reactor through closed pipeline. Storage tanks shall be vented through trap receiver and condenser operated on chilled water.
- Fugitive emissions in the work zone environment, product raw material storage area shall be monitored regularly.

F **Hazardous wastes**

(as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.

i

Sr. No.	Type/Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules.	Quantity(MT/Annum)			Management of HW
				Existing	Proposed	Proposed total	
1	Distillation residues	Solvent Recovery	20.3	--	3 MT/Year	3 MT/Year	Collection, Storage, Transportation and Disposal at CHWIF of SEPPL
2	Spent Catalyst	From Manufacturing process	28.2	--	0.675 MT/Year	0.675 MT/Year	Collection, Storage, Transportation and Disposal at TSDF of SEPPL
3	Spent Carbon	From Manufacturing process	28.3	--	0.26 MT/Year	0.26 MT/Year	Collection, Storage, Transportation and send to cement co-processors or TSDF
4	Spent Solvent	From Manufacturing process	28.6	--	227 MT/Year	227 MT/Year	Collection, storage, reused within process or disposal to solvent recyclers or CHWIF. MOU with HETU Industries for accepting Spent Solvent has been done

	5	Stripped Solvent	From stripper in ETP	28.6	-	40 MT/Year	40 MT/Year	Collection, storage, reused within process or disposal to solvent recyclers or CHWIF.
	6	Off specification products / Date Expired Medicines	From Manufacturing process	28.4 / 28.5	0.8 MT/Year	0.5 MT/Year	1.3 MT/Year	Collection, Storage, Transportation and Disposal at CHWIF
	7	ETP Sludge	From Effluent Treatment Plant	35.3	0.061 MT/Year	5 MT/Year	5.061 MT/Year	Collection, Storage, Transportation and Disposal at TSDF site
	8	Spent Resin Containing Toxic Chemicals	Raw water Treatment Plant	34.2	0.10 MT/Year	---	0.10 MT/Year	Collection, Storage, Transportation and Disposal at TSDF site
	9	Evaporation Residue	From Effluent Treatment Plant	37.3	--	7.0 MT/Year	7.0 MT/Year	Collection, Storage, Transportation and Disposal at TSDF.
	10	Discarded Containers Drums / Used Bags	Storage of Raw Materials and Products	33.1	22 Nos/Year --	Whatever Generated	22 Nos/Year	Sold to authorized vendors
						1 MT/Year	1 MT/Year	Sold to authorized vendors

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	Membership of CHWMF at Detox India Pvt Ltd BHACHAU obtained
iii	Details of Non-Hazardous waste & its disposal (MSW and others)	Domestic Waste: To soak pit
G	**Solvent management**, VOC emissions etc.	
i	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)	

Solvents	Quantity Used In kg/Month	Quantity Recovered in Kg/Month	% recovery
Acetone	405.12	327.27	80.8
Acetonitirile	857.7	698.2	81.4
Chloroform	275.0	262.5	95.45
Cyclohexane	1067.5	100.3	939
Cyclo Propyl Methyl Bromide	37.5	--	0
Cyclopropyl methyl Ether (CPME)	6278.1	5555.0	88.48
Ether	2300.0	2362.5	0.91

	Ethyl Acetate	275.0		
	Hexane	1500.0	682.5	45.5
	Isopropyl Alcohol	6675.0	3939.0	59.01
	Methanol	2350.0	2140.0	91.06
	Methanol	1206.0	90.5	0.08
	THF	51.7		
	Methyl Vinyl Ketone (MVK)	52.5	277.5	0.91
	Toluene	250.0		
	Methylene Chloride (MDC)	909.1	818.2	90
	N Propanol	321.4	292.9	91.1
	P-Diethyl Benzene	975.6	269.3	27.6
	Tetrahydrofuran (THF)	628.04	527.6	0.35
	Toluene	853.65		
	Toluene	850.0	575.0	0.67
	Triethyl Amine	599.2	--	0

Remaining solvent will be consumed in process and being very small quantity, it its not feasible to recover the solvent

ii VOC emission sources and its mitigation measures

Mitigation Measures:

- Management to ensure proper handling of the spillages during transfer, charging operation and provision of a Dust Collection System for collection of the air borne material wherever applicable.
- Preventive maintenance of flange connections and glands of pumps.
- Management will also ensure proper usage of the Personnel Protective Equipment by the workers.
- Regular Work Place Monitoring, Ambient Air, Stack Air Monitoring to be done.
- Proper identification on discharge line.
- Providing arrangements to avoid static sparks.
- Take care of adverse weather conditions.
- Providing Explosion Vents in spaces with possibility of air-vapour mixtures.
- Smoke detectors or heat detectors to be provided in storage or process area.

H **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Storage tanks	None	---
Drum/Barrel storage	All liquid raw material shall be stored in drum / barrel,	---

- **Applicability of PESO** : Not Applicable

- During the meeting dated 25/09/2019, technical presentation made during the meeting by project proponent.
- During the meeting, the project was appraised based on the information furnished in the EIA Report, and

details presented during the meeting.

- The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic aspect. The baseline environmental study has been conducted for the study area of 10 km radial distance from project site for the period March 2019 to May 2019. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, NOx at eight locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The incremental Ground Level Concentration (GLC) has been computed using AERMOD model. The resultant concentrations are within the NAAQS. The modelling study proved that the air emissions from the proposed plant would not affect the ambient air quality of the region in any significant manner. The ambient air quality around the proposed project site will remain within the National Ambient Air Quality Standards (NAAQS).
- Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios has been carried out. The detail proposed safeguard measures including On-Site / Off-Site Emergency Plan has been covered in the RA report.
- This unit was established well before year 2006. They have valid CC&A for existing unit. Copy of CC&A, its compliance report is submitted. PP ensured that there are no court cases pending and no public complaints against the project.
- During SEAC meeting, PP ensured that this unit is having valid CC&A for existing unit. Copy of CC&A, its compliance report is submitted. PP ensured that there are no court cases pending and no public complaints against the project. PP ensured that no legal action taken against unit by GPCB. Committee asked about compliance of specific ToR regarding adequacy of evaporator and stage wise reduction in effluent parameter in ETP units, PP informed briefly regarding adequacy of ETP and closed in-house evaporator for industrial effluent treatment with its characteristics and informed that industrial effluent passing through solvent stripper before sending it to in-house evaporator. Agro waste will be used as fuel for boiler. Committee deliberated on cleaner production, BAT, LDAR of proposed project and PP informed briefly regarding cleaner production and BAT and LDAR for proposed project. Committee asked regarding Hazardous waste management and PP informed regarding Hazardous waste management as per HWRules'2016.
- Committee also deliberated on baseline data, ambient air quality, surface water and ground water quality and Noise, EMP, need based CER with details of budgetary provisions and green belt development etc.
- Compliance of the ToR was found satisfactory.
- **After detailed discussion, it was decided to recommend the project to SEIAA Gujarat for grant of Environmental Clearance.**

08.	SIA/GJ/IND2/21137/2017	**M/s. Meghmani Finechem Ltd.** Plot No.: CH-1/ CH-2,GIDC Estate, Dahej, Ta - Vagra, Dist - Bharuch	Appraisal

Category of the unit : 5(f)

Project status: Expansion

- PP has submitted online application vide no. SIA/GJ/IND2/21137/2017 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 16/05/2019.
- Project proponent has submitted EIA Report prepared by M/s: Anand consultants based on the TOR issued by SEIAA
- This is an existing unit engaged in Synthetic organic chemicals and now proposes for expansion as tabulated below:

S. No.	Name of Products	CAS No. / CI No.	Quantity (MT/Month)			End use of products
			Existing	Proposed	Total	
A	**Chlor - Alkali Units**					
1	Caustic Soda	1310-73-2	33,600	Nil	33,600	Pulp, Paper, Textile, ETP & Other Organic and inorganic chemicals
	OR					
	Caustic Soda	1310-73-2	33,600	Nil	33,600	
	Caustic Potash	1310-58-3	33,600 (31,800 Caustic Soda + 1,800 Caustic Potash)	Nil	(31,800 Caustic Soda + 1,800 Caustic Potash)	Raw material for Soap, detergent, Fertilizer
2	Chlorine Gas	7782-50-5	29,770	Nil	29,770	Dyes intermediate, pharmaceutical
3	Hydrogen Gas	1333-74-0	840	Nil	840	Petroleum refining, pharmaceutical
4	30 % Hydrochloric Acid	7647-01-0	15,166	Nil	15,166	ETP, refinement of ore, animal nutrient
5	Sodium Hypochlorite	7681-52-9	2,916	Nil	2,916	Water purification, textile, Dyes
Total			**82292**		**82292**	
B	**Power Generation Unit**					
1	Captive Power Plant	--	132 MW	Nil	132 MW	Use for Chlor-Alkali & Synthetic Organic Products
2	Steam (including			**300 TPH***		Use for process

	process & power)		650TPH		950 TPH	operations

***Technical justification regarding need of proposed 300 TPH steam boiler is given in table below:**

Sr. No.	Description	Quantum of Steam (TPH)	Remarks
1.	33% standby in case of shutdown of any of our power plant turbines.	100 TPH	In case of failure of a power plant, we would be able to get power supply from the grid. However, the low-pressure steam that was generated at the turbine outlet of the power plant would be missed and would therefore have to be replaced by another steam source for our production activity.
2.	Steam required for our new products.	200 TPH	Distillation, Steam cracking process
Total		300 TPH	--

C Synthetic Organic Units

S. No.	Name of Products	CAS No. / CI No.	Quantity (MT/Month)			End use of products
			Existing	Proposed	Total	
1	Epichlorohydrin (ECH)	106-89-8	2,500	1667	4167	Epoxy resins, glycerin, polymers, coagulant
2	Epoxy Resins	61788-97-4	2,500	1667	4167	Coatings, electronic materials, adhesives, and fiber-reinforced compounds
3	Monochloro Acetic Acid	79-11-8	-	5000	5000	In manufacturing of carboxy methyl cellulose
4	Poly Aluminium Chloride	1327-41-9	2,500	Nil	2,500	Deodorants and antiperspirant, w/w treatment and paper sizing.
5	Meta PhenoxyBenzaldehyde Alcohol	13826-35-2	200	Nil	200	Synthetic organic chemicals
6	Dichloro Benzene (Ortho/ Meta/ Para)	95-50-1/ 541-73-1/ 106-46-7	6,000	Nil	6,000	Disinfectant
7	Trichloro Benzene (1,2,4/1,2,3)	120-82-1/ 87-61-6	1,200	Nil	1,200	Dyes and organic chemicals
8	Chloro Benzene	108-90-7	6,000	Nil	6,000	Drug, rubber, paint

9	Chlorinated Poly Vinyl Chloride (CPVC)	68648-82-8	4,200	Nil	4,200	Plastic Pipe
9A	Low grade CPVC and PVC resin powders	-	2,100	Nil	2,100	Plastic Pipe
10	**Chloromethanes**		6,900	6,900	13800	
i	C1 (Methyl Chloride)	74-87-3	900	900	1800	Refrigerant
ii	C2 (Methylene Chloride)	75-09-2	4,080	4,080	8160	Paint, metal cleaning, adhesives, pharma industries
iii	C3 (Chloroform)	67-66-3	1,680	1,680	3360	PTFE, pharmaceutical
iv	C4 (Carbon Tetra Chloride)	56-23-5	240	240	480	As a Feedstock
11	**Refrigerant Gas**					
11	DifluoromethaneR-32 &/or Tetrafluoroethane R-134A &/or Pentafluoroethane R-125	75-10-5 , 811-97-2 354-33-6	-	1251	1251	As a refrigerant gas
12	Chlorodifluoromethane R-22	75-45-6	-	2083	2083	For manufacturing of fluoro polymers
13	Tetra Fluoropropane-1234yf	754-12-1	-	417	417	As a refrigerant gas
14	R-410a (R32+R125) (DifluoromethanePentafluoroethane)	75-10-5-354-33-6	-	583	583	As a refrigerant gas
15	R- 407C (R32+R125+R134a) (DifluoromethanePentafluoroethane 1,1,1,2-Tetrafluoroethane)	75-10-5-354-33-6-811-97-2	-	508	508	As a refrigerant gas
	Others					
16	AHF (Hydrofluoric acid)	7664-39-3	-	2500	2500	As a raw material for chemical process in different chemical industries
17	TFE (Tetra Fluoroethylene)	116-14-3	-	1333	1333	Sale to PTFE manufacturing industries
18	S-PTFE and/or D- PTFE	9002-84-0	-	750	750	For the manufacture of Heat Resistant

						polymer products.
19	HFP (Hexafluoro Propylene)	116-15-4	-	333	333	Used in-house and sale to FKM manufacture industries.
20	FEP (Fluorinated Ethylene Propylene)	25067-11-2	-	208	208	Manufacture of Cables
21	FKM(Fluoro Elastomers)	64706-30-5		250	250	Sale to o-Rings manufacturing industries
22	Hexafluoropropylene Oxide(HFPO)	428-59-1	-	167	167	For manufacture of PPF polymer
23	PerfluoroAlkoxy(PFA)	26655-00-5	-	208	208	Sale to o-Rings manufacturing industries
24	Polyvinylidene Fluoride(PVDF)	24937-79-9	-	250	250	In the manufacture process of Metal Paints
25	Calcium Chloride (70 % - 92%)	7440-70-2	-	2083	2083	As a raw material for chemical process in different chemical industries
26	Hydrogen Peroxide (100%)	7722-84-1	1200	2493	3693	Used in textile industries.
	&/or					
	Hydrogen Peroxide (40%)	7722-84-1	0	5908.80	5908.80	
	&/or					
	Hydrogen Peroxide (50%)	7722-84-1	0	5539.50	5539.50	
	&/or					
	Hydrogen Peroxide (60%)	7722-84-1	0	5170.20	5170.20	
Total			**35300**	**47269.5**	**82569.5**	
Final total (A+C)			**117592**	**47269.5**	**164861.5**	

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- PP was called for presentation in the SEAC meeting dated 25/09/2019.
- Salient features of the project are as under:

Sr. No.	Particulars	Details

A	Total cost of Proposed Project (Rs. in Crores):	Existing:887Crores Proposed: 490Crores Total: 1377Crores
B	Total Plot area (sq. meter)	Existing: 353870 Sq. m. Proposed: 179600 Sq. m. Total: 533470Sq. m.
	Green belt area (sq. meter)	Existing: 90000 Sq. m. Proposed: 86100. Sq. m. Total: 176100 Sq. m.
C	Employment generation	Existing: 300 nos. Proposed: 50 nos. Total:350 nos.
D	Water	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	G.I.D.C
	Status of permission from the concern authority.	Attached as Annexure- 2.2 of EIA Report
ii	Water consumption (KLD)	

	Existing KLD	Proposed (Additional) KLD	Total after Expansion KLD	Remarks
(a) Domestic	65	20	85	--
(b) Gardening	500	128	628	--
(c) Industrial				
Process	7241	4970	12211*	* Including DM Plant water for regeneration
Washing	355	100	455	--
Boiler	1024	7200	8224	--
Cooling	9632	11264	20896	--
Softner+Others	197	120	317	--
Industrial Total	18449	23654	42103	--
Grand Total	19014*	23802	42816	--

(A+B+C)				

1) Total water requirement for the project: 42816KLD
2) Quantity to be recycled: 13842KLD
3) Total fresh water requirement: 28974KLD

Total water requirement for the project	Quantity to be recycled	Total fresh water requirement
42816KLD	13842KLD	28974KLD

iii Waste water generation (KLD)

Category	Existing KLD	Proposed (Additional) KLD	Total after Expansion KLD	Remarks
(A) Domestic	55	18	73	Will be treated in STP
(B) Industrial				
Process	4675	4366	9041*	*Including DM plant
Washing	353	--	353	Treatment in ETP
Boiler	1024	7200	8224	Treatment in ETP
Cooling	1113	1296	2409	Treatment in ETP
Others	197	120	317	Treatment in ETP
Total Industrial waste water	7362	12982	20344	--

iv Treatment facility within premises with capacity

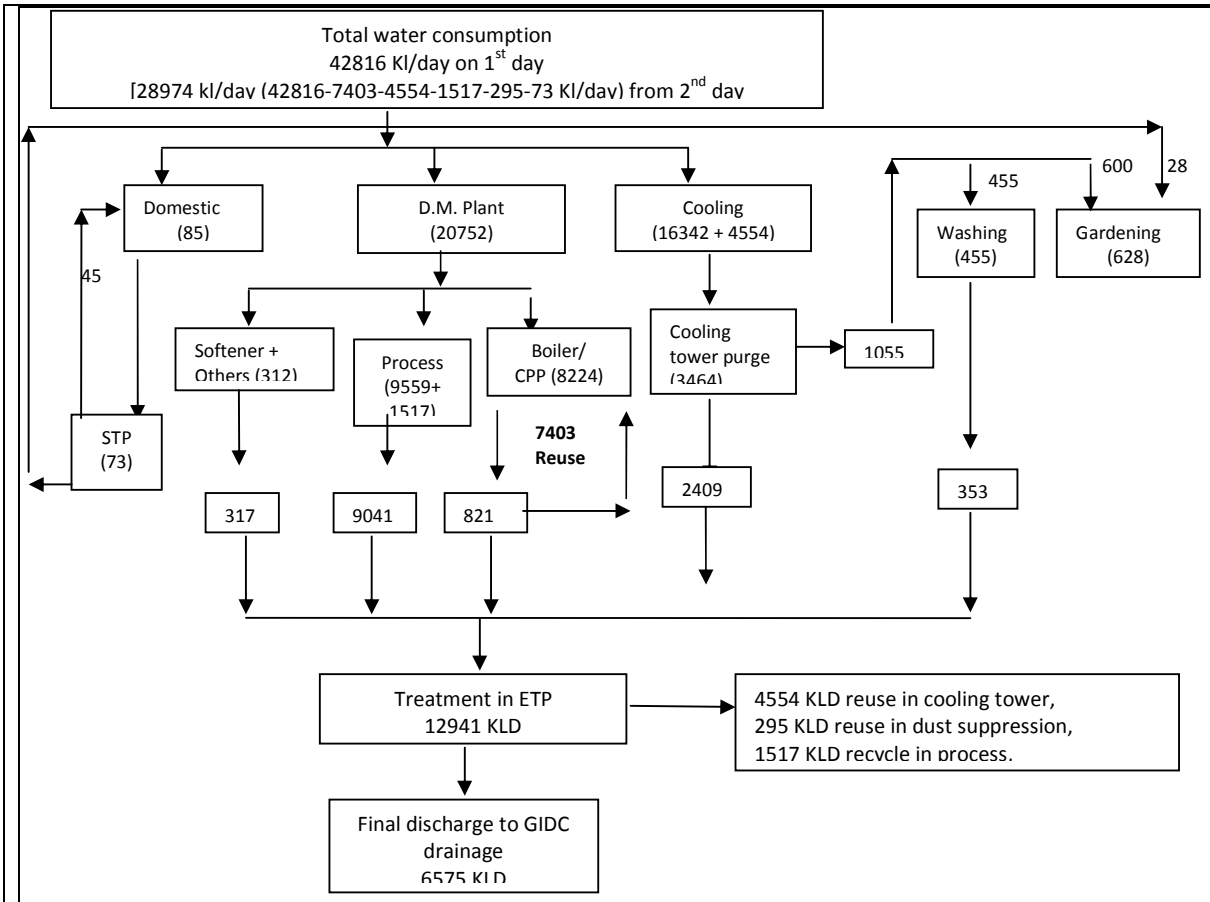
[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STPetc..

- Existing ETP Capacity 5355 KLD,
- AugmentedETP-Capacity 6760 KLD

Treatment scheme including segregation at source.

- The treated effluent generated will be initially collected into the Holding tank cum Equalization Tank with fixed aerators. Further, the effluent from the Equalization tank shall be equalized by giving air through fixed aerators. The effluent from this tank is pumped to aeration tank where aeration is provided by means of fixed aerators. In aeration tank biodegradation takes place in the presence of active biomass and dissolved oxygen, which is provided by means of fixed diffused aerators.
- The overflow of the aeration tank will be diverted into the secondary clarifier Tank for Biomass separation. The settled biomass is recycled back to the aeration tank to maintain the ratio of biomass in the aeration tank and excess biomass will be diverted into the filter press.
- The leachate from the filter-press will be diverted into Equalization tank and the wet cake of sludge is packed into the plastic bags properly and stored intothe sludge storage area with shed and impervious layer having leachate collection system. The overflow of the secondary clarifier is diverted into holding tank. The part of treated water from holding tank will be recycled back in the process and cooling tower and remaining will be discharged to GIDC drainage system along with

	the reject of UF/RO. ➢ Details are given in EIA report, Chapter – 2.	
	Note: (In case of CETP discharge) : Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP. ➢ Not Applicable.	
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ Not Applicable.	
v	Mode of Disposal & Final meeting point	
	Domestic:	73 KLD (existing + proposed) domestic waste water generated will be treated in STP and the treated water will be reused in flushing and gardening.
	Industrial:	9041 KLD process waste water, 821 KLD of boiler blowdown, 2409 KLD of cooling tower purge, 353 KLD of wash water and 317 KLD of softening/other wastewater will be treated in ETPs and UF/RO system. The part of treated effluent will be recycled back in various processes and the remaining will be discharged into the GIDC drain for sea disposal.
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE, CHWIF etc. Name of Common facility (CF)(For waste water treatment)	
	➢ Not Applicable	
	Membership of Common facility (CF) - Not Applicable	
	(For waste water treatment) ➢ Not Applicable	
vii	Simplified water balance diagram with reuse / recycle of waste water	



All units are in Kl/day

1st day water requirement will be 42816 KL/day

From 2nd day onwards 13842 Kl/day will be recycle/reuse to process and fresh water requirement will be (42816-13842) = 28974 Kl/day.

vii Reuse/Recycle details (KLD)
[Source of reuse & application area]

Total reuse 13842 KLD

Source of waste water for reuse with quantity in KLD (Fromwhere it is coming)	Application area with quantity in KLD (Where it is used)	Characteristics of waste water to be reused (COD, BOD,TDS etc.)	Remarks regarding feasibility to reuse i.e.
73 KLD STP treated water will be recycled	28 KLD will be recycled in gardening. 45 KLD will be recycled in Flushing.	➢ pH : 6.5- 8.5 ➢ TSS :50-100 mg/l ➢ Oil & Grease : 5-10 mg/l ➢ BOD : 10-20 mg/l	
6071 KLD ETP treated water will be recycled	1517 KLD will be recycled back in process. 4554 KLD will be reused in cooling tower.	➢ pH : 7- 8.5 ➢ Suspended Solids : 150 – 200 mg/l ➢ TDS :1500 – 2000 mg/l ➢ Oil & Grease : 5-10 mg/l ➢ COD : 80-100 mg/l ➢ BOD : 10-20 mg/l	It is completely feasible to use for Process & Cooling tower

	Total 1430 KLD water (295 KLD of ETP treated water + 1135 KLD of DM plant water)	1.For dust suppression to coal handling area (913 KLD) 2. Sprinkling on fly ash (470 KLD) 3. Road cleaning(47 KLD)	➢ pH : 7- 8.5 ➢ Suspended Solids : 150 – 200 mg/l ➢ TDS :1500 – 2000 mg/l ➢ Oil & Grease : 5 -10 mg/l ➢ COD : 80-100 mg/l ➢ BOD : 10-20 mg/l	
	7403 KLD of boiler condensate	Will be reused in boiler make-up.	➢ pH : 7- 8.5 ➢ Suspended Solids : 5 – 10 mg/l ➢ TDS :150 – 200 mg/l ➢ COD : 10-20 mg/l ➢ BOD : 2-5 mg/l	

Note: Existing ETP waste water has TDS characteristics of 34600 mg/l and Augmented ETP waste water has characteristics of 2929 mg/l. So after total expansion when combine ETP would be operate, TDS in collection tank would be homogeneoused and reduced and it is acceptable that TDS in final treated water would be around 1500-2000 mg/l.

E	Air
i	Flue gas emission details No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc. Existing & Proposed

Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
Existing Flue Gas Stacks						
1.	Boiler 1 (90 TPH) & 2 (90 TPH)	95	Coal	777	SPM, SO2, NOx	ESP
2.	Boiler 3 (110 TPH) & 4 (180 TPH)	65		690	PM SOx NOx	ESP
3.	Boiler – 5(180 TPH)		Coal	690	SPM, SO2, NOx	ESP
4.	D G Set(1200 kva)	20	HSD	0.2(25 lit/hr)	PM, SO2, NOx	Adequate stack height
Proposed Flue Gas Stacks						
1	D G Set (6*1010 KVA + 1500 KVA)	20	HSD	0.12 (4000 lpd)	PM, SO2, NOx	Adequate stack height

	2	Boiler – 6 (300 TPH@)	95*	Coal/ Lignite	1092	SPM, SO2, NOx	ESP

Note:
(i)We have planned phase wise production for our proposed products so as per requirement steam generation & utilization will carry out by installing the boilers in phase manner.
(ii) Water scrubber will be installed along with ESP.

ii Process gas i.e. Type of pollutant gases (SO_2,HCl, NH_3, Cl_2,NO_x etc.)

Existing & Proposed

Sr. no.	Specific Source of emission (Name of the Product & Process)	Type of emission	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
Existing Process Stacks				
1.	Reactor of Hypo Plant	HCl, Cl2	30	Two StageAlkali scrubber with caustic soda lye as a scrubbing media
2.	Reactor of HCl Synthesis	HCl, Cl2	30	Two StageWater Scrubber
3.	Reactor of Flakers Plant	SPM	40	Bag Filter
4.	Reactor of Hypo Plant &Dechlorination System	Cl2	30	Two StageAlkali scrubber with caustic soda lye as a scrubbing media
5.	Scrubber for HCl Synthesis	HCl, Cl2	30	Two StageWater Scrubber
6.	HCl Scrubber (Tri-Chlorobenzene)	HCl, Cl2	20	Alkali scrubber with caustic soda lye as a scrubbing media
7.	HCl Scrubber (Di Chlorobenzene)	HCl, Cl2	20	Alkali scrubber with caustic soda lye as a scrubbing media
8.	HCl Scrubber (Chlorobenzene)	HCl, Cl2	20	Alkali scrubber with caustic soda lye as a scrubbing media
9.	HCl Scrubber (ECH)	HCl, Cl2	20	Alkali scrubber with caustic soda lye as a scrubbing media
10.	Cl2 Scrubber (CPVC)	Cl2	9.5	Alkali scrubber with caustic soda lye as a scrubbing media
11.	Cl2 Scrubber EMG action (CPVC)	Cl2	10.5	Alkali scrubber with caustic soda lye as a scrubbing media

	12.	Dryer (CPVC)	HCl	18	Alkali scrubber with caustic soda lye as a scrubbing media
	13.	Bag Filter at re-slurry tank (CPVC)	SPM	2.8	Bag Filter
	14.	Bag Filter attached to product hopper (CPVC)	SPM	6	Bag Filter
	15.	Bag Filter attached to product bagging machines (CPVC)	SPM	2.8	Bag Filter
	16	HCl Scrubber (Chloromethane)	HCl, Cl2	30	Alkali scrubber with caustic soda lye as a scrubbing media
	Proposed Process Stacks				
	1.	HCl Scrubber (Epoxy Resin)	HCl, Cl2	20	Two Stage Alkali scrubber with caustic soda lye as a scrubbing media
	2.	HCl Scrubber (Chloromethane)	HCl, Cl2	30	Two Stage Alkali scrubber with caustic soda lye as a scrubbing media
	3.	HCl Scrubber (Epichlorohydrin)	HCl, Cl2	20	Two Stage Alkali scrubber with caustic soda lye as a scrubbing media
	4.	HCl Scrubber System (Refrigerant Gas)	HCL, Cl2	21	Two Stage Venturi Scrubber with water as a scrubbing media
	5.	HCl Scrubber System (Refrigerant Gas)	HCL	21	Two Stage Venturi Scrubber with water as a scrubbing media
	6.	2-HCl Scrubber+ Caustic Scrubber (AHF)	Chlorine HCL	30	Two Stage Water Scrubber followed by Alkali scrubber with caustic soda lye as a scrubbing media &venturi
	7.	2-HCl Scrubber+ Caustic Scrubber (TFE)	Chlorine HCL	30	Two Stage Water Scrubber followed by Alkali scrubber with caustic soda lye as a scrubbing media &venturi
	8.	2-HCl Scrubber+ Caustic Scrubber (FKM)	Chlorine HCL	30	Two Stage Water Scrubber followed by Alkali scrubber with caustic soda lye as a scrubbing media &venturi
	9.	2-HCl Scrubber+ Caustic Scrubber (PFA)	Chlorine HCL	30	Two Stage Water Scrubber followed by Alkali scrubber with caustic soda lye as a scrubbing media &venturi

	10.	Tail Gas scrubber (5 Nos.) HF plant scrubber	SO2 HF	30	Two Stage Wet Alkali scrubber with caustic soda lye as a scrubbing media
	11.	Emergence Thermal Oxidation	PM,HCL,SO2,CO	12	Two Stage Venturi Scrubber + Two Stage Water Scrubber

iii Fugitive emission details with its mitigation measures.

- Concrete road is/will developed within plot premises to avoid fugitive dust due to vehicle movement.
- Manufacturing activity will be carried out in closed reactors / vessels and regular checking and maintenance of the same will be carried out to avoid anyleakage and relative fugitive emissions.
- All the raw materials will be stored in closed containers and in sealed bags and will be handled through closed system to avoid the handling losses and relative fugitive emissions.

Water sprinkling will be done to avoid dust emission.

F Hazardous waste
(As per the Hazardous and Other Wastes (Management and Transboundary Movement Rules 2016).

Existing & Proposed

i

Sr. no.	Type/Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules.	Quantity (MT/month)			Management of HW
				Existing	Proposed	Total	
1	Process waste/ Residue	Chlor – Alkali,chloro - methane, Dichlorobenzene, Trichlorobenzene	20.3	178 MT	1292 MT	1470 MT	Will be collected, stored and sent to CHWIF/ sent for Co-processing
2	Used Oil	Production Plant	5.1	3.3 KL [3.63 MT]	100 KL [110 MT]	103.3 KL [113.63 MT]	Will be collected, stored reused as low grade lubrication and left over quantity (if any) sold to an authorized dealer or Re-processor.

3	Discarded Containers						
	Drums	Production Plant	33.1	400 Nos. [0.2 MT]	15000 Nos. [7.5 MT]	15400 Nos. [7.7 MT]	Will be collected, stored and sold to an authorized/ registered recyclers
	Carboys			75 Nos. [0.04 MT]	8000 Nos. [4 MT]	8075 Nos. [4.04 MT]	
	Plastic Liners			5 MT	70 MT	75 MT	
4	ETP Sludge	ETP	35.3	35 MT	500 MT	535	Will be disposed in TSDF site.
5	Used Catalyst	Chlor – Alkali, epichlorohydrin, Chloro-methane	26.5	0.32 MTPA	40 MTPA	40.32 MTPA	Collection, Storage, transportation and disposed in to TSDF.
6	Process residue including (Spent alumina, molecular sieves)	Refrigerant Gases	36.1	-	100	100	Collection, Storage, transportation and disposed in to TSDF.
7	Spent Carbon	Refrigerant Gases, Chlor alkali, Chloro-methane	36.2	-	50	50	Will be collected, stored and sent to CHWIF/ Co-processing/ captive end use as fuel.
8	Solid waste containing organic & inorganic residue	Epichlorohydrin, Chloro-methane	-	-	1000	1000	Collection, Storage, transportation and disposed in to TSDF.
9	Dilute Sulphuric Acid (70-90%)	Chlor – Alkali, Chloro-methane, PTFE	B-15 of Sch-II	1740	2000	3740	Collection, Storage, Transportation and Sale to actual end users as per Rule 9.
10	Hydrochloric Acid – 100%	Chlor alkali, Chloro-methanes, Refrigerant Gases	B-15 of Sch-II	21636 (30% BASIS) 6490 (100%	12510 (100% BASIS)	19,000 (100% BASIS)	

					BASIS)			
	11	Sodium Hypochlorite		B-15 of Sch-II	462	3145	3607	
	12	Hydrofluorosilisic acid(20-40%)	PTFE, Refrigerant Gases	B-15 of Sch-II	-	1500	1500	
	13	Aqueous HF(20-40%)	PTFE, Chlor – Alkali, Refrigerant Gases	B-15 of Sch-II	-	1063	1063	Collection, Storage, Transportation and Sale to actual end users as per Rule 9.
	14	Gypsum		B-2080 of Sch-III	-	10148	10148	Will be sold to the cement manufacture.
	15	HCl(anhydrous)		B-2 of Sch-II	-	15	15	Collection, Storage, Transportation and Sale to actual end users as per Rule 9.
	16	Trifluoro Methane	Refrigerant Gases, PTFE	A-3170 of Sch-VI	-	20.83	20.83	
	17	Spent Caustic	Chlor alkali, Chloromethanes,Refrigerent gases	-	-	53.376	53.376	
	18	AluminiumTrifluoride	PTFE, Refrigerent gases	-	-	62.5	62.5	
	19	Calcium Fluoride	PTFE,Refrigerent gases	-	-	375	375	
	20	Polymer Waste	Fluoropolymers	B-3010 of Sch-VI	-	83.75	83.75	
	21	MONG[Matter Organic Nonglycerol Content]	ECH	-	-	450	450	Will be sent for Co-processing as per Rule-9 / will dispatched in TSDF site

ii	Membership details of TSDF, CHWIF etc. (For HW management)	Attached as annexure 2.4
iii	Details of Non-Hazardous waste & its disposal(MSW and others)	

Sr. No.	Name of Waste	Quantity per MT /Month			Mode of Storage & Disposal
		Existing	Proposed	Total after Expansion	

		[a]	[b]	[a+b]	
1.	Brine Sludge	3360	-	3360	Will be collected, stored and disposed in solid waste collection pit within factory site and left over quantity (if any) will be sent to thedesignated TSDF site.
2.	Fly Ash	6858	3472	10330	Will be sold to brick manufacturer, cement industries, and dump off at low lying areas .
3.	Inorganic impurities [Due to use of 82% CaO]	-	900	900	Will be disposed to Captive TSDF/Common TSDF.
4.	NaCl	-	10	10	Will be disposed to Brine sludge TSDF/Common TSDF.

G Solvent management, VOC emissions etc.

i Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)

Sr. No.	Name of Product	Name of Raw Materials/ Solvent	Raw Materials / SolventtobeUsed	Raw Materials/Solvent to be Recovered	
			(MT/Day)	(MT/Day)	(%)
1.	Epoxy Resin	Toluene	1.389	1.386	99.8
2.	HFPO [Hexafluoropropylene oxide]	Toluene	2.783	2.774	99.8

Recovered solvents will be reused in process.

ii VOC emission sources and its mitigation measures

Epichlorohydrin, Production of 4167 MT/Month, manufacture, handle & transport will carry outinclosed loop systems.Double mechanical seal pumps will be provided to reduce VOC emission as much as possible. Details of the same is attached herewith asAnnexure-Cfor your ready reference.

H
- Details regarding storage of Hazardouschemicals

Storage details	Name of major Hazardous Chemicals	Remarks
Storage tanks	C1 (Methyl Chloride),R40 Gas, C2 (Methylene Chloride), C3 (Chloroform), C4 (Carbon Tetra Chloride), Epichlorohydrin, Epoxy Resin, AHF (Aqueous hydrofluoric acid), TFE (Tetra Fluoro- ethylene) R-134 a, Anhydrous Hydrogen Chloride (100%), Di Methyl Benzene, Acetic Acid, SMC,Acetic Anhydride, Perchloroethylene, R-32 Diflouro Methane, Oleum	--
UG Storage Tanks	Toluene, Methanol, Methyl Isobutyl Ketone	--

	Pipeline	Chlorine	--

➢ Applicability of PESO:
PESO Certificates have been attached as an Annexure – 21(a) & (b)

- During the meeting dated 25/09/2019, technical presentation made during the meeting by project proponent.
- During the meeting, the project was appraised based on the information furnished in the EIA Report, and details presented during the meeting.
- The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic aspect. The baseline environmental study has been conducted for the study area of 10 km radial distance from project site for the period October 2017 to December 2017. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, NOx, CO, Cl2, NH3, HCl, HBr and VOC at Eight locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The incremental Ground Level Concentration (GLC) has been computed using AERMOD model. The resultant concentrations are within the NAAQS. The modeling study proved that the air emissions from the proposed plant would not affect the ambient air quality of the region in any significant manner. The ambient air quality around the proposed project site will remain within the National Ambient Air Quality Standards (NAAQS).
- Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios has been carried out. The detail proposed safeguard measures including On-Site / Off-Site Emergency Plan has been covered in the RA report.
- During SEAC meeting, Committee asked for existing plant EC compliance report. PP informed that EC certified compliance report (CCR) dated 02/05/2014 by MoEF & CC, Bhopal is submitted and committee deliberated briefly in length. PP informed that they have obtained recently additional EC for expansion on dated 29/09/2018 and for power plant on dated 31/07/2018 but not started production of it. As they have not obtained CCA for EC recently obtained on 29/09/18 and hence submitted EC certified compliance report of dated 02/05/2014 and submitted letter regarding it. PP informed that they have started work regarding green belt development, installation of CEMS and rain water harvesting etc as per EC conditions compliance. Committee asked about proposed refrigerant gas products, PP informed that they will comply Ozone depleting Substances (ODS) Rules for proposed refrigerant gas manufacturing. Committee asked about steps taken for control fugitive emission of proposed epichlorohydrin product which is persistent organic pollutant, PP informed that they will adopt adequate measures for control of epichlorohydrin in atmosphere from plant. Committee asked about proposed steam production, PP informed that proposed steam as product will be used for only during failure of any boiler and 300 TPH boiler will be used for requirement of steam for proposed products production. Committee disagree with

use of Matter Organic Nonglycerol Content (MONG) and other Hazardous waste as fuel for captive fuel consumption and hence PP informed that they will sell Matter Organic Nonglycerol Content (MONG) and other Hazardous waste to end users having Rule-9 permission under HWR Rules '2016. Committee asked about waste water management, PP informed that 9041 KLD process waste water, 821 KLD of boiler blow down, 2409 KLD of cooling tower purge, 353 KLD of wash water and 317 KLD of softening/other wastewater will be treated in ETPs and UF/RO system and treated effluent partly will be reused back in process while rest of will be discharged into GIDC underground drainage. Committee asked regarding worst case scenario for effluent and PP informed in briefly regarding effluent characteristic and its stage wise pollutant reduction. Committee insisted for CEMS installation at effluent discharge line and flue gas and process gas emission stack.ESP as APCM will be installed with each boilers and two stage scrubbing system will be as APCM with process gas reactors. Committee asked about CER and green belt development, PP informed that they will start campaign in nearby villages for green belt development in support of Dahej industrial association. Committee discussed in length regarding LDAR of epichlorohydrin and other solvents and LDAR of its in length.

- Committee also deliberated on baseline data, ambient air quality, surface water and ground water quality and Noise, EMP, need based CER with details of budgetary provisions and green belt development etc.
- Compliance of the ToR was found satisfactory.
- **After detailed discussion, it was decided to recommend the project to SEIAA Gujarat for grant of Environmental Clearance with following specific condition,**

1. Unit shall provide Continuous Emission Monitoring System [CEMS] for air emission and waste water discharge as per the CPCB guidelines. Unit shall made arrangement for reflecting the online monitoring results on the company's server, which can be assessable by the GPCB on real time basis.
2. Unit shall develop thick green belt development in periphery of premises as per the CPCB guidelines for control of fugitive emission generated from proposed expansion project.

09.	SIA/GJ/IND2/30713/2019	**M/s. CS Specialty Chemicals Pvt. Ltd.** Plot No. Z-81, Z-82, SEZ Phase – 1, Dahej, Ta-Vagra, Dist -Bharuch	Appraisal

Category of the unit : 5(f)

Project status: New

- PP has submitted online application vide no. SIA/GJ/IND2/30713/2019 dated 12/09/2019 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 30/04/2019.
- Project proponent has submitted EIA Report prepared by M/s: Unistar Environment and Research Labs Pvt. Ltd based on the TOR issued by SEIAA

- This is a new unit proposes manufacturing of synthetic organic chemicals as tabulated below:

Sr. No.	Name of the Products	CAS No.	Quantity (MT/Month)	End-use of the products
1	Donor B (IPIA) (3,3-BIS(methoxymethyl)-2,6-DMH)	129228-11-1	**8.33**	Catalyst for poly olefin and Polymer manufacturing.
2	Catalyst Support (Magnesium ethoxide)	2414-98-4	**25.00**	
3	U - Donor (Diethyl Amino-Triethoxy Silane)	15180-47-9	**8.33**	
Total of Product			**41.66**	**--**

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- PP was called for presentation in the SEAC meeting dated 25/09/2019.
- Salient features of the project are as under:

Sr.No.	Particulars	Details
A	Total **cost of Proposed** Project (Rs. in Crores):	15 Crores
B	**Total Plot area** (sq. meter)	9886.12 Sq. m.
	Green belt area (sq. meter)	2000.24 Sq. m. (Inside Premises- 2000.24 m^2 + outside premises 690m^2)
C	**Employment generation**	60 Nos.
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	Dahej SEZ water supply dept
	Status of permission from the concern authority.	Obtained
ii	**Water consumption (KLD)**	

Category	Quantity (in KLD)	Remarks
(C) Domestic	**15.00**	Fresh water
(D) Gardening	**10.00**	Treated sewage from STP will be reused in gardening
(E) **Industrial**		
Process & Washing	6.00	Fresh water
cooling	30.00	Fresh water
Scrubbing	4.50	Industrial effluent from cooling tower is reused in scrubber
Industrial Total	**40.50**	--
Total (A + B + C)	**65.50**	**Total Fresh -51.00 KLD + 14.50 KLD Reused**

1) **Total water requirement** for the project: 65.50 KLD
2) Quantity to be **recycled**: 14.50KLD
3) Total **fresh water** requirement: 51.00KLD

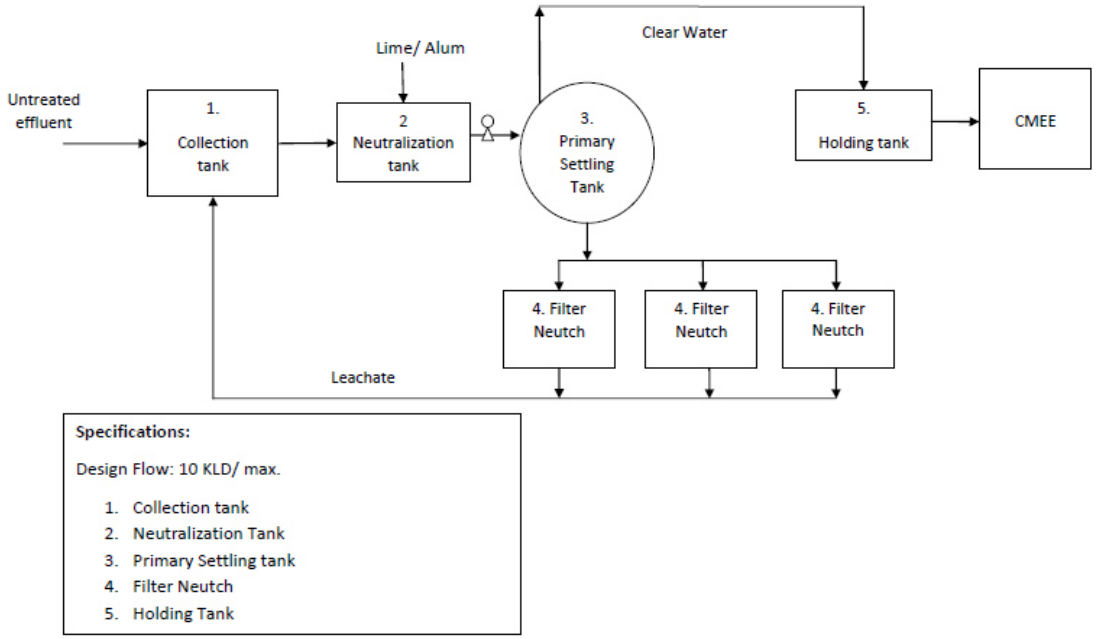
iii **Waste water generation (KLD)**

Category	Waste water (in KLD)	Remarks
(A) Domestic	**10.80**	To STP for treatment and will be reused in greenbelt
(B) Industrial		
Process & Washing	5.50	Bleed off liquor to ETP for primary treatment then disposal through CMEE(BEIL, Dahej).
Scrubbing	4.00	
cooling	4.50	Will be reused in scrubber
Total Industrial waste water	**14.00**	--
Total [A + B]	**24.80**	--

iv Treatment facility within premises with **capacity**
[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc.

- In-house ETP with Primary treatment facility (Capacity 10 KL/day Max.)
- In-house STP (Capacity 15 KL/day Max.)

Treatment scheme including segregation at source.
Proposed ETP Plan:



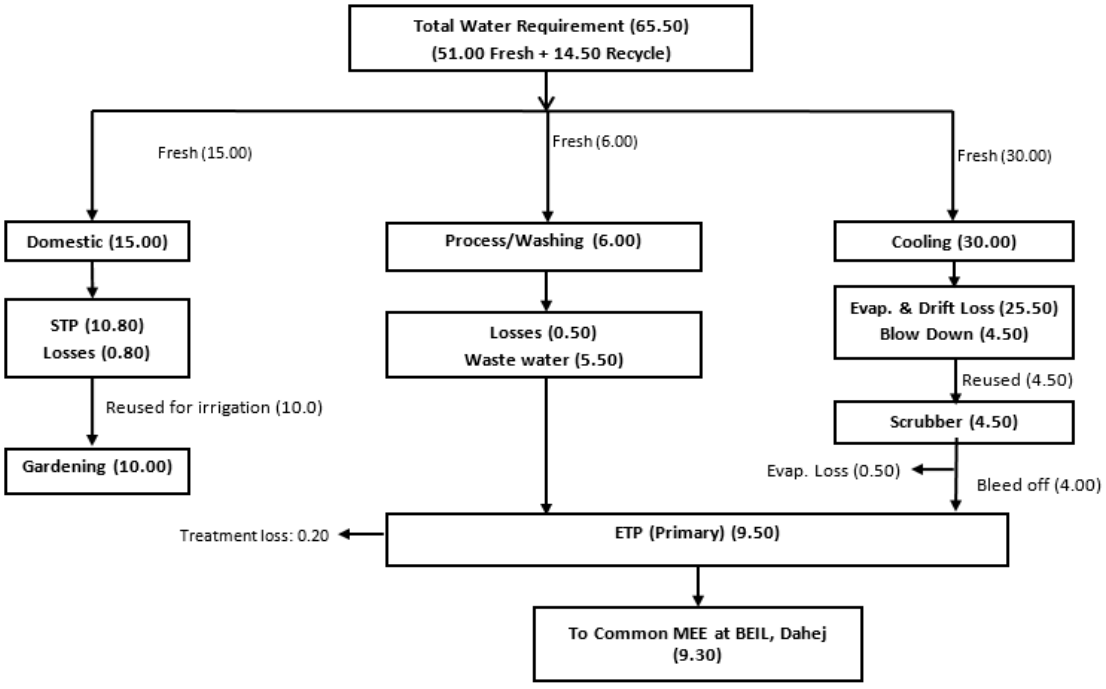
Note: (In case of CETP discharge) :
Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP.

- Not Applicable

Brief note on adequacy of ZLD (In case of Zero Liquid Discharge):

- Domestic effluent (10.80 KLD) will be treated in STP and will be reused in greenbelt.
- The industrial effluent generation will be @ 14.00 KLD
  (5.50 KLD from process/washing, 4.50 KLD cooling blow down and 4.00 KLD scrubber).
- Cooling tower blowdown @4.50 KLD will be directly reused in scrubbing.
- Hence, 9.50 KLD wastewater generated (5.50 KLD from Process & washing and 4.00 KLD from scrubber bleed off) will be treated using in-house ETP with primary treatment facility then will be send to CMEE (BEIL, Dahej) to achieve ZLD.

v	Mode of Disposal & Final meeting point	
	Domestic:	Treatment in proposed in-house STP and will be reused for plantation.
	Industrial:	• 4.50 KLD blow down from cooling will be directly reused in scrubbing. • 9.50 KLD wastewater generated (from scrubber bleed off @ 4.00 KLDand Process & washing @5.50 KLD) will be treated using in-house ETP (with primary treatment facility); then, will be send to CMEE (BEIL, Dahej)to achieve ZLD.
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ Common MEE - Bharuch Enviro Infrastructure Ltd., Dahej (BEIL)	
	Membership of Common facility (CF) **(For waste water treatment)**	
	Acceptance letter Obtained	
vii	**Simplified water balance diagram with reuse / recycle of waste water**	



Note: All quantity of Water and Wastewater are shown in KL/day.

viii Reuse/Recycle details (KLD)

Total reuse14.00KLD

Source of waste water for reuse with quantity in KLD (From where it is coming)	**Application area with quantity in KLD (Where it is used)**	**Characteristics of waste water to be reused (COD, BOD, TDS etc.)**	**Remarks regarding feasibility to reuse i.e.**
STP (10.80 KLD)	Greenbelt (10.00 KLD)	BOD <100 mg/L SS <200 mg/L. pH<5.5 to 9	Standards for Land for irrigation BOD < 100 mg/L SS < 200 mg/L pH <5.5 to 9
Cooling (4.50 KLD)	Scrubber (4.50 KLD)	TDS <1850 COD <60	Acceptable Feed water Quality for Scrubber

				BOD <30	TDS <2500 COD <60 BOD<50	

E **Air**

i Flue gas emission details
No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc.

Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1	Thermo pack (15 Lakh K.cal/hr)	15	Briquettes (Bio Fuel)	12.72 (530.00 Kgs/hr)	PM<150 mg/Nm3 SO2< 100 ppm	Pulse air jet type Bag filter system with Adequate Stack height
2	D.G. Sets: 1 X 250 KVA	7	HSD	0.40 KL/ Day (50.00 L/Hr)	NOx< 50 ppm	--

ii Process gas emission details i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)

-

Sr. no.	Specific Source of emission (Name of the Product & Process)	Type of emission	Stack/ Vent Height (meter)	Air Pollution Control Measures (APCM)
1	Process Stack (Capacity of 2 pumps 3 HP) Product: U-DONOR (Diethyl amino (triethoxy) silane)	HCl	11	Two stage alkali scrubber

iii **Fugitive emission** details with its mitigation measures:
As below:

Fugitive emission could occur from the storage yard of raw materials and finished products. Emissions from transport of vehicles would occur to a certain extent. The emissions from traffic movements will be controlled by proper planning of the transport of raw materials and finished products to and from the factory premises. All the roads inside the plant will be concreted to reduce any dust emissions. Proper planning and maintenance will control the extent of fugitive emissions. During the production, the industry will carry out regular monitoring of fugitive emissions as per the factories Act.

Measures taken for fugitive emission control:

- Solid raw material charging will be done through closed system.
- Entire process will be carried out in the closed reactors with proper maintenance of pressure and temperature.
- Close feeding system will be provided for centrifuges.
- Emphasis will be given to solvent management/solvent loss prevention.
- Enclosures to chemical storage area, collection of emission from loading of raw materials in particular solvents through hoods and ducts by induced draft, and control by scrubber/dust collector to be ensured.
- Proper gland packing will be maintained for pumps and valves and to the extent possible pumps with mechanical seal.
- All the raw materials will be pneumatically transfer to the reactor.

	• All rotating equipments like pumps will be installed with mechanical seals to arrest any sort of emissions. • A regular preventive maintenance schedule will be in place to replace or rectify all gaskets and joints etc. as a part of ISO systems to ensure no fugitive emissions take place. • Periodic monitoring of work area will be carried out to check the fugitive emission. • Adequate ventilation will be provided. • Airborne dust at all transfers operations/ points will be controlled either by spraying water or providing enclosures.
F	**Hazardous wastes** (as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.

i

Sr. no.	Type/Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules.	Quantity (MT/Annum)	Management of HW
1	ETP sludge	From ETP	Sch-I/ 35.3	15.00	Collection, Storage, Transportation, Disposal at TSDF(BEIL,Dahej).
2	Used oil	From plant and machinery	Sch-I/ 5.1	0.05 KL/Annum	Collection, Storage, Transportation, disposal by selling to registered recyclers/Reused.
3	Discarded materials Drum, Liners/ Bags/ Carboys	Raw Materials	Sch-I/ 33.1	20.00	Collection, Storage, Decontamination, Disposal on sell to authorized re-conditioners.
4	Distillation Residue/ Organic bottom residue.	Distillation and manufacturing process of all products.	Sch-I/ 20.3	160.00	Collection, Storage, Transportation, Disposal to Co-Processing at authorized siteor atAuthorised common incineration (falling outside CEPI area).
5	Waste from HCl scrubber (Bleed off liquor)	Process Scrubber (Product- U-DONOR (Diethyl amino (triethoxy) silane))	Sch-I/ 37.1	1200.00	Will be treated in ETP for primary treatment then disposal through CMEE(BEIL,Dahej).
6	Spent solvents (Ethanol, Hexane, DMSO, Methanol and n-Heptane)	Mfg. Process	Sch-I/ 20.2	5000.00	Collection, storage and Reuse by captive distillation.
				2000.00	Collection, storage and sale to registered recycler under Rule No. 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
7	Diethyl amine - HCl salt	From manufacturing of product (U-DONOR)	Sch-II/ Class-C2	155.00	Collection, storage and Reuse by captive Regeneration of Diethyl Amine and any non-reusable will be sold out to Registered recycler under Rule no.9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	➢ Acceptance letter of TSDF - Bharuch Enviro Infrastructure Ltd (BEIL), Dahej is obtained.
iii	Details of Non-Hazardous waste & its disposal(MSW and others)	-

G **Solvent management**, VOC emissions etc.

i Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)

➢ In the proposed project, Ethanol, Hexane, Dimethyl Sulfoxide, methanol and n-Heptane will be used as solvent. Solvents used in process will be recovered, distilled and reused back in the process. For the distillation two stage condensers will be used, one with cooling water circulation and other with Brine Circulation. The vents will be directed to the KO pots then released to the atmosphere. Solvent recovery will be more than 91%.

Solvent Recovery Table:

S. No.	Solvent	Charged Qty (MT)	Consumed in Process / Loss (MT)	Qty for Recovery(MT)	Qty Recovered (MT)	Recovery Loss(MT)	Effi. of Solvent recovery system (%)
1.	Ethanol	13.05	0.882	12.17	11.51	0.91	94.6
2.	Hexane	10.28	0.051	10.23	9.38	0.85	91.7
3.	DMSO	4.01	0.020	3.99	3.98	0.01	99.8
4.	Methanol	0.25	0.001	0.25	7.89	0.57	93.3
5.	n-Heptane	1.52	0.300	1.22	1.14	0.08	93.4

xii VOC emission sources and its mitigation measures

VOC emission sources: material handling area, process area, & solvent storage area.

- Knockout chiller & pot will be provide for VOC Control
- Closed handling & charging system will be provided.
- Mechanical seals to pumps will be provided to prevent leakages.
- Regular monitoring of VOCs will be done.
- Solvent specific LDAR program will be implemented. The solvent characteristics is as under.

Solvent Characteristics

Sr. No.	Name of Solvent (CAS No.)	Boiling Point (In °C)	Flash Point (In °C)	Vapor Pressurek Pa (at 20 °C)	Relative Density,g/cm3	Detection limit for alarm, ppm	Monitoring frequency
1.	Ethanol (64-17-5)	78.24	14	5.95	0.7893	1000	Continuous for online detector & twice per shift (every 4 hrs) for portable detector
2.	Hexane (110-54-3)	68.5 to 69.1	−26.0	17.60	0.6606	1000	
3.	Methanol (67-56-1)	64.7	11 to 12	13.02	0.792	1000	
4.	n-Heptane (142-82-5)	98.38	−4.0	5.33	0.6795	1000	
5.	DMSO (67-68-5)	189	89	NA	1.1004	2 liters per 8 hrs	Regular at beginning of shift

Identification (detection) of leaking component and repair, preventive maintenance and overall inspection will be done for all above solvents according to the methodology and schedule given in LDAR program presented in Chapter-7, section: 7.4.16 of EIA Report.

H

- **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Storage tanks	Ethanol, Hexane, Sodium Hydroxide, Methanol	

Drum/Barrel storage	Isoveraldehyde, Formaldehyde, Dimethyl Sulfoxide, Iodine, Magnesium, Tetra ethoxysilane (TEOS), Silicon tetra chloride, Diethyl amine, n-Heptane	--
Cylinder	Methyl Chloride	

- **Applicability of PESO** : Application for obtaining PESO permission has been made.

- During the meeting dated 25/09/2019, technical presentation made during the meeting by project proponent.
- During the meeting, the project was appraised based on the information furnished in the EIA Report, and details presented during the meeting.
- The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic aspect. The baseline environmental study has been conducted for the study area of 10 km radial distance from project site for the period December 2018 to February 2019. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, NOx, CO, O3, NH_3, HCl and VOC at Eight locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The incremental Ground Level Concentration (GLC) has been computed using AERMOD model. The resultant concentrations are within the NAAQS. The modelling study proved that the air emissions from the proposed plant would not affect the ambient air quality of the region in any significant manner. The ambient air quality around the proposed project site will remain within the National Ambient Air Quality Standards (NAAQS).
- Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios has been carried out. The detail proposed safeguard measures including On-Site / Off-Site Emergency Plan has been covered in the RA report.
- This unit is a new Greenfield project in GIDC Dahej.
- During SEAC meeting, Committee deliberated on area adequacy which was addressed in their presentation. PP informed that proposed plot is sufficient for accommodate proposed project plant machinery. Committee deliberated on cleaner production, BAT, LDAR Of proposed project and PP informed briefly regarding cleaner production and BAT and LDAR for proposed project. Total industrial effluent generated from process and washing will be treated in primary ETP and then will be sent to CMEE of Dahej for further treatment and disposal. Cooling blow down will be used in scrubber and domestic effluent will be treated in STP and will be used for green belt development in premises. Agro waste briquette will be used as fuel in thermo pack and pulse jet bag filter as APCM will be provided with thermo pack. Committee asked regarding Hazardous waste management and PP informed regarding Hazardous waste management as per HWRules'2016.
- Committee also deliberated on baseline data, ambient air quality, surface water and ground water quality and Noise, EMP, need based CER with details of budgetary provisions and green belt development etc.
- Committee also deliberated on Compliance of the ToR during meeting and found satisfactory.

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

10.	SIA/GJ/IND2/30244/2018	**M/s. Kinjal Chemicals** Plot no C/1/B-145-3, Phase II, GIDC, Naroda, Ahmedabad	EC – Reconsideration

Category of the unit: **5(f)**

Project status: **Expansion**

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/36786/2019 on dated 24.06.2019 for obtaining Environmental Clearance.
- SEIAA issued TOR to PP vide their letter dated 14.05.2019.
- Project proponent has submitted EIA Report prepared by B S Rana based on the TOR issued by SEIAA.
- This is an existing unit engaged in manufacturing of synthetic organic chemicals and now proposed for expansion tabulated as below:

Sr. no.	Name of the Products	CAS no. / CI no.	Quantity MT/Month			End-use of the products
			Existing	Proposed	Total	
1.	Resist salts	127-68-4	5	195	200	Dyes & Dyes Intermediates Manufacturing
2.	Metanilic Acid Liquid	121-47-1	10	-	10	
3.	Aniline 2-5 Disulphonic Acid **AND/OR**	98-44-2	20	380	400	
	Aniline 2-4 Disulphonic Acid	137-51-9	-			
4.	Metanilic Acid Powder **AND/OR**	121-47-1	90	210	300	
	Meta Amino Phenol	591-27-5	10	90	100	
		Total	135	875	910	

Note: Any three products from the six products can be manufactured at a time in a month.

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- PP was called for presentation in the SEAC meeting dated 08.07.2019.
- Salient features of the project including Water, Air and Hazardous waste management:

Sr.	Particulars	Details

no.		
A	Total **cost of Proposed** Project (Rs. in Crores):	Existing:4.0 Proposed: 2.0 Cr. Total: 6.0 Cr
	Details of EMP	

Operation Phase			
Sr. No.	**Pollution Control Measures**	**Capital Cost (Rs.)**	**Recurring Cost per annum (Rs.)**
1	Air Pollution Control	8,00,000	3,00,000
2	Water Pollution Control	5,00,000	2,00,000
3	Noise Pollution Control	1,00,000	25,000
4	Environment Monitoring and Management	1,00,000	20,000
5	Rain Water Harvesting	2,00,000	50,000
6	Occupational Health	1,00,000	25,000
7	Green Belt	1,00,000	20,000
Total		**19,00,000**	**6,45,000**

	Details of CER as per OM dated 01/05/2018

Sr. No.	Activities	Social Benefits	Expenses (Rs. Lacs)			
			2019	2020	2021	
1.	Greenbelt	• Greenery for ecological balance • Enrich local biodiversity • Helpful to control soil erosion • Plan for plantations	1	1	2	4
2.	Water Utilize	• Drinking & sanitation facilities in schools of nearby villages	2	3	3	8
	Total		**3**	**4**	**5**	**12**

B	**Total Plot area** (sq. meter)	Existing:1494 Proposed:-

		Total:1494 Sq. m.
	Green belt area (sq. meter)	Existing:44 Sq. m Proposed: - Total: 44 Sq. m.
C	**Employment generation**	Existing:10 Proposed:5 Total:15
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC Naroda
	Status of permission from the concern authority.	-
ii	**Water consumption (KLD)**	

	Existing KLD	**Proposed (Additional)** KLD	**Total after Expansion** KLD	Remarks
(F) Domestic	1.5	1.0	2.5	2.5 KLD fresh
(G) Gardening	-	0.5	0.5	0.5 KLD fresh
(H) Industrial				
Process	9.0	112	121	
Washing	8	4	12	5 KLD fresh +7 KLD recycled treated w/w
Boiler	-	5	5	
Cooling	12	12	24	14KLD fresh +10 KLD recycled treated w/w
Scrubber	1	2	3	-
Industrial Total	**30**	**135**	**165**	148KLD fresh +17 KLD recycled treated w/w

	Grand Total (A+B+C)	**31.5**	**136.5**	**168**	151KLD fresh +17 KLD recycled treated w/w

1) **Total water requirement** for the project: 168 KLD
2) Quantity to be **recycled:**17 KLD
3) Total **fresh water** requirement: 151 KLD

iii **Waste water generation (KLD)**

Category	**Existing** KLD	**Proposed (Additional)** KLD	**Total after Expansion** KLD	Remarks
(C) Domestic	1.5	0.5	2.0	Discharge to soak pit
(D) Industrial				
Process	9	15	24	Neutralize in ETP-1 and disposed to Common spray drying facility
Washing	8	4	12	Treated in ETP-2 and reuse in cooling tower make up and washing
Boiler	-	1	1	
Cooling	1	1	2	
Scrubber	1	1	2	
Total Industrial waste water	**19**	**22**	**41**	-

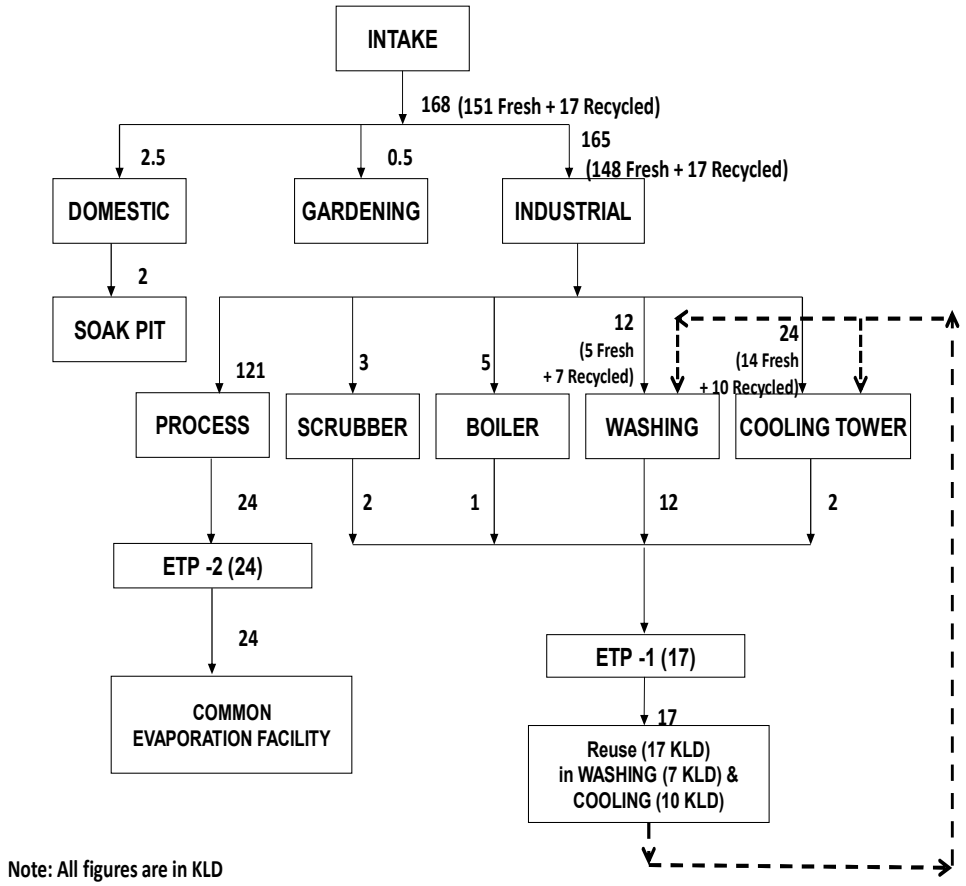
iv Treatment facility within premises with **capacity**

[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc.

- ETP -1(primary) :24 KLD (Concentrated Stream)
- ETP-2 (primary) : 17 KLD (Diluted Stream)

	Treatment scheme including segregation at source. ➢ Treatment Scheme: Segregation of Concentrated and diluted stream by providing separate ETP-1 & ETP-2 ➢ Type of Treatment: Primary Treatment ➢ Treatment Capacity: ETP -1(primary) :24 KLD (Concentrated Stream) ➢ ETP-2 (primary) : 17 KLD (Diluted Stream)	
	Note: (In case of CETP discharge) : **Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP**. ➢ Justification for complying of waste water management in view direction under section 18 (1) (b) of the Water\ ➢ There shall no discharged to CETP waste water treatment plant, NEPL, Naroda by proposing segregating diluted stream and concentration stream. After primary treatment in separate ETP the concentrated effluent will be discharged to the common spray drying facility and diluted effluent will be reused as cooling tower makeup and washing process.	
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ ZLD is not possible	
v	Mode of Disposal & Final meeting point	
	Domestic:	Soak pit : 2 KLD
	Industrial:	• Common Spray Drying Facility: 24 KLD • Recycled: 17 KLD.
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE, CHWIF etc. **Name of Common facility (CF) (For waste water treatment)**	
	• Society of clean and Green Environment, Naroda: 200 MT/Month • Naroda Enviro Projects Ltd.:450 MT/Month ➢ Novel, :500 MT/Month (**For discharge as per CC&A**)	
	Membership of Common facility (CF):Enclosed Annexure-VIII	
	(For waste water treatment)	
vii	**Simplified water balance diagram with reuse / recycle of waste water**	

WATER BALANCE DIAGRAM



Note: All figures are in KLD

vii	Reuse/Recycle details (KLD) [Source of reuse & application area]
E	**Total reuse 17.0 KLD**

Source of waste water for reuse with quantity in KLD (From where it is coming)	**Application area with quantity in KLD (Where it is used)**	**Characteristics of waste water to be reused (COD, BOD, TDS etc.)**	**Remarks regarding feasibility to reuse i.e.**
Diluted stream of ETP (17 KLD)	Reuse in Cooling (10 KLD & Washing(7 KLD)	PH: 7.5 COD:60 BOD:12 TDS :3500 mg/l TSS : 30 mg/l	The concentrate effluent will send to the Common spray drying facility and diluted stream

						will be reused.

i Flue gas emission details

No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc.

Existing & Proposed

Sr. No.	Attached to	Stack Height : m	Fuel Consumption	Pollutant	APCM
1.	Thermic Fluid Heater (01 Nos. of 2 Lacs Cal) (One stand by) (Existing)	12	Natural Gas (475SCM/ day)	PM/SO_2/ NO_2	Adequate Stack Height
2.	HAG / SFD (No – 1) (Existing)	12		PM/SO_2/ NO_2	Adequate Stack Height
3.	Evaporator (Existing)	12		PM/SO_2/ NOx	Adequate Stack Height
4.	D.G set (125KVAStandby)(No-1)	4	Diesel (25 Lit/hr)	PM/SO_2/ NO_2	Adequate Stack Height
5	Boiler 0.614 Ton (Nos-3) (Proposed)	12	Natural Gas (300 SCM/day)	PM/SO_2/ NO_2	Adequate Stack Height

ii Process gas i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)

Existing & Proposed

-

Sr. no.	Source of emission	Type of emission	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)

	1.	Reaction vessel From manufacturing of Aniline 2:5 Disulphonic Acid& Aniline 2:4 Disulphonic Acid)	SO_2 & SO_3	12	Water & Alkali Scrubber (Two stage)	
	2	SFD (Spin Flash Dryer)	PM	12	Multi Cyclone & Bag Filter	

iii **Fugitive emission** details with its mitigation measures.

Proposed project is of manufacturing of S. O. Dyes Intermediates. Followings measures will take for existing & proposed project.

- Maintaining the house keeping regularly
- Transferring the liquid materials by pump
- To carry out regular leak detection and repair activities
- Proper routine maintenance of equipment reduces the likelihood of leaks

F **Hazardous waste**

(As per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.

Existing & Proposed

i

Sr. no.	Type/Name of Hazardous waste	Source of generation	Category and Schedule as per HW Rules.	Quantity (MT/Annum)			Disposal Method
				Existing	Proposed	After Proposed	
1.	ETP Sludge	ETP	35.3	2	7	9	Collection, storage, transportation, disposal at the approved TSDF site.
2.	Discarded Container	Raw Materials Packing	33.3	0.72	1.55	2.22	Collection, storage, Reuse within premises/Sol

							d to registered recycler.
3.	Gypsum Sludge	Manufacturing of Metallic Acid & Resist Salt	26.1	2056.1	12972	15028.1	Collection, storage, transportation, Disposal by sent for co-processing in Cement Industries
4.	Iron Sludge	Manufacturing of Metallic Acid	26.1	913.84	5640	6553.84	Collection, storage, transportation, Disposal by sent for co-processing in Cement Industries
5.	Spent Sulphuric Acid	Manufacturing of Aniline2:5 Disulphon Acid & Aniline 2:4 Disulphon Acid	D2 of schedule II	374.90	5678.4	6053.3	Collection, storage, transportation, disposal to **Novel as per CC&A** and additional Sold to the Vendors under rule9
6.	Inorganic Salt KCl	Manufacturing of MAP	26.1	21.30	574.71	596.01	Collection, storage, transportation, disposal

								by selling to actual userunder rule9
	7.	Bleed Liquor	Scrubbing system	-	0.100	0.600	0.700	Collection, storage, transportation, disposal by treating in ETP

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	Enclosed in the Annexure-VIII of EIA Part III.
iii	Details of Non-Hazardous waste & its disposal(MSW and others)	NA
G	**Solvent management**, VOC emissions etc.	
i	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)	
	➢ No use of solvent	
ii	**VOC emission** sources and its mitigation measures	
	• There is no any Solvent will use. ➢ Unit will provide closed transferring system of raw materials during to avoid any leakage.	
H	• **Details regarding storage of Hazardous chemicals**	

Storage details	Name of major Hazardous chemicals	Remarks
Storage tanks	1. Oleum:25 KL(working 2. Sulphuric Acid: 25 KL 3. Caustic: 25 KL 4. Stand by Tank: 25 KL (3 No.)	Stand by tank of 25 KL capacity will be kept for transferring the chemical in emergency.
Drum/Barrel storage	2.22 MT/Annum	Sold to the registered recycler./ Reuse for

				parking of ETP and process sludge.

- **Applicability of PESO** :
- Not Applicable

- During the meeting dated 08.07.2019 technical presentation made by project proponent.
- The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic aspect. The baseline environmental study has been conducted for the study area of 10 km radial distance from project site for the period November'18 to January'19. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, NOx at Eight locations including the project site. Values conform to the prescribed standards for Ambient Air Quality. The incremental Ground Level Concentration (GLC) has been computed using AIRMOD. The resultant concentrations are within the NAAQS.
- Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios has been carried out. The detail proposed safeguard measures including On-Site / Off-Site Emergency Plan has been covered in the RA report.
- Committee noted that this proposal is for expansion of Dyes & Dyes Intermediates manufacturing at GIDC, Naroda. Unit has valid CC&A. PP submitted compliance report of CC&A. PP informed that there is no court case pending and no complaint against unit.
- While deliberating ToR no. 16, Committee found discrepancy in quantity of effluent generation shown in water balance diagram and stoichiometry mass/material balance. Upon asking the same, PP could not give clarification satisfactorily.
- Natural gas and diesel will be used as fuel. PP has not addressed APCM for SO3 process gas emission.
- Committee also deliberated on area adequacy, EMP, CER, safety aspects etc. of proposed project.
- PP has not addressed compliance of specific ToR no. 2, 3, 4, 7, 8 & 10 satisfactorily. Upon asking, PP could not explained compliance status of existing project (4 conditions).

After deliberation, SEAC unanimously decided to consider the proposal only after submission of the following details.

1. Compliance status of existing project (4 conditions).
2. Compliance of specific ToR no. 2, 3, 4, 7, 8 & 10.
3. Revise water balance diagram as per stoichiometry mass/material balance.
4. Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP.
5. APCM for SO3 process gas emission.
6. Readdress HW matrix including management of bleed liquor in accordance with the HWM Rules, 2016.

- PP submitted reply vide their letter dated 12.09.2019 which was considered in meeting dated 25.09.2019.
- During SEAC meeting dated 25/09/19, PP informed that they have submitted revised water, air and Hazardous Waste matrix as above. Committee asked about area adequacy and existing plant compliance, PP informed that vertical expansion of production plant in existing plot. PP informed that one show cause notice issued by the Board and SCN conditions complied by the unit. PP readdressed briefly regarding specific ToR conditions no-2, 3,4,7,8 and 10. Committee asked about Water Balance Diagram and PP informed revised water balance diagram with mass balance for all products in length. PP informed that concentrated effluent stream after primary treatment will be sent to common evaporation facility at Naroda and dilute stream after primary treatment will be reused back in process. PP informed that two stage scrubber as APCM will be provided with sulphonation reactor. PP submitted revised Hazardous waste matrix considering bleed liquor disposal and spent sulphuric acid as per existing CCA will be disposed to M/s Novel spent acid Management and additional quantity will be sold to Rule-9 units under HWR Rules'2016.Technical expert of PP informed that they have submitted revised format and oleum spare storage tank details.
- **In view of above after detailed discussion, Committee unanimously decided to recommend the project to SEIAA Gujarat for grant of Environmental Clearance.**

11.	SIA/GJ/IND2/39857/2018	**M/s. Voltbek Home Appliances Pvt. Ltd** Plot No. SM-12+51/1/2, Sanand-II Industrial Estate, BOL GIDC, Dist - Ahmedabad	EC-Reconsideration

Category of the unit: **5(f)**

Project status: **New**

- Project proponent (PP) submitted online application vide no. SIA/GJ/IND2/39857/2018 dated 23/08/19 for obtaining Environmental Clearance.
- SEIAA issued TOR to PP vide their letter dated 30/10/2018.
- Public Hearing of the Project was Carried Out at Project Site of M/s.Voltbek Home Appliances Pvt. Ltd. Plot No. SM-12+51/1/2, Sanand - II Industrial Estate, BOL GIDC, Ahmedabad, Gujarat by Gujarat Pollution Control Board on dated 30/06/2019.
- Project proponent has submitted EIA Report prepared by Yuva Enviro Expert, Ahmedabad based on the TOR issued by SEIAA.
- This is a new unit proposes for manufacturing of Synthetic Organic Chemical as tabulated below:

Sr. No.	Name of the Products	CAS no. /CI no.	Quantity	End-use of products

01	Production Usage of Polyurethane	9009-54-5	57.4 ton/Day (at maximum capacity in 2023)	Refrigerators as appliances For Home use purpose
Total			57.4 ton/Day	

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- PP was called for presentation in the SEAC meeting dated 05/09/2019.
- Salient Features of the project including Water, Air and Hazardous waste management:

Sr. no.	Particulars	Details
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	Total cost is 1214 Cr. From which 11 Cr is the project cost of this plant of usage of Polyurethane EC applicable area.
	Details of EMP	Capital Cost: 6 Cr Recurring Cost: 17 Lakh/Annum
	Details of CER as per OM dated 01/05/2018	22 Lakh (2 % of the total project cost of 11 Crore- EC applicable project)
B	**Total Plot area** (sq. meter)	Total plot area is 239278.16 Square meter from which 1250 Square meter is for polyurethane Usage EC applicable area.
	Green belt area (sq. meter)	70000 m^2
C	**Employment generation**	Total: 2153 Male:1507, Female: 646 From which 6 male is required in polyurethane Usage EC applicable area.
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC Water supply
	Status of permission from the concern	Obtained

	authority.	

ii **Water consumption (KLD)**

Category	Quantity KLD	Remarks
(I) Domestic	162	
(J) Gardening	21	
(K) Industrial		
Process	-	
Washing	-	
Boiler	-	
Cooling	100	
Others	-	
Industrial Total	100	
Total (A + B + C)	283	

1) **Total water requirement** for the project: 283 KLD
2) Quantity to be **recycled**: 134.5 KLD
3) Total **fresh water** requirement:148.5 KLD

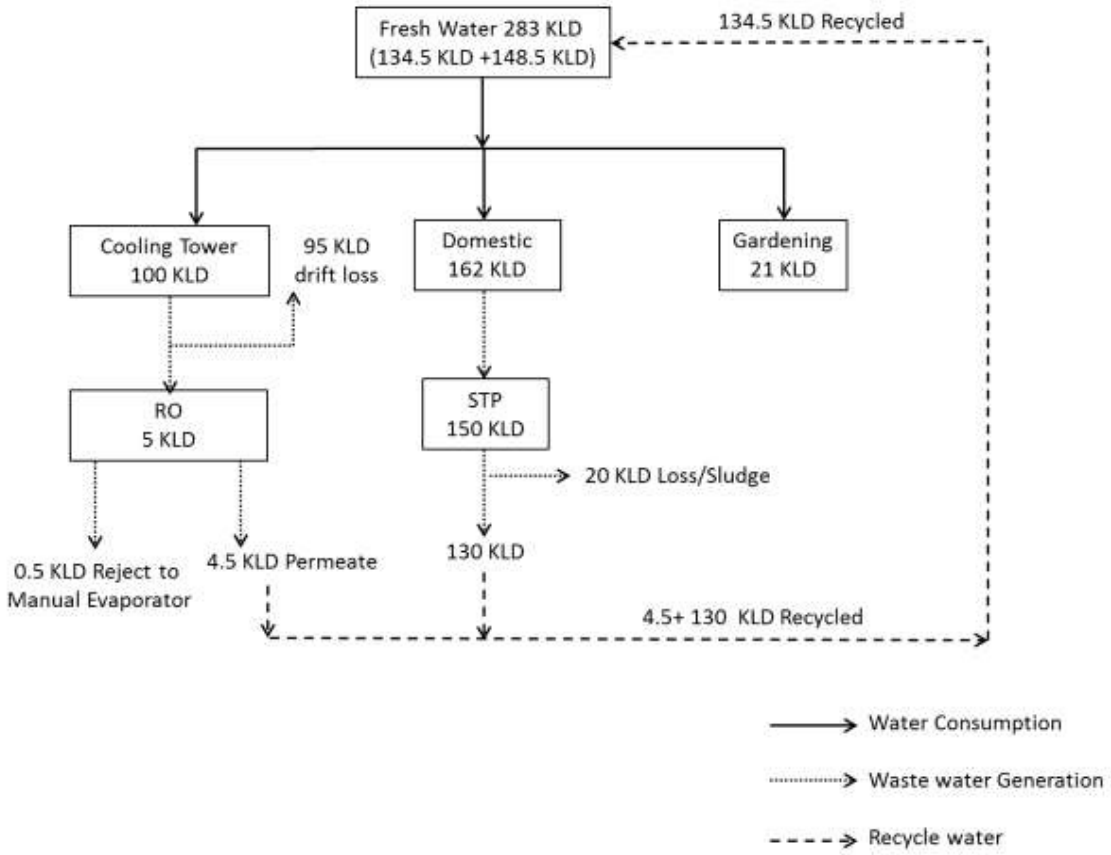
(Total water requirement = Fresh water + Recycled water)

iii **Waste water generation (KLD)**

Category	Waste water KLD	Remarks
(E) Domestic	150	Will be treated in STP and 130 KLD reuse in back in Domestic & Gardening purpose & 20 KLD will be loss
(F) Industrial		
Process	-	
Washing	-	
Boiler	-	
Cooling	5	Will be treated in RO and permeate of 4.5 KLD will be reuse back and reject of 0.5

				KLD will be forwarded in manual evaporator(ZLD)
		Others	-	
		Total Industrial waste water	5	
		Total [A + B]	155	
	-			
iv	Treatment facility within premises with **capacity** [In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc. The total water consumption will be 283 KLD. Proposed is Zero Liquid Discharge Unit. The sewage water of 150 KLD will be treated in Sewage Treatment plant and reused.			
	Treatment scheme including segregation at source. ➢ The waste water generated from cooling tower of 5 KLD will be sent to RO and RO permeate (4.5 KLD) will be recycled back in process while reject (0.5 KD) will be sent to manual evaporator. The sewage water of 150 KLD will be treated in Sewage Treatment plant and after treatment 130 KLD will be recycled back within premises. Hence total 134.5 KLD of waste water will be recycled back.			
	Note: (In case of CETP discharge) : **Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP**. ➢ Not Applicable			
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ The waste water generated from cooling tower of 5 KLD will be sent to RO and RO permeate (4.5 KLD) will be recycled back in process while reject (0.5 KD) will be sent to manual evaporator. The sewage water of 150 KLD will be treated in Sewage Treatment plant and after treatment 130 KLD will be recycled back within premises. Hence total 134.5 KLD of waste water will be recycled back.			
v	Mode of Disposal & Final meeting point			
	Domestic:		Will be treated in STP and 130 KLD reuse in back in Domestic & Gardening purpose & 20 KLD will be loss	
	Industrial:		Will be treated in RO and permeate of 4.5 KLD will be reuse back and reject of 0.5 KLD will be forwarded in manual evaporator(ZLD)	

vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ Not applicable
	Membership of Common facility (CF) **(For waste water treatment)**
	Not Applicable
vii	**Simplified water balance diagram with reuse / recycle of waste water**



viii	Reuse/Recycle details (KLD)

Total reuse…….KLD

Source of waste water for reuse with quantity in KLD (From where it is coming)	**Application area with quantity in KLD (Where it is used)**	**Characteristics of waste water to be reused (COD, BOD, TDS etc.)**	**Remarks regarding feasibility to reuse i.e.**
From RO	In process	COD: very less	

		plant(RO permeate)-4.5 KLD		BOD: Nil	
		From sewage water treatment plant-130 KLD	In process	COD <50 BOD<10	
		Total	134.5 KLD(In process and gardening)		

E **Air**

i Flue gas emission details

No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc.

-

Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1	DG Set	11	HSD	165 Litre/Hr	PM,SOX, NOX	Adequate stack height will be maintained

-

ii Process gas emission details i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)

-Not Applicable

iii **Fugitive emission** details with its mitigation measures:

As below:

Necessary precautions will be taken care like development of water sprinkling system including development of green belt.

F **Hazardous wastes**

(as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.

i

Sr.	Type/Name	Specific	Category	Quantity	Management

no.	of Hazardous waste	Source of generation (Name of the Activity, Product etc.)	and Schedule as per HW Rules.	(MT/Annum)	of HW
1	Used oil	Maintenance of plant machineries & D. G. Set	5.1	3	Collection, Storage,Reuse in lubrications of gear box and drive chains
2	ETP Waste (Evaporation Salt)	Manual Evaporator	35.3	0.5	Collection, Storage, Transportation, Will be sent to TSDF (Which will be Approved by GPCB and Falling outside CEPI area).
3	Battery	Production Unit	--	6	Collection, Storage, Transportation, SellingTo authorized dealers
4	Plastic & e-waste	From Production	--	At Actual	Collection, Storage, Transportation, Will be resale as per Plastic Waste management Rules, 2016

<table>
<tr><td>ii</td><td>Membership details of TSDF, CHWIF etc.
(For HW management)</td><td>TSDF membership part is Under Process (GPCB Approved Nearby TSDF which will be falling Outside CEPI area).</td></tr>
<tr><td>iii</td><td>Details of Non-Hazardous waste & its disposal
(MSW and others)</td><td>Sewage sludge will be used as manure within premises. Other municipal solid waste generated would include kitchen waste, cardboards, papers, and garden waste. Cardboard and papers wastes will be handed over to scrap dealers and kitchen & garden waste would be sent to the nearest municipal waste collection site. Aluminium waste generated during production is approx. 22 MT/A which will be sold to authorised dealer.</td></tr>
<tr><td>G</td><td colspan="2">Solvent management, VOC emissions etc.</td></tr>
<tr><td>i</td><td colspan="2">Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)</td></tr>
<tr><td></td><td colspan="2">➢ There will be negligible solvent loss from proposed project as Pentane is completely used and goes along with the product.</td></tr>
<tr><td>ii</td><td colspan="2">VOC emission sources and its mitigation measures</td></tr>
<tr><td></td><td colspan="2">➢ There will be no VOC generation</td></tr>
<tr><td>H</td><td colspan="2">• Details regarding storage of Hazardous chemicals-Not Applicable
<table>
<tr><td>Storage details</td><td>Name of major Hazardous chemicals</td><td>Remarks</td></tr>
<tr><td>Storage tanks: 3 NOs</td><td>Methylene diphenyl diisocyanate (MDI)</td><td>@ 80 KL storage</td></tr>
<tr><td></td><td></td><td></td></tr>
</table>
• Applicability of PESO : Applicable and Under Process</td></tr>
</table>

- During the meeting dated 05/09/2019, technical presentation made by the Project proponent.
- During the meeting, the project was appraised based on the information furnished in the EIA Report, Public hearing proceedings and details presented during the meeting.
- The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic aspect for the study area of 10 km radial distance from project site for the period October 2018 to December 2018. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2 & NOX at tenlocations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The incremental Ground Level Concentration (GLC) has been computed using AERMOD. The resultant concentrations are within the NAAQS. The modeling

study proved that the air emissions from the proposed plant would not affect the ambient air quality of the region in any significant manner. The ambient air quality around the proposed project site will remain within the National Ambient Air Quality Standards (NAAQS).

- Risk assessment including prediction of the worst-case scenario and maximum credible accident scenarios has been carried out. The detail proposed safeguard measures including On-Site / Off-Site Emergency Plan has been covered in the RA report.
- Committee also noted that a complaint on the project has been received on 23/06/2019 via E-mail from Paryavaran Abhiyan (NGO) and noted on the issue raised (1) storage on MDI and the Applicability of EC on the same considering category 6 (b) , (2) Project falls in GIDC Sanand which has not obtained EC as per category 7(c) as per EIA Notification, after detail deliberation committee concluded that as per OM dated 13/06/2019 from MoEF&CC EC on Isolated Storage of Hazardous Chemicals has been Eliminated and further they submitted that the Isolated storage of Hazardous chemicals is within the 500 meter from the production area. Further committee deliberated that as Sanand GIDC has not obtained EC in category 7 (c) as per EIA Notification the project proponent has already carried out Public Hearing for the compliance of the same as per the ToR issued by SEIAA.
- Committee noted that this proposal is new in GIDC – II Sanand. Source of Water is GIDC. PP mentioned that effluent generated from cooling tower blow down will be treated in proposed in-house RO, RO – Permeate will be reused back by mixing with fresh water while RO – Reject will be treated in manual evaporator. Committee asked PP about justification for calculation of drift loss however PP was not able to satisfactorily address the same. Committee asked PP about technical specification of manual evaporator and about the operation of the same however PP was not able to address the same. Committee asked PP to submit detail Plant Layout for the overall plot for which EC is applied with details of all the plant & machinery installation along with storage tanks of MDI. Committee also noted that PP has not properly address issues raised in the public hearing in the presentation. Committee deliberated on MDI safety issues for storage, transfer, unloading & process and noted that PP has not addressed satisfactorily the same. Committee noted that PP has not addressed Hazardous Waste as per HWR – 2016.
- After detailed discussion, it was decided to call the project proponent along with their expert consultant only after satisfactory submission of the following details.
    1. Technical Justification for 95 KLD Drift Loss from Cooling Tower having 100 KLD fresh water consumption in Water Balance Diagram.
    2. Submission of Approved Plant Layout along with every Technical details regarding plant & machinery and storage tanks of MDI along with their capacities.
    3. Details of issues raised in Public Hearing covering all the questions (issues) raised by public along with the commitment of the Project Proponent for the same in Tabular Form along with Summary.
    4. Technical Specification of Evaporator and its operation mechanism as per the ToR.

5. Safety Precautions on MDI covering Storage, Transfer, Loading, Unloading & Process Safety.
6. Revised Hazardous Waste Matrix Considering the Storage of MDI as per HWR – 2016.
7. Technical Justification of ND values of COD/BOD at all the locations for Surface Water & Ground Water in EIA Report.

- PP submitted reply vide their letter dated 24.09.2019 which was considered in meeting dated 25.09.2019.
- During SEAC meeting dated 25/09/19, PP informed that they have submitted technical justification regarding 95 KLD drift loss from cooling tower with summary of water balance diagram and committee deliberated in brief regarding evaporative cooling unit for drift loss. Committee deliberated in length regarding Approved Plant Layout along with every Technical details regarding plant & machinery and storage tanks of MDI along with their capacities. Committee deliberated in length regarding details of issues raised in Public Hearing covering all the questions (issues) raised by public along with the commitment of the Project Proponent for the same in Tabular Form along with Summary submitted by PP. Committee asked regarding technical details of evaporator and its operation mechanism, PP informed in details regarding evaporator and RO system for effluent treatment. Committee insisted for safety precaution measures for MDI storage and its handling and revised Hazardous waste matrix considering MDI storage and handling. PP informed about technical justification for ND values of COD/BOD at all the locations for Surface Water & Ground Water in EIA Report.
- **In view of above after detailed discussion, Committee unanimously decided to recommend the project to SEIAA ,Gujarat for grant of Environmental Clearance.**

12.	SIA/GJ/IND2/36996/2019	**M/s. Vihita Chem Pvt Ltd (Unit III)** Plot No. 25/8, GIDC Estate- Jhagadia, Ta-Jhagadia, Dist-Bharuch	Screening and scoping

Project / Activity No.: **5(f)**

Project status: New

- This office has received an application vide their online proposal no. SIA/GJ/IND2/36996/2019 dated 27/08/2019 regarding grant of Terms of Reference [ToR] for preparation of EIA/EMP report.
- Project proponent (PP) has submitted Form-1, PFR and relevant details/information.
- This is a new unit proposes for Synthetic Organic Chemicals manufacturing plant as tabulated below:

Sr. no.	Name of the Products	CAS No.	QUANTITY MT/MONTH	End-use of the products
	GROUP-1 (Sr. NO:- 1 to 3) (Total:- 70 MT/Month)			
1.	2,3,4,5–bis-O-[1-Methyl Ethyl idene]B-D-Fructopyranose	20880-92-6	70	For Topiramate (API)

	AND/OR				
2.	Di Methyl Formamide Di Methyl AcetalAND/OR		4637-24-5		For Imatinib (API)
3.	4-Methyl Catechol Di-acetic acid Dimethyl ester AND/OR		52589-39-6		For Watermelone Ketone (FRAGRANCE)
	GROUP-2 (Sr No:-4 to 8) (TOTAL:- 40 MT/Month)				
4.	4-Methyl Catechol AND/OR		452-86-8	40	For Watermelon Ketone (FRAGRANCE)
5.	Methylene dioxy phenol AND/OR		533-31-3		For Paroxetine (API)
6.	4-Chloro-4'Hydroxy Benzophenone AND/OR		42019-78-3		For Fenofibrate (API)
7.	2-Bromo Veratryl Bromide AND/OR		53207-004		For Pinaverium Bromide (API)
8.	7-Ethyl tryptophol AND/OR		41340-36-7		For Etodolac (API)
	GROUP-3 (Sr No:-9 to 53) (TOTAL:- 25 MT/Month)				
9.	Di Methyl Formamide Di Iso Propyl Acetal AND/OR		18503-89-4	25	For Cocaine (API)
10.	4-Methoxy Benzaldehyde dimethyl Acetal AND/OR		2186-92-7		For Paclitaxel/Octinoxate (API)
11.	Benzaldehyde dimethyl Acetal AND/OR		1125-88-8		For Rosuvastatin (API)
12.	Dimethyl Acetamide Dimethyl Acetal AND/OR		018871-66-4		For Zaleplon (API)
13.	O-Benzyl hydroxyl amine Hydrochloride AND/OR		2687-43-6		For Larsartan(API)
14.	Endo-9-methyl-9-azabicyclo[3,3,1]nonane 3-amineAND/OR		76272-56-5		For Granisetron (API)
15.	2 3 Dihydrofuran AND/OR		1191-99-7		For Etodolac (API)

16.	2-Amino-4-fluoro Benzophenone AND/OR		3800-06-4		For Pitavastatin (API)
17.	2-(2-ethoxy phenoxy)ethyl amine HCL AND/OR		64464-07-9		For Tamsulosin (API)
18.	2-(2-ethoxy phenoxy)ethyl amine AND/OR		6781-17-5		For Tamsulosin (API)
19.	N-(4-cyanophenyl)-glycin AND/OR		42288-26-6		For Dabigatran (API)
20.	1-(2,'5' Dimethoxy phenyl amino ethanol) AND/OR		3600-87-1		For Midodrine (API)
21.	Guanidine hydrochloride AND/OR		50-01-1		For Triazine (API)
22.	Guanidine Nitrate AND/OR		506-93-4		For Trimethoprim (API)
23.	Guanidine thiocyante AND/OR		593-84-0		For Triazine (API)
24.	O-benzyl hydroxyl amine AND/OR		2687-43-6		For Azaindoles (API)
25.	Syringaldazine AND/OR		14414-32-5		For Cholrine Test (API)
26.	3-amino-2-thiophenecarboxylic acid AND/OR		55341-87-2		For Tenoxicam (API)
27.	ethyl 2-(3-cyano-4-isobutoxyphenyl)-T-oxo-N,B-diphenylbenzenebutanamide AND/OR		125971-96-2		For Atorvastatin (API)
28.	Sulfamerazine AND/OR		127-79-7		For Antibiotic & Antimicrobial (API)
29	2-amino-4-methylpyrimidine AND/OR		108-52-1		For Sulfamerazine (API)
30	Methyl-2-amino-3-nitrobenzoate AND/OR		57113-91-4		For Candesartan (API)
31.	Guanidine carbonate AND/OR		593-85-1		For Triazine (API)
32.	N-hydroxy phthalimide AND/OR		524-38-9		For Catalyst Oxidation Reaction

33	Alpha –Bromo -2-Chloro Phenyl Acetic Acid Methyl Ester AND/OR		85259-19-4		For Clopidogrel (API)
34	4-Methoxy-3-nitrobenzylsulfonylacetic acid AND/OR		592542-51-3		For Oncology (API)
35	3,4-Dihydroxy Benzoic Acid AND/OR		99-50-3		For Protochuic Acid (API)
36	3,4- Dihydroxy Benzoic Acid Methyl ester AND/OR		2150-43-8		For Erlotinib (API)
37	**Piperonylic Methyl Ester** AND/OR		326-56-7		For Fragrance Intermediate
38	Ethyl 3-[(pyridin-2-yl)-amino]-propanoate AND/OR		103041-38-9		For Dabigatran (API)
39	3-nitro-4-methylamino benzoic acid AND/OR		41263-74-5		For Dabigatran (API)
40	Hydroquinone dimethyl ester AND/OR		150-78-7		For Midodrine (API)
41	Malonic Acid Methyl Ester Potassium salt AND/OR		38330-80-2		For Gycosylation (API)
42	**(1R,2R)-1,2 Cyclohexane Dicarboxylic Acid** AND/OR		46022-05-3		For Lurasidon Hcl (API)
43	**1-Methylindazole-3-Carboxylic acid** AND/OR		**50890-83-0**		For Garnisetron Hcl (API)
44	Isovanillic Acid AND/OR		645-08-9		For Galantamine (API)
45	2-Methyl-3-Oxo-Pentanoate AND/OR		759-66-0		For Etodolac (API)
46	2-(2-ethoxy phenoxy)-mesylate AND/OR		106463-17-6		For Tamsilosin HCl (Speciality Chemical)
47	3-(((2-methoxy-2-oxoethyl)amino)-sulfonyl)-2-thiopenecarboxylic acid methyl ester AND/OR		106820-63-7		For Tenoxicam (API)
48	Methyl-6-methylnicotinate AND/OR		2519-37-1		For Etoricoxib (API)

49	4-[(4-Methyl-1-piperazinyl)-methyl]-benzoic acid AND/OR		106261-48-7		For Lematinib (API)
50	**2-(((2'-cyano-(1,1'biphenyl)-4-yl)-methyl)amino)-3-nitro benzoic acid)** AND/OR		139481-28-0		For Cilexetile (API)
51	**Ndlic anhydride (endo- cis-bicyclo-(2.2.1)-5-heptane-2,3-dicarboxylic acid)** AND/OR		3853-88-1		For Lurasidone Hcl (API)
52	**4- Methoxy-3-(3-methoxypropoxy) benzoic acid** AND/OR		895240-50-3		For Aliskiren (API)
53	3- cyclopropyl-3-oxo Propionic Acid Methyl Ester AND/OR		32249-35-7		For Pitavastatin (API)
	GROUP-4 (Sr. No:-54 To 127) (25 MT/Month)				
54	4-Hydroxy Benzyl Alcohol AND/OR		623-05-2	25	For Bisoprolol Fumarate (API)
55	2,4,6 TrimethoxyBenzaldehyde AND/OR		830-79-5		For Oncology (API)
56	4-Isopropyl catechol AND/OR		2138-43-4		For Fragrance Intermediate
57	3-Methoxy Phenol AND/OR		150-19-6		For Antioxidants (API)
58	Veratryl Alcohol AND/OR		93-03-8		For Pinaverium Bromide (API)
59	3,4 Dihydroxy Benzaldehyde AND/OR		139-85-5		For Protochuic Acid (API)
60	4-Propyl Catechol AND/OR		2525-02-2		For Fragrance Intermediate
61	(3*S*,4*R*)-4-(4-Fluorophenyl)-3-hydroxymethyl-1-methylpiperidine(-alcohol) AND/OR		105812-81-5		For Paroxetine (API)
62	3 –MethoxyPropiophenone AND/OR		37951-49-8		For Tapentadol (API)
63	**4-Hydroxy Benzaladehyde** AND/OR		**123-08-0**		For Bisoprolol Fumarate (API)

64	**Piperonyl Alcohol** AND/OR		**495-76-1**		Antioxidants (API)
65	3,4-Dimethoxy phenol AND/OR		2033-89-8		For Thalicarpine (API)
66	**4- Methyl Guaiacol** AND/OR		**93-51-6**		For Fragrance Intermediate
67	Isovanillyl Alcohol AND/OR		4383-06-6		Aliskiren (API)
68	3-Methoxy benzyl alcohol AND/OR		6971-51-3		Sarpogrelate (API)
69	2,5-dimethoxy Benzaldehyde AND/OR		93-02-7		Midodrine (API)
70	5-Nitrovanillin AND/OR		6635-20-7		Entacapone (API)
71	4-Hydroxy Anisole AND/OR		150-76-5		For Fragrance Intermediate
72	Salicylaldehyde AND/OR		090-02-8		Midodrine (API)
73	Isovanillin AND/OR		621-59-0		For Galantamine (API)
74	Watermelone ketone AND/OR		28940-11-6		For Perfumes (Fragrance)
75	(1R,2R)-1,2-cyclohexanedimethanol AND/OR		65376-05-8		For Lurasidone Hcl (API)
76	3',4'-(methylenedioxy)-acetophenone AND/OR		3162-29-6		For Paroxetine Hcl (API)
77	3,4-dihyroxy-5-nitro-benzaldehyde AND/OR		116313-85-0		For Enatcapone (API)
78	2,4- di Hydroxy Benzophenone AND/OR		131-56-6		For Antioxidants (API)
79	2-hydroxy benzyl alcohol AND/OR		90-01-7		For Fragrance Intermediate
80	**N-benzyl-4-piperidinecarboxaldehyde** AND/OR		22065-85-6		For Donepezil (API)
81	5,6- Dimethoxy indanone AND/OR		2107-69-9		For Donepezil (API)

82	3-(1-Piperaziny)-1,2-Benzisoxazole/Hydrochloride AND/OR		87691-87-0/ 87691-88-1		For Ziprasidone (API)
83	5-Chloroethyl-6-Chloro-2-Oxindole AND/OR		118289-55-7		For Ziprasidone (API)
84	4-[(4-Methyl-1-piperazinyl)-methyl]-benzoyl chloride dihydrochloride AND/OR		**106261-64-7**		For Imatinib (API)
85	**1-(Benzo (d)(1,3)dioxol-5-yl))ethanol** AND/OR		**6329-73-3**		For Proline (API)
86	2 -Bromo 2',5' – dimethoxyacetophenone AND/OR		1204-21-3		For Midodrine (API)
87	(1R,2R)-1-2-bis (methane sulfonyloxy methyl) cyclohexane AND/OR		186204-35-3		For Lurasidone Hcl (API)
88	Tert-butyl(4-bromophenyl) Methylcarbamate AND/OR		639520-70-0		For Protecting Group
89	(2-cyclopropyl-4-(4-fluorophenyl)quinolone-3yl)methanol AND/OR		121660-11-5		For Pitavastatin (API)
90	2-Bromo-3'-Chloro – Propiophenone AND/OR		34911-51-8		For Bupropion Hcl (API)
91	3- Bromo- 4-Hydroxy Benzaldehyde **AND/OR**		**2973-78-6**		For Bromoxynil (API)
92	3,4-(methylenedioxy) bromo benzene **AND/OR**		**2635-13-4**		4-Bromo 1,2-Methylene Dioxy Benzene (Speciality Chemical)
93	**3-Methoxy Benzyl chloride** AND/OR		**824-98-6**		Sarpogrelate (API)
94	**4- Chloro Guaiacol** AND/OR		16766-30-6		For Fragrance Intermediate
95	**4- Chloro Veratrole**AND/OR		**16766-27-1**		For Reactant (Speciality Chemical)
96	2-Bromo-4- Chloro Phenol AND/OR		695-96-5		For Reactant (Speciality Chemical)

97	4- Bromo Anisole AND/OR		104-92-7		4-Bromo –(3-Methyl Phenol) Methanamine (Speciality Chemical)
98	4-BromoPhenetole AND/OR		588-96-5		For irritability (Fragrance)
99	Endo-9-methyl-9-azabicyclo[3,3,1]nonane 3-amine 2 HCL AND/OR		135906-03-5		For Granisetron Hcl Int. (API)
100	2-Bromo-4-Cyanophenol AND/OR		82380-17-**4**		For 2-Bromo -4-Hydroxy -Benzonitrite (Speciality Chemical)
101	2-Chloro-4,6-dimethoxy-[1,3,5]-triazine AND/OR		3140-73-**6**		For Pemetrexed Disodium (API)
102	Bicyclo[2.2.1]hep-tane-2,3-exo-dicarboximide AND/OR		14805-29-9		For Lurasidone (API)
103	4-Bromo Phenol AND/OR		106-41-2		For Stilled Reaction (Speciality Chemical)
104	2-(2-ethoxy phenoxy) ethyl bromide AND/OR		3259-03-8		For Tamsulosin (API)
105	Ethyl-3[1-(3 amino-4-(methyl amino)-phenyl)-n-(pyridine-2-yl)-foramido)proponate] AND/OR		212322-56-0		For Dabigatran (API)
106	Ethyl-n-[2-((4-cyanophenyl)-amino)-methyl-1-methyl-1H-benzimidazol-5-yl)-carbonyl-n-pyridine-2-yl-b-alanimate030AND/OR		211915-84-3		For Dabigartan (API)
107	6-chloro 2-oxindole AND/OR		56341-37-8		For Ziprasidone (API)
108	6-chloro-5-(chloroactyl)-1-3-dihydro-2H-indole-2-one AND/OR		118307-04-3		For Ziprasidone (API)
109	3,4-(methylenedioxy)-toluene AND/OR		**7145-99-5**		For Sitaxentan (API)
110	2-chloro-4,6-dimethoxybenzaldehyde AND/OR		18093-05-5		For Fenoldopam Mesylate (API)

111	2-chloro-2',5'-dimethoxy Acetophenone AND/OR		1204-22-4		For Midodrine (API)
112	4-fluoro-alpha-(2-methyl-1-oxopropyl)-t-oxo-N,B,Diphenylbenzenebutanamide AND/OR		125971-96-2		For Atorvastatin (API)
113	**5-Bromo-6-bromomethyl-1,3-benzodioxole** AND/OR		5434-47-9		For Iloperidone (API)
114	**6-Fluoro-3-(4-piperidinyl)1,2-benzisoxazole** AND/OR		84163-77-9		For Resperidone (API)
115	2,4-dimethoxy benzyl chloride AND/OR		55791-52-1		For Coumestan (Speciality Chemical)
116	methyl-4-(Bromomethyl)-benzoate AND/OR		2417-72-3		For Eprosartan (API)
117	**1,2,3,4- tetrahydro-9-methyl-4H-carbazol-4-one** AND/OR		27387-31-**1**		For Ondansetron (API)
118	4,5-dimethoxy-2- nitro toluene AND/OR		7509-11-7		For Chemical Ingredient (Speciality Chemical)
119	Alpha-bromo-ortho-chloro-phenyl acetic acid AND/OR		29270-30-**2**		For Clopidogrel (API)
120	**3,4-(Dimethoxy)-6-methylbenzyl chloride** AND/OR		34523-76-7		For Antibiotics (API)
121	**Anisole** AND/OR		100-66-3		For Fragrance Intermediate
122	**Veratrol** AND/OR		91-16-**7**		For Salmeterol Int. (API)
123	**Vanillin** AND/OR		121-33-5		For Vanilla Bean (API)
124	**Ethyl Vanillin** AND/OR		121-32-4		For Chocolate &Antioxidants (API)
125	3,4-methylenedioxy Benzaldehyde (piperonal) AND/OR		120-57-0		For Tadalafil Int. (API)
126	1-[3-(benzyloxy)propyl]-5-formylindoline-7-carbonitrile		1375180-30-5		For Silodosin (API)

	AND/OR				
127	Dimethyl formamide di-tert-butyl Acetal AND/OR		36805-97-7		For Int. Veterinary Uses (API)
	GROUP-5 (Sr No:- 128 to 209) (15 MT/Month)				
128	AfatinibDimaleate AND/OR		850140-73-7	15	For Metastatic (pharma)
129	Arbutin AND/OR		497-76-7		For Glycoside (pharma)
130	Agomelatine AND/OR		138112-76-2		For Antidepressant (pharma)
131	Apixaban AND/OR		503612-47-3		For Anticoagulant (pharma)
132	Aripiprazole AND/OR		129722-12-9		For Antipsychotic (pharma)
133	Asenapine AND/OR		65576-45-6		For Schizophrenia (pharma)
134	Axitinib AND/OR		319460-85-0		For Carcinoma (pharma)
135	Azilsartan AND/OR		147403-03-0		For Hypertension (pharma)
136	Abacavir Sulfate AND/OR		188062-50-2		For HIV Medications (pharma)
137	Atorvastatin Calcium AND/OR		134523-03-8		For Cardiovascular Diesease (pharma)
138	Bupropion HCL AND/OR		31677-93-7		For Depressive Order (pharma)
139	Bisoprolol Fumarate AND/OR		104344-23-2		For Antihypertensive (pharma)
140	Bazedoxifene AND/OR		**198481-32-2**		For Cancer (pharma)
141	Canagliflozin AND/OR		842133-18-0		For Diabetes (pharma)
142	Candesartan Cilexetil AND/OR		145040-37-5		For Angiotensin (pharma)
143	Celecoxib AND/OR		169590-42-5		For Non-Steroidal &Anti-inflammatory

					(pharma)
144	Clopidogrel sulfate AND/OR		120202-66-6		For Antiplatelet (pharma)
145	Dabigatran AND/OR		211915-06-9		For Anticoagulant (pharma)
146	Dapagliflozin AND/OR		461432-26-8		For Glycemia (pharma)
147	Darifenacin AND/OR		133099-04-4		For Overative Bladder (pharma)
148	Donepezil AND/OR		120014-06-4		For Dementia (pharma)
149	Dronedarone AND/OR		141626-36-0		For atrial fibrillation (pharma)
150	Desvenlafaxine Succinate monohydrate AND/OR		386750-22-7		For Depressive Disorder (pharma)
151	Duloxetine Hydrochloride AND/OR		136434-34-9		For Depression &Anxiety (pharma)
152	Erlotinib AND/OR		183321-74-6		For Cancer (pharma)
153	Etoricoxib AND/OR		202409-33-4		For Pain & Swelling (pharma)
154	Etodolac AND/OR		41340-25-4		For Arthritis (pharma)
155	Escitalopram oxalate AND/OR		219861-08-2		For Depression & Anxiety (pharma)
156	Febuxostat AND/OR		144060-53-7		For Arthritis (pharma)
157	Felodipine AND/OR		72509-76-3		For Hypertension (pharma)
158	Fluconazole AND/OR		86386-73-4		For Antifungal (pharma)
159	**Fenofibrate** AND/OR		49562-28-9		For High Good And loco cholesterol (pharma)
160	Granisetron HCl AND/OR		107007-99-8		For Cancer (pharma)

161	Gefitinib AND/OR		184475-35-2		For Lung Cancer (Pharma)
162	Gabapentin AND/OR		60142-96-3		For Neurontin (Pharma)
163	ILoperidone AND/OR		133454-47-4		For Proton Pump (Pharma)
164	Irbesartan AND/OR		138402-11-6		For Hypertension (Pharma)
165	Itopride Hydrochloride AND/OR		122892-31-3		For Dyspepsia (Pharma)
166	Lapatinib AND/OR		388082-78-8		For Cancer (Pharma)
167	Lurasidone Hydrochloride & its intermediate AND/OR		367514-88-3		For Schizophrenia (Pharma)
168	Losartan Potassium AND/OR		124750-99-8		For Hypertension (Pharma)
169	Mem Chloride AND/OR		3970-21-6		For API (Antibiotics)
170	Minodronic Acid AND/OR		155648-60-5		For osteoporosis (Pharma)
171	Moclobemide AND/OR		71320-77-9		For Depression & Anxiety (Pharma)
172	Modafinil AND/OR		68693-11-8		For Sleep apnea & narcolepsy (Pharma)
173	Metoprolol Tartrate AND/OR		37350-58-6		For Hypertension (Pharma)
174	Nisoldipine AND/OR		63675-72-9		For Hypertension (Pharma)
175	Omeprazole AND/OR		73590-58-6		For Antacids and Peptic Ulcer(Pharma)
176	O Des Venlafexine AND/OR		93413-62-8		For Major Depression Disorder (Pharma)
177	Olmesartan AND/OR		144689-63-4		For Hypertension (Pharma)
178	Pitavastatin AND/OR		147511-69-1		For High & Low Cholesterol (Pharma)

179	Piperonylic Acid AND/OR		94-53-1		For Piperonal (API)
180	PramipexoleDihydrochloride Monohydrate AND/OR		191217-81-9		For Renal Liver (Pharma)
181	Prasugrel Hydrochloride AND/OR		389574-19-0		For Heart Disease (Pharma)
182	Paroxetine hcl AND/OR		61869-08-7		For Depression (Pharma)
183	Pinaverium Bromide AND/OR		53251-94-8		For Irritable Bowel Syndromes (Pharma)
184	Pioglitazone HCl AND/OR		112529-15-4		For Diabetes (Pharma)
185	QuetiapineFumarate AND/OR		111974-72-2		For Schizophrenia (Pharma)
186	Rabeprazole Sodium AND/OR		117976-90-6		For Gastroesophageal Reflux Disease (Pharma)
187	Rivaroxaban AND/OR		117976-90-6		For Atrial fibrillation (Pharma)
188	Ropinirole Hydrochloride AND/OR		91374-20-8		For Restless Legs Syndrome (Pharma)
189	Resperidone AND/OR		106266-06-2		For Schizophrenia (Pharma)
190	Sertraline Hydrochloride AND/OR		79559-97-0		For Depression (Pharma)
191	Solifenacin Succinate AND/OR		242478-38-2		For Urination & incontinentia (Pharma)
192	Tadalafil AND/OR		171596-29-5		For Erectile DysFunction (Pharma)
193	Ticagrelor AND/OR		274693-27-5		For Angioplasty (Pharma)
194	Topiramate AND/OR		97240-79-4		For Seizures (Pharma)

195	Vilazodone Hydrochloride AND/OR		163521-08-2		For (Pharma)
196	Valsartan AND/OR		137862-53-4		For Hypertension (Pharma)
197	Vortioxetine Hydrbromide AND/OR		960203-27-4		For Depression (Pharma)
198	Vemurafinib AND/OR		1029872-54-5		For Melonoma (Pharma)
199	Warfarin Sodium clatharte AND/OR		67430-45-9		For AntiCoagulant (Pharma)
200	Ziprasidone HCl AND/OR		138982-67-9		For Schizophrenia (Pharma)
201	Vildagliptin AND/OR		274901-16-5		For Diabetes (Pharma)
202	Memantine HCL AND/OR		41100-52-1		For Alzeheimer (Pharma)
203	Linezolid AND/OR		165800-03-3		For Infections (Pharma)
204	Ramelteon AND/OR		96597-26-9		For Insomnia (Pharma)
205	Timolol maleate AND/OR		26839-75-8		For Antibiotic (Pharma)
206	Salmeterol Xinafoate AND/OR		94749-08-3		For Adrenergic (Pharma)
207	Ezetimibe AND/OR		**163222-33-1**		For Primary Hypercholesterolemia (Pharma)
208	Ritonavir AND/OR		**155213-67-5**		For HIV Protease Inhibitors (Pharma)
209	Glimepiride AND/OR		93479-97-1		For Diabetes (Pharma)
GROUP- 6 R&D PRODUCTS					
	Various New Product developed by In-House R & D with similar chemistry for production 1 to 209.		--	5	--

	TOTAL PRODUCTION CAPACITY		**--**	**180**	

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- PP was called for presentation in the SEAC meeting dated 25/09/2019.
- Aerial distance of this unit from the nearest Critically Polluted Area (CPA), GIDC Ankleshwar is @ 8.24 Km.
- Salient features of the project including Water, Air and Hazardous waste management :

Sr. no.	Particulars	Details
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	20 Crore
B	**Total Plot area** (sq. meter)	Total Area:- 11784.66 Sq.mt Utilization area:- 9570.62
	Green belt area (sq. meter)	3184.16 Sq.mt
C	**Employment generation**	**150**
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC
	Status of permission from the concern authority.	WILL BE OBTAINED.
ii	**Water consumption (KLD)**	

Category	Quantity KLD	Remarks
(L) Domestic	5	Unit will use fresh water for it.
(M) Gardening	9	Unit will use fresh water for it.
(N) Industrial		
Process	67	Fresh Water:- 67 KLD
Washing	8	Fresh water:- 3 KLD + Recycled water:- 5 KLD)
Boiler	15	Fresh water:- 15 KLD
Cooling	35	Fresh Water:- 35 KLD

Process Scrubber	3	Fresh water:- 3 KLD
Boiler Scrubber	12	Recycled Water:- 12 KLD
Industrial Total	140	Fresh water:- 123 KLD + Recycled water:- 17 KLD
Total (A + B + C)	154	Fresh water requirement:- 137 KLD + Recycled water:- 17 KLD

4) **Total water requirement** for the project:154KLD
5) Quantity to be **recycled**: 17KLD
6) Total **fresh water** requirement: 137KLD

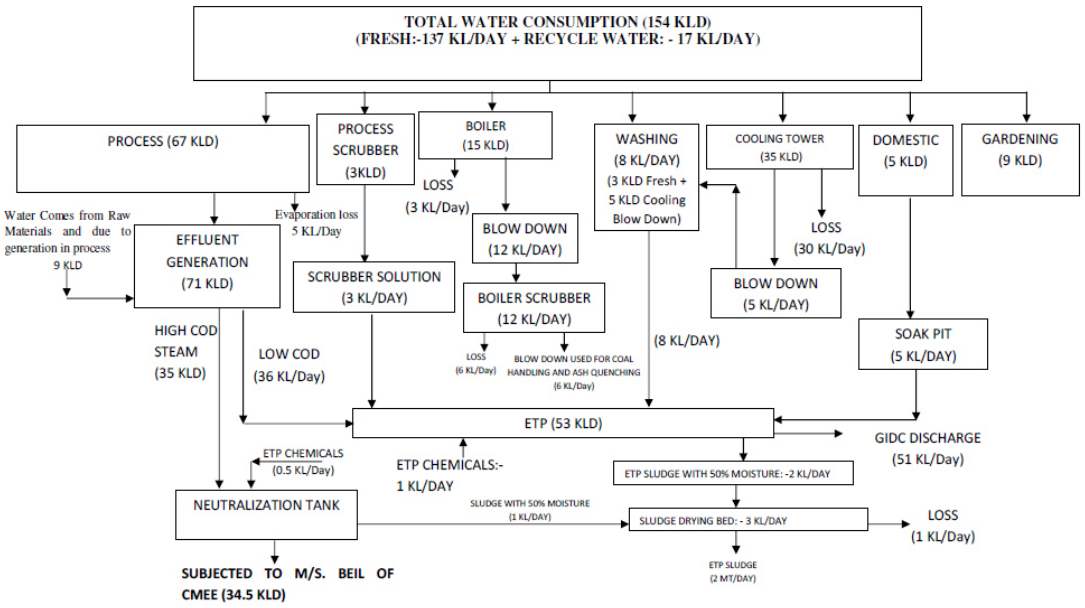
(Total water requirement = Fresh water + Recycled water)

iii **Waste water generation (KLD)**

Category	Waste water KLD	Remarks
(G) Domestic	5	Unit will treat domestic effluent along with its industrial effluent.
(H) Industrial		
Process	71	High COD effluent subjected to CMEE of M/s. BEIL-Dahej: - 35 KLD after neutralization. LOW COD effluent: - 36 KLD subjected to in house effluent treatment plant and subjected to M/s. NCT.
Washing	8	8 KLD WASHING WATER will be treated in unit's own effluent treatment plant.
Boiler	12	Total 12 KLD Boiler Blow Down will be generated. Unit will use this Boiler Blow Down water in the water scrubber of Boiler. Total 6 KLD effluent will be lost in to atmosphere. Remaining 6 KLD saturated Water will be used in Coal Handling and Ash quenching. So unit will use entire BOILER BLOW DOWN water with in premises.
Cooling	5	5 KLD Cooling Tower Blow

				Down water will be used for the washing purpose.	
		Others	3	3 KLD washing water will be subjected to unit's own effluent treatment plant.	
		Total Industrial waste water	99	Total 99 KLD effluent will be generated from Industrial activity. STEAM 1:- High Ammonical Nitrogen Steam + HIGH COD steam – send to CMEE of M/s. BEIL-Dahej after neutralization. (35 KLD) STEAM 2:- Total 64 KLD low COD steam will be generated. From which 5 KLD cooling tower blow down will be reused in the washing which comes as low COD and 12 KLD boiler blow down will be used in the water scrubber of boiler, remaining water will be subjected to in house ETP. 1 KL/Day chemicals will also be added in ETP for treatment.	
		Total [A + B]	104	Total 35 KLD effluent will be subjected to M/s. BEIL-Dahej after neutralization. Total 69 KLD effluent (Industrial + Domestic) will be generated ,from it 5 KLD cooing tower blow down will be reused in the washing which comes as low COD from washing and 12 KLD boiler blow down will be used in the water scrubber of boiler, remaining water will be subjected to in house ETP. 1 KL/Day chemicals will also be added in ETP for treatment.	
iv	Treatment facility within premises with **capacity** [In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc. ➢ Unit is having primary, secondary and tertiary treatment.				

	Treatment scheme including segregation at source. ➢ High COD and High Ammonical nitrogen stream will be segregated at the source and sent to CMEE of M/s. BEIL- Dahej after neutralization and LOW COD and LOW Ammonical nitrogen steam will be treated in units own effluent treatment plant and subjected to M/s. NCT.	
	Note: (In case of CETP discharge) : **Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP**. ➢ 18(1)-B is not applicable.	
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ Unit will discharge 51 KLD effluent into M/s. NCT	
v	Mode of Disposal & Final meeting point	
	Domestic:	Domestic
	Industrial:	GIDC Discharge
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ M/s. NCT	
	Membership of Common facility (CF) **(For waste water treatment)**	
	M/s. NCT	
vii	**Simplified water balance diagram with reuse / recycle of waste water**	



viii Reuse/Recycle details (KLD)

Total reuse: - No recycled water will be used by the unit.

Source of waste water for reuse with quantity in KLD (From where it is coming)	**Application area with quantity in KLD (Where it is used)**	**Characteristics of waste water to be reused (COD, BOD, TDS etc.)**	**Remarks regarding feasibility to reuse i.e.**
Washing	5 KLD- Into cooling tower	pH:- Basic COD:- <100 mg/l TDS:- 1500-2000 mg/l	
Boiler Blow Down	12 KLD into Water Scrubber of Boiler	pH:- Basic COD:- <100 mg/l TDS:- 2500-3000 mg/l	

E Air

i Flue gas emission details

No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc.

Sr. no.	**Source of emission**	**Stack Height (meter)**	**Type of Fuel**	**Quantity of Fuel MT/Day**	**Type of emissions i.e. Air**	**Air Pollution Control**

			With Capacity				**Pollutants**	**Measures (APCM)**
		1	Boiler-1 (2 MT/Hr.)	30	Natural Gas / Furnace Oil	2100 m^3/Day OR 1800 lit/Day	PM SO_2 Nox	Adequate Stack Height.
		2	Boiler-2 (5 MT/Hr.)	30	Coal/Briquette	11 MT/Day OR 13 MT/Day	PM SO_2 Nox	Bag Filter, Multi Cyclone Separator and Water Scrubber.
		3	Thermic Fluid Heater (4 Lacs Kcal/Hr)	30	Natural Gas / Furnace Oil	1500m3/ Day OR 1200 Lit/Day	PM SO_2 Nox	Adequate Stack Height
		4	D.G.Set (750 KVA) (2 Nos)	12	Diesel	50 Lit/Hr	PM SO_2 Nox	Adequate Stack Height
ii	Process gas emission details i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)							
	-							

Sr. no.	Specific Source of emission (Name of the Product & Process)	Type of emission	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
1	Process Vessels	HCl SO_2	15	Water Scrubber followed by Alkali Scrubber
2	Process Vessels	Br_2	15	Water Scrubber followed by Alkali Scrubber
3	Process Vessels	HBr	15	Water Scrubber followed by Alkali Scrubber
4	Process Vessels	Ammonia	15	Acid Scrubber

iii	**Fugitive emission** details with its mitigation measures: As below:

Unit has proposed to install water scrubber followed by alkali scrubber and acid scrubber to curb the emission.

F **Hazardous wastes**

(as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.

i

Sr. No.	Type of Waste	Category	Source of Generation	Total Hazardous waste generation (MT/ Annum)	Mode of Disposal
1.	ETP sludge	35.3	From ETP	730	Collection, Storage, Transportation, Disposal at TSDF site authorized by the GPCB.
2.	Process Salt	35.3	From manufacturing Process of following, 4-Methoxy Benzaldehyde dimethyl Acetal, Benzaldehyde dimethyl Acetal, 2-(2-ethoxy phenoxy)ethyl amine HCl, 2-(2-ethoxy phenoxy)ethyl amine, Ethyl 2-(3-cyano-4-isobutoxyphenyl)-T-oxo-N,B-diphenylbenzenebutanamide, Veratryl Alcohol, (1R,2R)-1,2-cyclohexanedimethanol, (2-cyclopropyl-4-(4-fluorophenyl)quinolone-3yl)methanol, **3- Bromo- 4-Hydroxy Benzaldehyde, 3-Methoxy Benzyl chloride, 4- Chloro Veratrole,** 4-BromoPhenetole, **Anisole, Veratrol, Vanillin, Ethyl Vanillin,** 3,4-methylenedioxy Benzaldehyde (piperonal), Etodolac, Nisoldipine, Omeprazole	650	
3	Used Oil	5.1	From lubricate of plant and machineries	5	Collection, Storage, And internally reused in the lubrication of plant and machinery

					or sell it to authorized re-refiners/recycler.
4	Discarded containers/ Empty barrels/ Bags/ Liners	33.1	Packing of raw materials.	50	Storage, decontamination, transport and send to recycler or reuse or send back to supplier.
5	Spent Catalyst	28.2	From following manufacturing Process Endo-9-methyl-9-azabicyclo[3,3,1]nonane 3-amine, Alpha –Bromo -2-Chloro Phenyl Acetic Acid Methyl Ester , 4-Hydroxy Benzyl Alcohol, 5,6- Dimethoxy indanone, Endo-9-methyl-9-azabicyclo[3,3,1]nonane 3-amine 2 HCl, Bicyclo[2.2.1]hep-tane-2,3-exo-dicarboximide , Ethyl-n-[2-((4-cyanophenyl)-amino)-methyl-1-methyl-1H-benzimidazol-5-yl)-carbonyl-n-pyridine-2-yl-b-alanimate030, Alpha-bromo-ortho-chloro-phenyl acetic acid, Bazedoxifene, Dapagliflozin, Paroxetine hcl, Vemurafinib, Salmeterol Xinafoate, Ezetimibe	25	Collection, Storage, and send to authorized unit for regeneration.
6	Spent Carbon	28.3	From manufacturing Process Product no:- Aripiprazole, Asenapine, Donepezil, Irbesartan, Losartan Potassium , Losartan Potassium , Moclobemide, PramipexoleDihydrochloride Monohydrate, Tadalafil	30	Collection, Storage, and send for co-processing or Incinerator .
7	Distillation Residue	26.3	From manufacturing Process Product no:- 4-Isopropyl catechol , 4-Propyl Catechol , 1-[3-(benzyloxy)propyl]-5-formylindoline-7-carbonitrile , Agomelatine, Aripiprazole, Asenapine, Bazedoxifene, Canagliflozin, Dabigatran, Dapagliflozin, Darifenacin, Escitalopram oxalate, **Fenofibrate**, Gabapentin, Losartan Potassium , Modafinil, Pitavastatin, Solifenacin Succinate .	280	
8	Formic acid solution (50 to 60%	26.3	From following manufacturing Process Product no:- Methylene dioxy phenol, Ethyl 2-(3-cyano-4-isobutoxyphenyl)-T-oxo-N,B-diphenylbenzenebutanamide	1435	Collection, Storage, And sell to those units

	soln);				who are having permission of RULE-9 or who have applied under RULE-9.
9	Zinc chloride Solution (20 to 22% soln);	26.3	From following manufacturing Process Product no:- Methylene dioxy phenol, 3',4'-(methylenedioxy)-acetophenone, 5-Chloroethyl-6-Chloro-2-Oxindole, 2 -Bromo 2',5' – dimethoxyacetophenone, **1,2,3,4- tetrahydro-9-methyl-4H-carbazol-4-one.**	3130	
10	Sodium Bromide Solution (10 to 12% soln);	26.3	From manufacturing Process Product no:- 4,56,60,69,71,206 4-Methyl Catechol, 4-Isopropyl catechol, 4-Propyl Catechol, 2,5-dimethoxy Benzaldehyde, 4-Hydroxy Anisole, Salmeterol Xinafoate	4980	
11	Aluminium Chloride Solution	26.3	From following manufacturing Process 4-Chloro-4'Hydroxy Benzophenone, 2-Amino-4-fluoro Benzophenone, **1-Methylindazole-3-Carboxylic acid,** 3,4 Dihydroxy Benzaldehyde, 3 –MethoxyPropiophenone, 3,4-Dimethoxy phenol, 2,4- di Hydroxy Benzophenone, 6-chloro-5-(chloroactyl)-1-3-dihydro-2H-indole-2-one, 2-chloro-2',5'-dimethoxy Acetophenone, Febuxostat	3036	
12	Acetic Acid (35% to 40% solu)	26.3	From manufacturing Process Product no:- 3,4 Dihydroxy benzoic acid	810	
13	Scrubber Solution	--	From Scrubber	1095	It will be treated in unit's own effluent treatment plant. (HCl solution :- 548 MT/Annum, SBS Solution:- 250

						MT/Annum, HBr solution:- 200 MT/Annum, Sodium Bromide solution:- 40 MT/Annum, Ammonium Sulfate Solution:- 42 MT/Annum)
	14	Off Specification Products	28.4	--	2	Collection, Storage, And send to co-processing or Incinerator.
	15	Date Expired Products	28.5	--	2	
	16	Spent Solvents	28.6	From following products, Di Methyl formamide di iso propyl acetal, 2,3 Dihydorfuran , Methyl 2 amino 3 nitrobenzene, 4- Propyl catechol, Bisoprolol fumarate and SRP	560	Collection, Storage and send for co-processing or Incinerator.
	17	Sodium sulfate salt	35.3	From following products, 3,4 Dihydroxy Benzoic acid methyl ester, Hydroquinone dimethyl ester, 1- methylindazole 3- carboxylic acid, Isovanillic acid.	948	Collection, Storage and sell to those units who are having permission of rule-9 or who have applied under rule-9 or dispose through TSDF site.
	18	Recoverable Solvent	28.6	From all products	6450	Collection, Storage and Recycled within the

						unit by using of distillation.

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	Membership certificate is attached as ANNEXURE-XV.
iii	Details of Non-Hazardous waste & its disposal (MSW and others)	---
G	**Solvent management**, VOC emissions etc.	
i	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)	

- Unit is using methanol, Toluene, Xylene etc. as a solvent.

Name of Solvent	Name Of Product	Total Quantity (MT/MT)	Quantity Fresh (MT/MT)	Quantity recovered (MT/MT)	% Recovery
Acetone	2,3,4,5–bis-O-[1-Methyl Ethyl idene] B-D-Fructopyranose Di Methyl Formamide Di Methyl Acetal	2	0.1	1.9	95
Toluene		0.6	0.04	0.56	94
Total		**2.6**	**0.14**	2.46	
Methanol	4-Methyl Catechol Di-acetic acid Dimethyl ester	5	0.15	4.85	97
Toluene		2	0.06	1.94	97
Total		**7**	**0.21**	**6.79**	
N-butanol		1.4	0.05	1.35	98
Total					
MDC	Methylene dioxy phenol	1.6	0.1	1.5	94
Toluene		3.3	0.08	3.22	97.5
Methanol		0.6	0.02	0.58	98

Total		**5.5**	**0.224**	**5.276**	
1,2 Di Chloro benzene	4-Chloro-4'Hydroxy Benzophenone	1.6	0.06	1.54	96.2
Total		1.6	0.06	1.54	
Methelyen dichloride	2-Bromo Veratryl Bromide	1	0.5	0.95	95
Toluene		1	0.08	0.92	92
Total		**2**	**0.13**	1.87	
Toluene	7-Ethyl tryptophol	**1**	**0.1**	0.9	90
Total		**6.2**	**0.7**	5.5	
Methelene chloride	2 -Bromo 2',5'-dimethoxyacetophenone	1.2	0.1	1.1	92
Total		**1.2**	**0.1**	1.1	
---	Di Methyl Formamide Di Iso Propyl Acetal	No Solvent will be used.			
Methanol	4-Methoxy Benzaldehyde Dimethyl Acetal	1.4	0.07	1.33	95
		1.4	0.07	1.33	
Methanol	Benzaldehyde dimethyl Acetal	1.4	0.07	1.33	95
		1.4	0.07	1.33	
Methanol	4-Hydroxy Benzyl Alcohol	2	0.08	1.92	96
Total		2	0.08	1.92	
Methelene dichloride	O-Benzyl hydroxyl amine Hydrochloride	3	0.15	2.85	95
Toluene		1.6	0.05	1.55	97
Methanol		2	0.1	1.9	95
Total		**6.6**	**0.3**	6.3	
Toluene	Alpha –Bromo - 2-Chloro Phenyl Acetic Acid Methyl Ester	4	0.2	3.8	95
Methanol		1.4	0.1	1.3	93
Chloro benzene		2	0.1	1.9	95
Methelene dichloride		1	0.1	0.9	90
Total		**8.4**	**0.5**	7.9	
Methanol	3-(1-Pleperazinuyl)-1,2 Hydrochloride	**7**	**0.1**	6.9	97.5
Toluene		**8**	**0.5**	7.5	94
		15	**0.6**	14.4	
Methelene dichloride	5-Chloroethyl-6-Chloro-2-	1.4	0.1	1.3	93

DMSO	Oxindole	2	0.1	1.9	95
Methanol		2	0.05	1.95	97.5
Total		**5.4**	**0.25**	**5.15**	
Methanol	2,4,6 TrimethoxyBenzaldehyde	2	0.1	1.9	95
Total		**2**	**0.1**	**1.9**	
chlorobenzene	4-Methoxy-3-nitrobenzylsulfonylacetic acid	3.8	0.12	3.68	97
Methanol		3	0.3	2.87	96
Total		**6.8**	**0.42**	6.55	
Methelyen dichloride	(1R,2R)-1-2-bis (methane sulfonyloxy methyl) cyclohexane	2	0.2	1.8	90
THF		1	0.04	0.96	96
Total		**3**	**0.24**	**2.76**	
Methelyne dichloride	4-Isopropyl catechol	2	0.1	1.9	95
N-Butanol		2.8	0.06	2.74	98
Copper sulfate		2	0.1	1.9	95
Total		**6.8**	**0.26**	**6.54**	
Toluene	3-Methoxy Phenol	2	0.1	1.9	95
Total		**2**	**0.1**	**1.9**	
Toluene	Veratrol Alcohol	3.76	0.26	3.5	93
Methanol		2	0.1	1.9	95
Methelyen dichloride		1	0.1	0.9	90
Total		**6.76**	**0.46**	6.3	
--------	3,4-Dihydroxy Benzoic Acid	Solvnet will not be used in this product.			
Total					
--------	3,4 DihydroxyBenzaldehyde	Solvnet will not be used in this product.			
Total					
N-Butanol	4-Propyl Catechol	2.8	0.06	2.74	98
Methelyen dichloride		2	0.1	1.9	95
Total		**4.8**	**0.16**	4.24	
Methanol	Dimethyl Acetamide Dimethyl Acetal	1	0.02	0.98	98
Total		**1**	**0.02**	**0.98**	
DMF	Tert-butyl(4-bromophenyl) Methylcarbamate	1	0.05	0.95	95
Methelyen dichloride		3	0.2	2.8	94

Total		**4**	**0.3**	3.7	
Methelyen dichloride	4-[(4-Methyl-1-piperazinyl)-methyl]-benzoyl chloride dihydrochloride	1	0.05	0.95	95
Thionyl chloride r		4	0.1	3.9	97.5
chloroforom		2	0.1	1.9	95
Total		**7**	**0.3**	6.7	
Methanol	(2-cyclopropyl-4-(4-fluorophenyl)quinolone-3yl)methanol	1.2	0.05	1.15	96
Toluene		4	0.1	3.9	97.5
Cyclohaxen		1	0.05	0.95	95
Total		**6.2**	**0.2**	6.0	
Iso propyl alcohol	(-) Alcohol	2	0.1	1.9	95
DMF		0.4	0.02	0.38	95
Total		**2.4**	**0.12**	**2.28**	
EDC	3 – MethoxyPropiophenone	2	0.1	1.9	95
DMF		0.6	0.05	0.55	92
Toluene		2	0.1	1.9	95
Total		**4.6**	**0.25**	**4.35**	
Methanol	AfatinibDimalate	1.29	0.3	1.26	97.67
Total		**1.29**	**0.3**	**1.26**	
MDC	Arbutin	2	0.1	1.9	95
methanol		1.6	0.08	1.52	95
Total		**3.6**	**0.18**	**3.42**	
Methanol		3	0.1	2.9	96.66
Total		3	0.1	2.9	
Ethyle glycoal	Apixaban	2	0.1	1.9	95%
Total		2	0.1	1.9	
Dimethylformamide	Aripiprazole	1.7	0.06	1.64	96.47
Iso Propyl Alcohol		3.1	0.14	2.96	95.48
Total		**4.8**	**0.2**	**4.6**	
Methanol	Asenapine	2.4	0.1	2.3	95.83
MDC		2.4	0.1	2.3	95.83
Butanol		2	0.1	1.9	95
N-Butyl alcohol		1.4	0.1	1.3	92.85
Total		**8.2**	**0.4**	**7.8**	
--	Axitinib	--	--	--	--
Total		**--**	**--**	**--**	**--**
MDC r	Azilsartan	1.6	0.1	1.5	93.75
Acetone + water		2	0.1	1.9	95

Ethyl acetate		2	0.1	1.9	95
Total		**5.6**	**0.3**	**4.9**	
Iso Propyl Alcohol	Abacavir Sulfate	6	0.3	5.7	95
Triethyl ortho formate		4	0.1	3.9	97.5
Acetone		0.4	0.02	0.38	95
Total		**10.4**	**0.42**	**9.98**	
Cyclohexane	Atorvastatin Calcium	1	0.05	0.95	95
Ethyle acetate		1	0.05	0.95	95
Methyl ethyl ketone		1	0.05	0.95	95
T-butanol		0.5	0.05	0.45	90
Methanol		1.5	0.09	1.41	94
Total		**5**	**0.44**	**4.56**	
Iso Propyl Alcohol	Bupropion HCl	1	0.05	0.95	95
Methelene dichlorie		2	0.1	1.9	95
Ethlye acetate		1	0.05	0.95	95
Total		**4**	**0.2**	**3.8**	
Acetone	Bazedoxifene	1.8	0.1	1.7	94.44
Total		**1.8**	**0.1**	**1.7**	
Methanol	Canagliflozin	2.4	0.1	2.3	95.83
Ethyle acetate		2.4	0.1	2.3	95.83
Toluene + Heptane		2	0.1	1.9	95
Total		**6.8**	**0.3**	**6.5**	
Methelene dichloride r	Candesartan Cilexetil	4.6	0.2	4.4	95.65
Acetone		2	0.1	1.9	95
Methanol		2	0.1	1.9	95
Acetonitrile		2	0.1	1.9	95
Total		**10.6**	**0.5**	**10.1**	
--	Celecoxib	--	--	--	--
Total					
Methanol	Clopidogrel bi sulfate	3	0.2	2.8	93.33
Total		**3**	**0.2**	**2.8**	
Acetone	Dabigatran	3	0.1	2.9	96.66
Methanol recovered	Dapagliflozin	2.2	0.1	2.1	95.45
Total		**2.2**	**0.1**	**2.1**	
Dimethyl formamide	Darifenacin	2	0.1	1.9	95.0
Acetone		2	0.1	1.9	96.0
Methelene		2	0.2	1.8	90

dichloride						
Total		**6**	**0.4**	**5.6**	
Methelye dichloride	Donepezil	2.2	0.1	2.1	95.45
Methanol		2.2	0.1	2.1	95.45
Diisopropyl ether		2	0.1	1.9	95
Total		**6.4**	**0.3**	**6.1**	
Methelye dichloride	Dronedarone	4.2	0.1	4.1	98
Ethyl acetate		4.2	0.1	4.1	98
Total		**8.4**	**0.2**	8.2	
Acetonitrile	Desvenlafaxine Succinate monohydrate	2	0.1	1.9	95
Thiophenol		0.306	0.026	0.28	91
DMSO		1	0.05	0.95	95
Total		**3.306**	**0.226**	**3.08**	
Methanol	Duloxetine Hydrochloride	3	0.15	2.85	95
DMSO		1	0.05	0.95	95
Diiso propyle amine		1	0.05	0.95	95
acetone		1	0.05	0.95	95
Total		**6**	**0.3**	**5.7**	
Methelyene dichloride	Erlotinib	1.6	0.1	1.5	94
Methanol		2.95	0.35	2.6	90
Total		**4.55**	**0.45**	**4.1**	
Tetrahydrofuran	Etoricoxib	1.8	0.1	1.7	94.44
Toluen		2.2	0.1	2.1	95.45
IPA-Hexane		2	0.1	1.9	95
Total		**6**	**0.3**	**5.7**	
Methanol	Etodolac	2	0.1	1.9	95
Total		**2**	**0.1**	**1.9**	
Iso propyl alcohol	Escitalopram oxalate	2	0.1	1.9	95
Methanol		2	0.1	1.9	95
MDC		1.5	0.1	1.4	93.33
Toluene		2	0.1	1.9	95
Total		**6.5**	**0.4**	**6.1**	
Methanol	Febuxostate	2.4	0.1	2.3	95.83
Acetone		1	0.05	0.95	95
Total		**3.4**	**0.15**	**3.25**	
Cyclo hexane	Felodipine	1	0.05	0.95	95
Isopropyl alcohol		1	0.05	0.95	95
Total		**2**	**0.1**	**1.9**	
Ethyle acetate	Fluconazol	2	0.1	1.9	95

Methanol		3	0.1	2.9	96
Total		**5**	**0.2**	**4.8**	
MDC	Granisetron HCl	2	0.1	1.9	95
Total		**2**	**0.1**	**1.9**	
Iso propyl alcohol	Gefitinib	1.6	0.1	1.5	93.75
N-Propanol		2	0.1	1.9	95
Total		**3.6**	**0.2**	**3.4**	
Iso propyl alcohol recovered	Gabapentin	1	0.05	0.95	95
Acetone recovered		1	0.1	0.9	90
Methanol recovered		1	0.05	0.95	95
Total		**3**	**0.2**	**2.8**	
--	ILoperidone	Solvent will not be used in this product.			
Total					
Iso propyl alcohol	Irbesartan	2	0.1	1.9	95
Methyl-T-Butyl ether		2	0.1	1.9	95
Xylene		2	0.1	1.9	95
Total		**6**	**0.3**	**5.7**	
Toluene	Itopride Hydrochloride	2	0.05	1.95	97.5
Acetone		2	0.05	1.95	97.5
Total		**4**	**0.1**	**3.9**	
Tetrahydrofuran	Lapatinib	2	0.1	1.9	95
Total		2	0.1	1.9	
IPA	Lurasidone Hydrochloride	3	0.1	2.9	96.66
Acetone		0.4	0.04	0.36	90
Toluene		2	0.1	1.9	95
N-Xylene		0.4	0.04	0.36	90
Total		**5.8**	**0.28**	**5.52**	
Methanol	Losartan Potassium	2.4	0.1	2.3	96
Total		**2.4**	**0.1**	**2.3**	
1,3,5 Trioxane recovered	Mem Chloride	1	0.1	0.9	90
Total		**1**	**0.1**	**0.9**	
--	Minodronic Acid	No solvent will be used in this product.			
Total		**--**	**--**	--	
Toluene	Moclobemide	2	0.1	1.9	95
IPA		2	0.1	1.9	95
Total		**4**	**0.2**	**3.8**	
Acetid acid	Modafinil	2	0.1	1.9	95
Total		**2**	**0.1**	**1.9**	
Acetone	Metoprolol	1	0.1	0.9	90

Toluene	Tartrate	2	0.05	1.95	97.5
Total		**3**	**0.15**	**2.85**	
Acetone	Nisoldipine	1	0.05	0.95	95
Toluene		1.6	0.1	1.5	93.75
Total		**2.6**	**0.15**	**2.45**	
Methanol	Omeprazole	1	0.05	0.95	95
acetone		1	0.05	0.95	95
Total		**2**	**0.1**	**1.9**	
DMF	O Des Venlafexine	1.3	0.1	1.2	92.30
Methanol		2	0.1	1.9	95
Toluene		2.2	0.1	2.1	95.45
Total		**5.5**	**0.45**	**5.2**	
Methanol	Olmesartan	2	0.1	1.9	95
Acetone		2	0.1	1.9	95
Total		**4**	**0.2**	**3.8**	
Methanol	Pitavastatin	1	0.05	0.95	95
acetone		1	0.05	0.95	95
Total		**2**	**0.1**	**1.9**	
--	Piperonylic Acid	--	--	--	--
Total		**--**	**--**	--	--
Methanol	PramipexoleDihydrochloride Monohydrate	4.9	0.2	4.7	95.91
Total		**4.9**	**0.2**	**4.7**	
Ethyl methyl ketone	Prasugrel Hydrochloride	2	0.1	1.9	95
Ipa		2	0.1	1.9	95
Total		**4**	**0.2**	**3.8**	
DMF	Paroxetine	1	0.05	0.95	95
toluene		3	0.1	2.9	96.66
Total		**4**	**0.15**	**3.85**	
IPA	Pinaverium Bromide	2	0.1	1.9	95
ACETONE		2	0.1	1.9	95
Total		**4**	**0.2**	**3.8**	
Recover of Toluene	Pioglitazone HCl	3	0.2	2.8	93.33
Recover of DMSO		0.5	0.04	0.46	92
Recover of Ethanol		1	0.05	0.95	95
Total		**4.5**	**0.29**	**4.21**	
Recovered Toluene	QuetiapineFumarate	3	0.2	2.8	93.33
Recovered		2	0.1	1.9	95

		Ethanol					
		Recovered DMSO		0.5	0.04	0.46	92
		Total		**5.5**	**0.34**	**5.16**	
		Recover of Methanol	Rabeprazole Sodium	2	0.1	1.9	95
		Recover of Toluene		2	0.1	1.9	95
		Total		**4**	**0.2**	**3.8**	
		Recover of Acetic acid	Rivaroxaban	2	0.1	1.9	95
		Total		**2**	**0.1**	**1.9**	
		Recover of ETHYL ACETATE	Ropinirole Hydrochloride	2	0.1	1.9	95
		Recover of Methanol		2.5	0.1	2.4	96
		Recover of MDC		2	0.1	1.9	95
		Total		**6.5**	**0.3**	**6.2**	
		Recover of DMF	Resperidone	2	0.05	1.95	97.5
		Total		**2**	**0.05**	**1.95**	
		Recover of ETHYL ACETATE	Sertraline Hydrochloride	1	0.05	0.95	95
		Recover of Methanol		1	0.05	0.95	95
		Recover of Acetonitrile		2	0.1	1.9	95
		Total		**4.1**	**0.2**	**3.9**	
		Recover of DMF	1-[3-(benzyloxy)propyl]-5-formaylindoline-7-carbonitrite	2	0.1	1.9	95
		Recovery of Methanol		2	0.1	1.9	95
		Total		**4**	**0.2**	**3.8**	
		Recover of DMSO	Solifenacin Succinate	2	0.1	1.9	95
		Total		**2**	**0.1**	**1.9**	
		Recover Of t-butanol	Dimethylformamide di-tert-butyl Acetal	3	0.1	2.9	96.66
		Total		**3**	**0.1**	**2.9**	
		Recover Of methanol	Tadalafil	2.4	0.1	2.3	95.83
		Recover IPA		2	0.06	1.94	97
		Total		**4.4**	**0.16**	**4.24**	
		Recover Of methanol	Ticagrelor	2	0.1	1.9	95
		Cyclohexane		2	0.1	1.9	95

recovered					
Total		**4**	**0.2**	**3.8**	
Water recovered	Topiramate	2	0.1	1.9	95
Recover of O-XYLENE		2	0.1	1.9	95
Recover of THF		3	0.1	2.9	96.66
Recover of N-HEXANE		6	0.3	5.7	95
Total		**13**	**0.6**	**12.4**	
--	Vilazodone Hydrochloride	--	--	--	--
Total					
Recover Of Ethyl Acetate	Valsartan	2.4	0.1	2.3	95.83
Di isopropyl ether recovered		2	0.1	1.9	95
Total		**4.4**	**0.2**	**4.2**	
Recover Of THF	VortioxetineHydrbromide	2	0.1	1.9	95
Total		**2**	**0.1**	**1.9**	
Acetonitrile recovered	Vemurafinib	2	0.1	1.9	95
Total		**2**	**0.1**	1.9	
Acetonitrile recovered	Vemurafinib	2	0.1	1.9	95
Total		**2**	**0.1**	1.9	
	WarfarinSodium clatharte	--	--	--	--
Total					
IPA recovered	Ziprasidone HCl	1	0.05	0.95	90
Total		1	0.05	0.95	

ii VOC emission sources and its mitigation measures

- Unit will follow LDAR program.

H

- **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Tank	Methanol, Toluene, Xylene, Hexane, TEA, DMS	

- **Applicability of PESO** :
- Unit will obtain the permission.

- During the meeting dated 25/09/2019, the project proponent along with their expert/consultant M/s. Jyoti Om Chemical Research Centre Pvt. Ltd attended the meeting and made presentation before the committee.
- This is a new Greenfield project in GIDC Jhagadia
- During SEAC meeting dated 17/09/2019, Committee asked about 209 products proposed in product profile and its justification, technical expert of PP informed that proposed products are bulk drug and its intermediate product manufacturing unit. Bulk drugs intermediate will be used captive for bulk drug products and classified in bulk drug group and bulk drugs intermediate group separately. Committee asked about waste water management, PP informed that high COD effluent will be sent to CMEE of M/s BEIL, Dahej after primary treatment for further treatment and disposal and low COD effluent will be treated in ETP and then will be discharged into M/s NCT pipeline for further treatment and disposal. NG/FO will be used as fuel in boiler and bag filter and water scrubber as APCM will be provided with coal fired boiler. Committee asked about bleed liquor from scrubber disposal and PP informed regarding disposal of scrubber bleed liquor.
- Considering the above project details, after detailed discussion, the terms of reference (ToR) were prescribed as below and as per the standard TOR for the Synthetic Organic Chemical projects recommended by SEAC vide letter no. EIA-10-GEN-21/1480 dated 14/09/2017 and approved by SEIAA in its 12th meeting dated 16/09/2017 for the EIA study to be done covering 10 Km radial distance from the project boundary.
    1. Treatability report of ETP units and stage wise reduction of pollutant like, BOD/COD/Ammonical nitrogen/TDS value to achieve M/s NCT pipeline discharge norms.
    2. Unit shall submit notarized undertaking for installation of CEMS at final effluent discharge line leading to M/s NCT pipeline.
    3. Compliance of MoEF&CC's OM dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER). Fund allocation for Corporate Environment Responsibility (CER) shall be made as per MoEFCC's O.M. No. 22-65/2017-IA.III dated 01/05/2018 for various activities therein. The details of fund allocation and activities for CER shall be incorporated in EIA/EMP report.
    4. Explore the use of renewable energy to the maximum extent possible. Details of provisions to make the project energy-efficient through energy efficient devices and adoption of modes of alternative eco-friendly sources of energy like solar water heater, solar lighting etc. Measures proposed for energy conservation.
    5. Leak Detection and Repairing Programme (LDAR) for all the volatile organic solvent proposed for use in-house with detailed chemical properties including vapor pressure. LDAR shall endeavor prevention of losses of solvents to the best minimum extent.
    6. Technical details of scrubber and source of VOC generation in each product plant area.
    7. PP shall furnish status of all the applicable Rules, Acts, Regulation, Clearances in a tabular form.

8. Membership certificate of Common facility (Common Spray dryer, Common MEE, Common Incinerator etc.) with booking quantity in KLD along with other details/information like Spare capacity of Common Facility (CF), quality of waste water by member industry and assurance by CF that there is no adverse impact on Environment and Human Health due to treatment of waste water received from your industrial effluent.
9. Submit status of compliance of Environmental norms of existing Common Infrastructure of M/s: BEIL, Dahej.

- The TOR prescribed as above and as per the standard TOR approved by SEIAA and the model ToRs available in the MoEF&CC'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.
- Further Project Proponent may be advised to submit final EIA Report with EC application within 100 days from the date of issuance of this ToR to expedite processing of Environment Clearance application.
- The project proponent shall have to apply for Environmental clearance through online portal http://environmentclearance.nic.in/along with final EIA report.

13.	SIA/GJ/IND2/41193/2019	**M/s. Maxwell Industries** Plot No. 508, Phase-IV, GIDC Naroda, Ahmedabad	Screening and scoping

Project / Activity No.: **5(f)**

Project status: Expansion

- This office has received an application vide their online proposal no. SIA/GJ/IND2/41193/2019 dated 30/08/2019 regarding grant of Terms of Reference [ToR] for preparation of EIA/EMP report.
- Project proponent (PP) has submitted Form-1, PFR and relevant details/information.
- This is an existing unit and now proposes for expansion of Synthetic Organic Chemicals manufacturing plant as tabulated below:

Sr. no.	Name of the Products	CAS No. / CI no.	Quantity, MT/Month			End-use of the products
			Existing	Proposed	Total	
1.	4 Sulpho Anthranilic Acid	98-43-1	10	40	50	**Dyes manufacturing**
2.	4 SulphoHydrazone	118969-29-2	00	60	60	
3.	5 SulphoHydrazone	68645-45-4	00	10	10	
4.	4 NADPSA (4 Nitro 2 Amino Di Phenyl	91-29-2	00	80	80	

	Amine Ortho Sulphonic Acid)					
5.	2 NADPSA (2 Nitro 2 Amino Di Phenyl Amine Ortho Sulphonic Acid)	135-11-5				
6.	4 ADAPSA (4 Amino Di Phenyl Amine Sulphonic Acid)	91-30-5				
7.	4 NAP (4-Nitro 2 Amino Phenol)	99-57-0				
8.	4 CAP (4 Chloro 2 Amino Phenol)	95-85-2				
		Total	**10**	**190**	**200**	

Note - Unit will take production of any 2 products at a time

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- PP was called for presentation in the SEAC meeting dated 25/09/2019.
- Salient features of the project including Water, Air and Hazardous waste management :

Sr. no.	**Particulars**	**Details**
A	Total **cost of Proposed** Project (Rs. in Crores):	Existing: 1.5 Crores Proposed: 2.5 Crores Total: 4.0 Crores
B	Total Plot area (sq. meter)	Existing: 1167 Sq. m.Proposed: -- Total: 1167 Sq. m.
	Green belt area,/Tree Plantation area (sq. meter)	Existing: 100 Sq. m. Proposed: 250 Sq. m. Total: 350 Sq. m.
C	**Employment generation**	Existing: 12 Proposed: 13 Total: 25
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC water supply
	Status of permission from the concern authority.	Permission is obtained from

		GIDC.
ii	**Water consumption (KLD)**	

	Existing KLD	Proposed (Additional) KLD	Total after Expansion KLD	Remarks
(O) Domestic	1.0	1.5	2.5	Fresh
(P) Gardening	1.0	1.0	2.0	Fresh
(Q) Industrial				
Process	1.5	27.5	29.0	13.0 Recycle 16.0 Fresh
Scrubber	0.0	6.0	6.0	Recycle
Washing	2.5	7.5	10.0	Recycle
Boiler	2.0	4.0	6.0	Recycle
washing	2.0	8.0	10.0	Recycle
Cooling	--	--	--	--
Others	--	--	--	--
Industrial Total	**5.5**	**45.5**	**51.0**	--
Grand Total (A+B+C)	**7.5**	**48.0**	**55.5**	--
Less Recycle	**--**	**35.0**	**35.0**	
Fresh water requirements	**7.5**	**13.0**	**20.5**	

7) Total water requirement for the project: **55.5KLD**
8) Quantity to be recycle: **35.0KLD**
9) Total fresh water requirement: **20.5KLD**

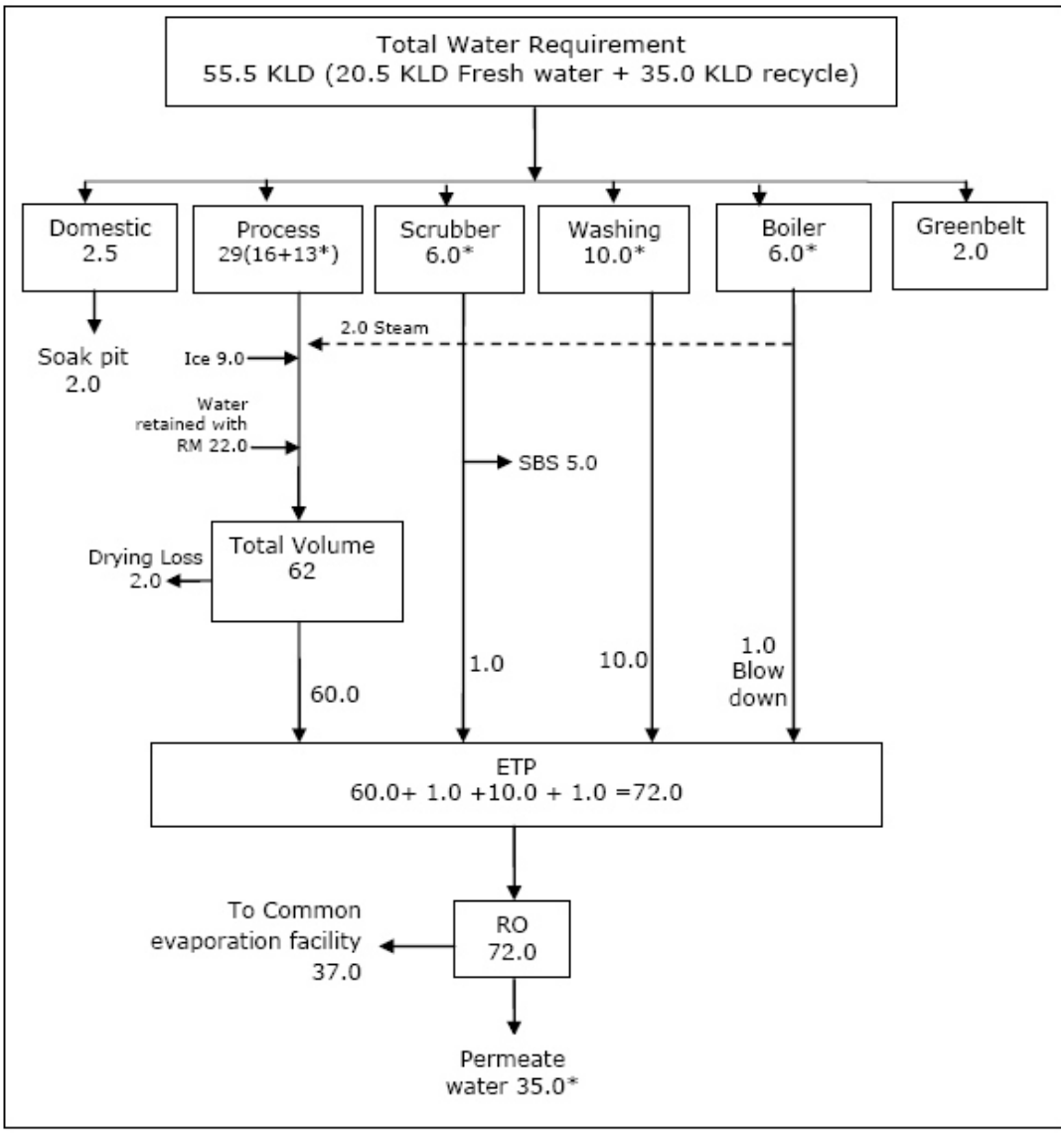
iii **Waste water generation (KLD)**

Category	Existing KLD	Proposed (Additional) KLD	Total after Expansion KLD	Remarks
(I) Domestic	0.8	1.2	2.0	
(J) Industrial				
Process	2.3	57.7	60.0	
Washing	2.0	8.0	10.0	
Boiler	0.2	0.8	1.0	
Cooling	--	--	--	
Others	--	--	--	
Total Industrial	**4.5**	**67.5**	**72.0**	

		waste water				
		Total (A+B)	**5.3**	**68.7**	**74.0**	

iv	Treatment facility within premises with **capacity** [In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc. ➢ ETP - 75 KLD ➢ ETP-RO- Capacity –3.5 m^3/hr.	
	Treatment scheme including segregation at source. ➢ Wastewater generated from process, washing and utilities will be treated in In-house ETP. ➢ Stream of RO reject (37.0 KLD) will be sent to common evaporation facility at, NEPL, Naroda, Society for Clean and Green Environment, Naroda Currently, we have membership of 500 KL/month of NEPL, Naroda and 220 KL/month of Society for Clean and Green Environment, Naroda. Balance qty. of 10 KLD will be procured from any common facility except Vatva before submission of EIA report. ➢ 2.0 KLD Domestic wastewater will be disposed through soak pit.	
	Note: (In case of CETP discharge): **Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP**. ➢ No disposal of effluent to CETP, Naroda	
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ Wastewater generated from process, washing and utilities will be treated in In-house ETP. Primary treated effluent will be passed though ETP-RO. Permeate of RO (35 KLD)will be recycled in process and RO reject (37.0 KLD) will be sent to common evaporation facility at, NEPL, Naroda, Society for Clean and Green Environment, Naroda	
v	Mode of Disposal & Final meeting point	
	Domestic:	Domestic wastewater (2.0 KLD) will be disposed through soak pit.
	Industrial:	72.0 KLD of industrial wastewater will be primarily treated in ETP, after treatment, it will be passed though RO, RO permeates (35.0 KLD) will be reused and RO reject (37.0 KLD) will be sent to the common evaporation facility for final treatment and disposal.
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE, CHWIF etc. Name of Common facility.	
	NEPL, Naroda, Society for Clean and Green Environment, Naroda	
	Membership of Common facility (CF)**(For waste water treatment)**	

	Attached as **Annexure- IV.**
vii	**Simplified water balance diagram with reuse / recycle of waste water**



vii	Reuse/Recycle details (KLD) (Source of reuse & application area)
	Total reuse: 35 KLD

Source of waste water for reuse with quantity in KLD	**Application area with quantity in KLD**	**Remarks regarding feasibility to reuse i.e. w/w characteristics (COD, BOD, TDS etc.)**

	ETP-RO permeate – 35.0 KLD	RO permeate utilize for Process-13 KLD Scrubber-6 KLD Boiler- 6 KLD Washing – 10 KLD	Quality of reuse water is given in following table. Mention quality easily use for washing and utilities without any adverse impact on product quality.

Parameter	Unit	RO permeate after ETP
pH	pH unit	7.5-8.0
Color	mg/L	<10
SS	mg/L	15-18
TDS	mg/L	200-250
COD	mg/L	50-70
BOD	mg/L	20-30
Oil & Grease	mg/L	--
Ammonical Nitrogen	mg/L	--
Volume	**--**	**35.0 KLD**

E **Air**

i Flue gas emission details

No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc.

Existing & Proposed

Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
Existing Scenario						
1.	Steam Boiler* (0.6 TPH)	11	Fire wood	0.75 MT/day	SPM, SO_2, NO_x	Cyclone
2.	Hot air generator* (2 lakh KCal/hr)	11	Fire wood	0.75 MT/day	SPM, SO_2, NO_x	---

	Scenario after expansion						
	1.	Steam Boiler (1.0 TPH)	21	Agro waste/ Agro Briquettes	6.0 MT/day	SPM, SO_2, NO_x	Cyclone & Bag filter
	2.	Hot air generator (5 lakh KCal/hr)	11	Agro waste/ Agro Briquettes	4.0 MT/day		

* Existing boiler and HAG will be dismantled/modified after expansion and replaced by the new boiler and HAG.

ii Process gas i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)

Existing & Proposed

Sr. no.	**Specific Source of emission (Name of the Product & Process)**	**Type of emission**	**Stack/ Vent Height (meter)**	**Air Pollution Control Measures (APCM)**
Existing Scenario				
There is no process gas emission from existing manufacturing process.				
Scenario after expansion				
1	Process vent attached to reaction vessel of 4 and 5 sulphoHydrazone	SO_2	21	Alkali scrubber
2	Spin Flash Dryer (250 liter/hr.)	SPM	15	In built bag filter

iii Fugitive emission details with its mitigation measures.

There are chances of the fugitive emission due to handling of raw materials, from process and hazardous chemicals.

Mitigation Measures:

- Entire process will be carried out in closed reactors.
- Pneumatically transfer of liquid raw material in rector.
- Raw material will be stored in the covered structure.
- Greenbelt will be developed around the plant to arrest the fugitive emission.
- Frequent work area monitoring will be done ensure fugitive emissions level.

- Internal road will be concreted or paved to reduce the fugitive emission during vehicular movement.
- Water sprinkling will be done to control air borne dust.

F **Hazardous waste** (as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.

Existing & Proposed

i

Sr. No.	Type of Waste	Source	Category No. as per HWM rules, 2016	Quantity			Method of Disposal
				Existing	Proposed	Total	
1.	ETP sludge	ETP	35.3	372 MT/annum	1788 MT/ annum	2160 MT/annum	Collection, Storage, Transportation, Disposal at TSDF site.
2.	Iron Sludge	Reduction stage of 2-NADPSA, 4-NADPSA	26.1	Nil	1935 MT/ annum	1935 MT/ annum	Collection, Storage, Transportation, Disposal at TSDF site or sale to cement industries.
3.	Discarded Containers Liners	Raw material	33.1	2500 No/ annum 0.6 MT/annum	12500 No/ annum 4.4 MT/annum	15000 No/ annum 5.0 MT/annum	Collection, Storage, Decontamination, Transportation, Disposal by selling to Authorized Recycler.
4.	Used Oil	Plant & machineries	5.1	12 Lit/Year	88 Lit/Year	100 Lit/Year	Collection, Storage, Transportatio

								n, Disposal by selling to Registered Reprocess.
	5.	Sodium Bi-Sulphite	Process of 4 & 5 sulphoHydrazone	B(15)	--	1560 MT/Annum	1560 MT/ Annum	Collection, Storage and captive used. Balance will be sold to actual user under rule-9.
	6.	Bleed liquor	Scrubber blow down	--	--	312 MT/yr.	312 MT/yr.	Collection, Storage and send to ETP for treatment and final disposal.
ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**					Eco Care Infrastructures Pvt. Ltd., Surendranagar **(copy attached as Annexure-IV)**		
iii	Details of Non-Hazardous waste & itsdisposal (MSW and others)					---		
G	**Solvent management**, VOC emissions etc.							
i	Types of solvents, Details of Solvent recovery, % recovery. reuse of recovered Solvents (Details in Table Format)							
	➢ **No use of any solvents**							
ii	VOC emission sources and its mitigation measures							
	➢ **No generation of VOC as no use of any solvent**							

Details regarding storage of Hazardous chemicals

Storage details	Name of major Hazardous chemicals	Remarks

- **Applicability of PESO**: No

- During the meeting dated 25/09/2019, the project proponent along with their expert/consultant M/s. San Enviro tech Pvt. Ltd attended the meeting and made presentation before the committee.
- During SEAC meeting dated 25/09/2019, Committee asked about existing plant CCA and legal action

compliance for existing plant. PP informed that one show cause notice issued by GPCB and PP complied SCN condition and its reply submitted. Unit is having CCA of GPCB for existing product. Committee asked about clarification regarding area adequacy for proposed product, technical expert of PP informed that this proposed product process is simply one and two step process and at a time only two products will be manufactured in plant. Committee asked about waste water management, PP informed that total industrial effluent will be treated in ETP units and RO plant. RO permeate will be reused back in process while RO reject will be sent to CMEE facility at Naroda . Technical expert of PP informed that agro waste briquette will be used as fuel in boiler and Hot Water Generator and cyclone and bag filter as APCM will be provided with it. Committee deliberated on Hazardous Waste management in details.

- Considering the above project details, after detailed discussion, the terms of reference (ToR) were prescribed as below and as per the standard TOR for the Synthetic Organic Chemical projects recommended by SEAC vide letter no. EIA-10-GEN-21/1480 dated 14/09/2017 and approved by SEIAA in its 12th meeting dated 16/09/2017 for the EIA study to be done covering 10 Km radial distance from the project boundary.
    1. Technical justification of quantity of ETP sludge against treatment of industrial effluent.
    2. Feasibility study report for reuse of industrial effluent along with stage wise reduction of pollutants within premises.
    3. Details with respect to justification for proposed expansion: (1) To address proportionate availability of space for production plant. (2) To address proportionate availability of storage area for raw materials finished goods, utilities considering fire-safety norms & PESO standards and goods carrier movement within premises. (3) To address proportionate captive/common infrastructure available to accommodate additional load due to proposed expansion. (4) Environment impact and its mitigation measures for common/ captive infrastructure due to proposed production.
    4. Compliance of MoEF&CC's OM dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER). Fund allocation for Corporate Environment Responsibility (CER) shall be made as per MoEF&CC's O.M. No. 22-65/2017-IA.III dated 01/05/2018 for various activities therein. The details of fund allocation and activities for CER shall be incorporated in EIA/EMP report.
    5. Explore the use of renewable energy to the maximum extent possible. Details of provisions to make the project energy-efficient through energy efficient devices and adoption of modes of alternative eco-friendly sources of energy like solar water heater, solar lighting etc. Measures proposed for energy conservation.
    6. Membership certificate of Common facility (Common Spray dryer, Common MEE, Common Incinerator etc.) with booking quantity in KLD along with other details/information like Spare capacity of Common Facility (CF), quality of waste water by member industry and assurance by

CF that there is no adverse impact on Environment and Human Health due to treatment of waste water received from your industrial effluent.

7. PP shall furnish status of all the applicable Rules, Acts, Regulation, Clearances in a tabular form.

- The TOR prescribed as above and as per the standard TOR approved by SEIAA and the model ToRs available in the MoEF&CC'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.
- Further Project Proponent may be advised to submit final EIA Report with EC application within 100 days from the date of issuance of this ToR to expedite processing of Environment Clearance application.
- The project proponent shall have to apply for Environmental clearance through online portal http://environmentclearance.nic.in/along with final EIA report.

14.	SIA/GJ/IND2/41244/2019	**M/S. Loxim Industries Limited** Plot No. DP-120, DP-125 To 129/1, GIDC Industrial Estate, Saykha, Ta-Vagra, Dist - Bharuch	Screening and scoping

Project / Activity No.: **5(f)**

Project status: New

- This office has received an application vide their online proposal no. SIA/GJ/IND2/41244/2019 dated 27/08/2019 regarding grant of Terms of Reference [ToR] for preparation of EIA/EMP report.
- Project proponent (PP) has submitted Form-1, PFR and relevant details/information.
- This is a new unit proposes for Synthetic Organic Chemicals manufacturing plant as tabulated below:

LIST OF PRODUCTS				
SR.NO	**NAME WITH C.I NUMBER**	**CAS No.**	**QUANTITY (MT/MONTH)**	**END USE**
A - SOLVENT DYES				
1	Solvent Blue 104	116-75-6	**100**	**NYLON FABRIC**
2	Solvent Green 3	128-80-3		
3	Solvent Violet 13	81-48-1		
4	Solvent Blue 35	17654-14-2		
5	Solvent Blue 36	14233-37-5		
6	Solvent Blue 78	2475-44-7		
7	Solvent Red 135	20749-68-2		

8	Solvent Red 139	61969-49-1		
9	Solvent Orange 60	6925-69-5		
10	Solvent Red 179	6829-22-7		
B - ACID DYES				
11	Acid Blue 111	6420-90-4	**50**	**NYLON FABRIC**
12	Acid Blue 25	6408-78-2/2786-71-2/37218-11-4		
13	Acid Blue 281	226923-51-9		
14	Acid Blue 225	12216-97-6		
15	Acid Blue 260	62168-86-9		
16	Acid Black 194- 24709	61931-02-0		
17	Acid Black 107/KBL- 24703	12218-96-1		
18	Acid Black 207- 24710	84145-95-9		
19	Acid Black 210	99576-15-5		
20	Acid Black 63- 24708	32517-36-5		
21	Acid Blue 193/Navy MBR-24404	12392-64-2		
22	Acid Blue 171-24407	51053-44-2		
23	Acid Blue 277	25797-81-3		
24	Acid Blue 284-24405	61814-66-2		
25	Acid Blue 324- 24408	88264-80-6		
26	Acid Brown 282- 24601	12219-65-7		
27	Acid Green 73	12219-93-1		
28	Acid Orange 144	61814-64-0		
29	Acid Orange 156	68555-86-2		
30	Acid Red 182- 24305	61901-42-6		
31	Acid Red 211	12239-05-3		
32	Acid Red 260	12239-07-5		
33	Acid Red 315	12220-47-2		
34	Acid Red 361	61931-22-4		
35	Acid Red 405	83833-37-8		
36	Acid Red 414	172287-09-7		
37	Acid Violet 90- 24801	6408-29-3		
38	Acid Yellow 137-24105	72827-84-0		
39	Acid Yellow 151	12715-61-6		

40	Acid Yellow 199- 24106	70865-20-2		
41	Acid Yellow 220- 24102	71603-79-7		
42	Acid Yellow 246	119822-74-1		
43	Acid Yellow 59	5601-29-6		
C - DISPERSED DYES				
44	Disperse Red 60	17418-58-5	**416**	**POLYSTER FABRICS**
45	Disperse Blue 60	12217-80-0		
46	Disperse Blue 56	12217-79-7		
47	Disperse Navy Blue 79 (3G)	12239-34-8		
48	Disperse Orange 25 (RL)	31482-56-1		
49	Disperse Red 167 (Red 2B)	61968-52-3		
50	Disperse Yellow 211 (4G)	86836-02-4		
51	Disperse Violet 99 (3R)	212955-32-3		
52	Disperse blue 62	53989-05-2		
53	Disperse blue 77	20241-76-3		
54	Disperse blue 25	2475-46-9		
D - PIGMENTS				
55	Pigment Red 122	980-26-7	**100**	**POLYSTER FABRICS**
56	Pigment Yellow 135	68511-62-6		
57	Pigment Red 177	4051-63-2		
E - DIRECT DYES				
58	Direct Base Brown 1	1052-36-6	**50**	**COTTON FABRIC**
59	Direct Black HRS	--------		
60	Direct Black 168	85631-88-5		
61	Direct Black 179	143549-91-1		
62	Direct Black 22	6473-13-8		
63	Direct Black 62	6473-13-8		
64	Direct Blue 273	70956-20-6		
65	Direct Blue 281	77907-25-6		
66	Direct Blue 290	110444-91-2		
67	Direct Blue 299	-----		
68	Direct Blue 71	4399-55-7		
69	Direct Blue 80	12222-00-3		
70	Direct Blue 85	70210-31-0		
71	Direct Blue 67/SF	3354-97-0		
72	Direct Blue 279/SM	72827-89-5		

73	Direct Brown 44/SBR	6252-62-6			
74	Direct Green 26/78	8003-79-0			
75	Direct Orange 102	6598-63-6			
76	Direct Orange 118	60202-34-8			
77	Direct Orange 15	1325-35-3			
78	Direct Orange 34	12222-37-6			
79	Direct Orange 603R	12217-64-0			
80	Direct Red 16	6227 02 7			
81	Direct Red 227	17791-81-0			
82	Direct Red 239/CAS	28706-25-4			
83	Direct Red 254/2B	6300-50-1			
84	Direct Red 80/F3B	08-10-10			
85	Direct Red 81	09-11-10			
86	Direct Red 83	15418-16-3			
87	Direct Red 89	12217-67-3			
88	Direct Violet 66	04-03-98			
89	Direct Violet 35	6227-20-9			
90	Direct Yellow 106	12222-60-5			
91	Direct Yellow 6	1325-42-4			
92	Direct Yellow 11	1325-37-7			
93	Direct Yellow 137	71838-47-6			
94	Direct Yellow 142	71902-08-4			
95	Direct Yellow 157	72705-26-1			
96	Direct Yellow 86	50925-42-3			
F - REACTIVE DYES					
97	Reactive Blue 19	2580-78-1			
98	Reactive Blue 49	12236-92-9			
99	Reactive Blue 198	124448-55-1			
100	Reactive Black – 5	1222-25-1			
101	Reactive Black 31	12731-63-4			
102	Reactive Blue – 171/HEXL	77907-32-5	**50**	**COTTON FABRIC**	
103	Reactive Blue 203	147836-71-9			
104	Reactive Blue 220	147826-71-9			
105	Reactive Blue 221	93051-41-3			
106	Reactive Blue 222	93051-44-6			
107	Reactive Blue 250/RGB	93951-21-4			

	108	Reactive Blue 28/ 3R	12225-45-5			
	109	Reactive Brown 18/GR	12225-73-9			
	110	Reactive Orange 107 /RNL	90597-79-8			
	111	Reactive Orange 122	12220-12-1			
	112	Reactive Orange 16/3R	12225-88-6/20262-58-2/12769-09-4			
	113	Reactive Orange 1N	6522-74-3			
	114	Reactive Orange 2N	12236-86-1			
	115	Reactive Orange 3N	12225-83-1			
	116	Reactive Orange 72	71902-15-3			
	117	Reactive Orange 84	91261-29-9			
	118	Reactive Orange 96 / Yellow 103	85567-07-3			
	119	Reactive Red EHS 237- 1304 B-1	17752-85-1			
	120	Reactive Red 278/CD	-----			
	121	Reactive Red 120	61951-82-4			
	122	Reactive Red 141	61931-52-0			
	123	Reactive Red 194	23354-52-1			
	124	Reactive Red 195	93050-79-4			
	125	Reactive Red 198	145017-98-7			
	126	Reactive Red 222	93051-45-7			
	127	Reactive Red 23	12769-07-2			
	128	Reactive Red 2445-1304 B-2	41423-92-1			
	129	Reactive Red 410	98114-32-0			
	130	Reactive Red 49	12237-02-4			
	131	Reactive Violet 5/5R	12226-38-9			
	132	Reactive Yellow 145/MER	93050-80-7			
	133	Reactive Yellow 15/GR	12226-47-0			
	134	Reactive Yellow 160.1	----			
	135	Reactive Yellow 17/G	20317-195			
	136	Reactive Yellow 24/RTN	12226-51-6			
	137	Reactive Yellow 37/HNL	12237-16-0			
	138	Reactive Yellow 42/FG	12226-63-0			
	139	Reactive Yellow 135/HE6G	77907-38-1			

140	Reactive Yellow 57/ME4GL	61969-35-5		
141	Reactive Yellow 84/HE4R	61951-85-7		
142	Reactive Yellow 98_2/1104B-2	-----		
143	Reactive Yellow V1/1104B-1	-----		
G - INTERMEDIATES				
144	1,4 Di Hydroxy AQ	81-64-1	206.0	Captive Use or Sale for Production of Dyes
145	1,4 Di Amino AQ	128-95-0		
146	1,4 Di Amino 2,3 Di Chloro AQ	81-42-5		
147	1,8 Dichloro AQ	82-43-9	5.0	
148	1, 5 Dichloro AQ	82-46-2		
149	1,8 Dihdroxy-4,5 dinitro AQ	81-55-0	5.0	
150	1,8 Di Amino Naphthalene	479-27-6	50.0	
Sub Total (G)			**266.0**	
H - FORMULATED DYES				
Formulated Dyes			**1248.0**	**-**
Total (A+B+C+D+E+F+G+H)			**2280.0**	

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- PP was called for presentation in the SEAC meeting dated 25/09/2019.
- Salient features of the project including Water, Air and Hazardous waste management :

Sr. no.	Particulars	Details
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	30.00 Crores
B	**Total Plot area** (sq. meter)	29256.15 Sq. m.
	Green belt area (sq. meter)	9654.00 Sq. m.
C	**Employment generation**	Permanent: 108 Nos. Tempararory: 54 Nos.
D	**Water**	

i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	Saykha,GIDC
	Status of permission from the concern authority.	Permission Granted from Saykha,GIDC.

ii **Water consumption (KLD)**

Category	Quantity KLD	Remarks (Reuse)
(R) Domestic	5	-
(S) Gardening	13	-
(T) Industrial		
Process	218.2	183
Washing	10	-
Boiler	240	216
Cooling	49	31
Others	0	-
Industrial Total	517.2	430
Total (A + B + C)	535.2	430

1) **Total water requirement** for the project: 535.2 KLD
2) Quantity to be **recycled**: 430 KLD
3) Total **fresh water** requirement: 105.2 KLD

(Total water requirement = Fresh water + Recycled water)

iii **Waste water generation (KLD)**

Category	Waste water KLD	Remarks
(K) Domestic	4.5	-
(L) Industrial		
Process	205	-

Washing	9	-
Boiler	19	-
Cooling	15	-
Others	0	-
Total Industrial waste water	248	-
Total [A + B]	252.5	

-

iv Treatment facility within premises with **capacity**

[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc.

- In-House ETP (Primary, Secondary, Tertiary) : 225 KLD
- MEE (MVR) : 220 KLD
- UF+RO : 40 KLD

Treatment scheme including segregation at source.

Streams are segregated as follows:

- High COD Stream of 214 KLD is subjected to ETP followed by MEE(MVR) where 212.8 KLD (209.8+ 3 from RO Reject) is send to MVR (Type of MEE) for further reduction of COD & TDS. where 183 KLD is recovered back after condensation to processing unit & remaining 29.8 KLD outlets from MEE(MVR) is released to ATFD where recovery salt of 24.8 is send to TSDF.

- 34 KLD from Low COD Stream of Boiler and Cooling tower blow down is subjected to UF-RO where 3 KLD is rejected and send to the in-house MEE(MVR) and 31 KLD permeate from UF-RO is reuse in cooling tower as make up water.

Note: (In case of CETP discharge) :

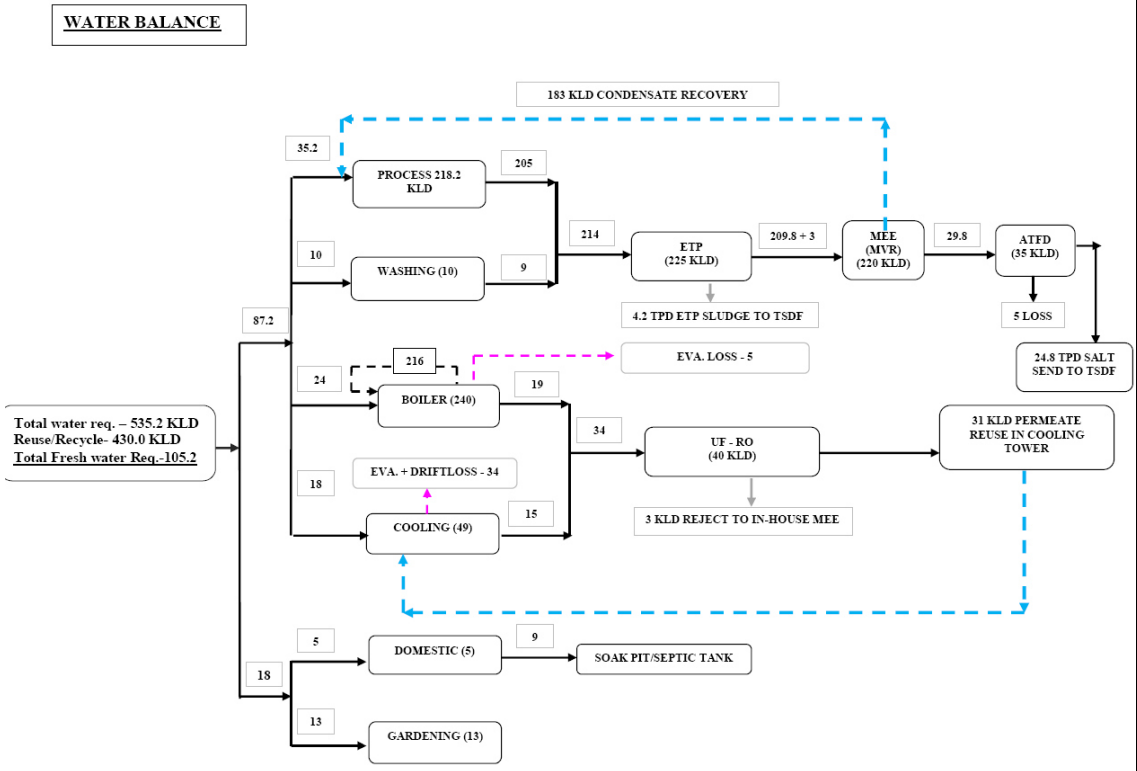
Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP.

- Not Applicable (Unit is ZLD)

Brief note on adequacy of ZLD (In case of Zero Liquid Discharge):

- High COD Stream of 214 KLD is subjected to ETP followed by MEE(MVR) where 212.8 KLD (209.8+ 3 from RO Reject) is recompressed where 183 KLD is recovered back after condensation to processing unit & remaining 29.8 KLD outlets from MEE(MVR) is released to ATFD where recovery salt of 24.8 is send to TSDF.

	➢ 34 KLD from Low COD Stream of Boiler and Cooling tower blow down is subjected to UF-RO where 3 KLD is rejected and send to the in-house MEE(MVR) and 31 KLD permeate from UF-RO is reuse in cooling tower as make up water.
v	Mode of Disposal & Final meeting point
	Domestic: — Soak Pit/Septic Tank
	Industrial: — Zero Liquid Discharge
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ NA (Zero Liquid Discharge)
	Membership of Common facility (CF) **(For waste water treatment)**
	NA (Zero Liquid Discharge)
vii	**Simplified water balance diagram with reuse / recycle of waste water**



vii i Reuse/Recycle details (KLD)

Total reuse 430 KLD

Source of waste water for reuse with quantity in KLD (From where it is coming)	**Application area with quantity in KLD (here it is used)**	**Characteristics of waste water to be reused (COD, BOD, TDS etc.)**	**Remarks regarding feasibility to reuse i.e.**
Boiler & Cooling Blowdown-34	Cooling-31	pH-6.5-7.5 COD-<50 TDS-<10 TSS-<30	Yes Feasible. Boiler & Cooling Blowdown is separately treated in UF&RO and then reuse in CT.
Process-205 Washing-9	Process-183	pH-6.5-7.5 COD-<100 TDS-<500 TSS-<50	Yes Feasible after adequate treatment.
Boiler Condensate Recovery-216	Boiler-216	pH-6.5-7.5 COD-<50 TDS-<10 TSS-<30	Its Condensate Recovery in Boiler basically its a recycle.

E Air

i Flue gas emission details

No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc.

-

Sr. no.	**Source of emission With Capacity**	**Stack Height (meter)**	**Type of Fuel**	**Quantity of Fuel MT/Day**	**Type of emissions i.e. Air Pollutants**	**Air Pollution Control Measures (APCM)**

		1	Steam Boiler (5 TPH)	36	1.3	23 TPD Imported Coal **OR** 6300 SCM/day Natural gas	PM, Sox, Nox	Multi Cyclone separator+ Bag filter + water scrubber & Adequate Stack Ht
		2	Steam Boiler (5 TPH)			23 TPD Imported Coal **OR** 6300 SCM/day Natural gas	PM, Sox, Nox	Multi Cyclone separator+ Bag filter + water scrubber & Adequate Stack Ht
		3	Thermo Pack (1,00,000 Kcal/Hr)	30	2.5	3.5 TPD Imported coal **OR** 1000 SCM/day Natural Gas	PM, Sox, Nox	Multi Cyclone Separator + Bag filter & Adequate Stack Ht
		4	HAG (12,50,000 Kcal/Hr)	34	1	7 TPD Imported coal **OR** 2100 SCM/day Natural Gas	PM, Sox, Nox	Multi Cyclone Separator + Bag filter & Adequate Stack Ht
		5	HAG (12,50,000 Kcal/Hr)			7 TPD Imported coal **OR** 2100 SCM/day Natural Gas	PM, Sox, Nox	Multi Cyclone Separator + Bag filter & Adequate Stack Ht
		6	D. G. set of 500 KVA X 2 nos	12	0.3	Diesel 160 Lit./hr approx.	PM, Sox, Nox	Acoustic Enclosure & Adequate stack

	(In Emergency only)					height

-

ii Process gas emission details i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)

-

Sr. no.	Specific Source of emission (Name of the Product & Process)	Type of emission	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
1	Scrubber (Intermediate Plant)	CL2 SO2 NOx	16.5	2 Stage Alkali Scrubber
2	Spray Dryer 1 (HAG)	PM	33	Cyclone Separator + Water Scrubber
3	Spray Dryer 2 (HAG)	PM	33	Cyclone Separator + Water Scrubber
4	Fluidized Bed Dryer	PM	16	Cyclone Separator

-

iii **Fugitive emission** details with its mitigation measures:

As below:

• Green belt will be developed which will help to reduce fugitive emission.
• All pumps, Compressors and Agitator must be mechanically sealed.
• All process pumps must be provided trays to collect probable leakage.
• More weightage on selection of MOC of piping must be given to avoid leakage/spillage.
• Proper system must be provided for decontamination and effective cleaning of drums.
• Face mask must be provided to all workers to avoid odor nuisance.
• Developing appropriate green belt. Vehicular speed will be limited to reduce airborne fugitive dust.

F **Hazardous wastes**

(as per the Hazardous and Other Wastes (Management and Transboundary

Movement) Rules 2016.

i

Sr. no.	Type/Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules.	Quantity (MT/Annum)	Management of HW
1	Spent/Used oil	Various Maintenance Processes	5.1	0.6	Collected in drums and stored at specified area, Reuse in plant for lubrication and Balance will be Selling to authorized recyclers
2	Discarded drums/ Containers	Various Production units	33.3	1008	Collected and stored at specified area and sold to approved/ registered vendors.
3	Distillation residue (Semi Solid having CV 1500-2000 Kcal/Kg)	From Solvent Recovery Process	36.1	1548	Collection, Storage Transportation, Disposal at GPCB approved CHWIF or Co/Pre-processing
4	ETP sludge Primary sludge Secondary sludge	Effluent Treatment Plant	34.3	1560	Collection, Storage, Transportation, Disposal at BEIL, TSDF.

	5	Gypsum	Various production units	D2	6192	Collection, Storage Transportation, Disposal by selling to cement industry
	6	Salts (Solid)	ATFD	34.3	9000	Collection, Storage, Transportation, Disposal at BEIL, TSDF
	7	Fly Ash (Boiler) (Non Hazardous)	Boiler	-	2400	Collection, Storage Transportation, Disposal by selling to brick manufactures
	8	Spent Acetic Acid 25-30%	Intermediate Manufacturing process (1,8 Dihdroxy-4,5 dinitro AQ)	26.3	36	Will be Reuse in process (50 MT/Month in Acid Dyes)
	9	Spent Catalyst	Intermediate Manufacturing process (1,8 Di Amino Naphthalene)	28.2	0.72	Collection, Storage, Transportation, disposal by selling to registered recyclers
	10	Spent Solvent (Methanol)	Solvent orange 60, Pigment red 122, 1-4 Di Hydroxy AQ, 1-8 Di Amino Napthalene,	26.3	24156	Collection, Storage, Transportation, Recovered solvent will be reused in process & unrecovered

				1-8 dichloro AQ, 1-5 dicholoro AQ			distillation residue will be sent for CHWIF at BEIL
			Spent Solvent (ODCB)	Solvent blue 104, Pigment red 122, 1-8 dichloro AQ, 1-5 dicholoro AQ		4464	
			Spent Solvent (Toluene)	Solvent Green 3		396	
			Spent Solvent (Ethylene Glycol)	Dispersed Blue 7		9720	
			Spent Solvent (Ethyl acetate)	1,4 Di Hydroxy AQ		3096	
		11	Liquor Ammonia (23%) (1,8 Dihdroxy-4,5 dinitro AQ Intermediate)	From Unit Operation (Condensation) of 1,8 Dihdroxy-4,5 dinitro AQ Intermediate	26.3	21.6	Collection, Storage, Transportation, Will be Reuse in Process (Req. in Process 50.0 MT/Month in production of 1,8 Dihdroxy-4,5 dinitro AQ Intermediates)
		12	NaNO3 (Sodium Nitrate) (1,8 Dihdroxy-	Scrubber at Intermediate Plant (1,8 Dihdroxy-4,5	26.3	1.68	Collection, Storage, Transportation, Will be sent to users under Rule

	4,5 Dinitro AQ Intermediate)	dinitro AQ Intermediate)			9	
13	NaOCl Sodium Hypochlorite (1,8 Dichloro AQ, 1-5 Dichloro AQ)	Scrubber at Intermediate Plant (1,8 Dichloro AQ, 1-5 Dichloro AQ)	26.3	2.4	Collection, Storage, Transportation, Will be Reuse in Process (Req. in Process 100 MT/Month in production of Direct Yellow 106 & Direct Orange 34	
14	Na2SO3 Sodium Sulphite 30% (1,4 Dihydroxy AQ)	Scrubber at Intermediate Plant (1,4 Dihydroxy AQ)	26.3	30	Collection, Storage, Transportation, Will be sent to users under Rule 9	

-

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	ETP sludge, Salt from ATFD and Distillation residue will be sent to M/s. BEIL.(TSDF,CHWIF)
iii	Details of Non-Hazardous waste & its disposal (MSW and others)	Fly-ash will be sold to brick manufactures.
G	**Solvent management**, VOC emissions etc.	
i	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)	

S N.	**Spent Solvent**	**Qty (MT/ MT)**	**Recovered Solvent Quantity**	**Loss**	**Residue (MT/MT)**	**% Recov**

1	Methanol	67.1	64.1	0.5	0.2	94
2	Ortho Dichlorobenzene	12.4	11.2	0.2	1.0	90
3	p-Toluidine	1.1	1	0.01	0.2	89
4	Ethylene Glycol	27	24.3	0.3	2.4	90
5	Ethyl Acetate	8.6	8.2	0.27	0.069	95

ii VOC emission sources and its mitigation measures

- Leak Free Pumps for transfer of solvents.
- MSW Gaskets in solvent pipelines to prevent leakage from flanges.
- Minimum number of flanges, joints and valves in pipelines.
- To eliminate chances of leakages from glands of pumps, mechanical seal will be provided at all solvent pumps.
- All the rotating equipments like pumps will be installed with Mechanical Seals to arrest any sort of emissions.
- Condenser and scrubber post Reactor with cooling arrangement.
- Enclosures to chemical storage area, collection of emission from loading of raw materials in particular solvents through hoods and ducts by induced draft, and control by condenser to be ensured.
- In case the small spillage or leakage observed, first pour the china clay (vermiculate) on material and collect the contaminated china clay (vermiculate) and send to ETP.
- If the spillage is of inflammable liquid, switch off all the power supply in the area to prevent Electric Spark.
- Two condensers will install with cooling water and chilled brine to recover the solvent.
- Primary Condenser HE-01: Cooling Tower water or Chilled water at 5 0C will be used to condense the solvents depend on the vapor pressure at its operating conditions and the non condensed vapors will be condensed in a Secondary Condenser
- VOC Trap Condenser HE-02: Chilled Brine at -15 0C will be used to trap any traces of Solvent which is slipped from Secondary condenser

H

- **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks

Storage tanks	HCL	1 X 25 KL
	98% Sulphuric Acid	1 X 8 KL
	20 % Oleum	1 X 5 KL
	60 % Oleum	1 X 5 KL
	Nitric Acid	1 X 5 KL
	Acetic Acid	1 X 5 KL
	Caustic Lye	1 X 5 KL
	Acetic Anhydride	1 X 5 KL
	Aniline Oil	1 X 5 KL
	Liquid Phenol 90%	1 X 5 KL
	Liquor Ammonia 23%	1 X 10 KL
Drum/Barrel storage	Hydrazine Hydrate	200 L X 4
Cylinders	Tonner	2 X 900 kg

- **Applicability of PESO** :
- Will be applied.

- During the meeting dated 25/09/2019, the project proponent along with their expert/consultant M/s. En-vision Environmental Services attended the meeting and made presentation before the committee.
- This is a new Greenfield project in GIDC Saykha
- During SEAC meeting dated 25/09/2019, Committee asked about proposed production plant size justification, technical expert of PP informed that proposed plot is sufficient to accommodate proposed products plant machinery. Committee asked about waste water management, PP informed that high COD effluent will be evaporated in in-house MEE(MVR) after ETP treatment and low COD effluent will be treated in ETP and then will be further treated in UF/RO plant. Imported coal will be used as fuel in boiler and MCS & bag filter and water scrubber as APCM will be provided with coal fired boiler separately. Committee insisted for spare storage tank for oleum and adequate safety measures for Cl2 handling as per PESO standards. Committee asked about bleed liquor from scrubber disposal and PP informed regarding disposal of scrubber bleed liquor as per HWRules'2016.
- Considering the above project details, after detailed discussion, the terms of reference (ToR) were prescribed as below and as per the standard TOR for the Synthetic Organic Chemical projects recommended by SEAC vide letter no. EIA-10-GEN-21/1480 dated 14/09/2017 and approved by SEIAA in its 12th meeting dated 16/09/2017 for the EIA study to be done covering 10 Km radial distance from the project boundary.
    1. Treatability report of ETP units and stage wise reduction of pollutant like BOD/COD/Ammonical nitrogen/TDS value.
    2. Compliance of MoEF&CC's OM dated 01/05/2018 regarding "Corporate Environment

Responsibility" (CER). Fund allocation for Corporate Environment Responsibility (CER) shall be made as per MoEFCC's O.M. No. 22-65/2017-IA.III dated 01/05/2018 for various activities therein. The details of fund allocation and activities for CER shall be incorporated in EIA/EMP report.

3. Explore the use of renewable energy to the maximum extent possible. Details of provisions to make the project energy-efficient through energy efficient devices and adoption of modes of alternative eco-friendly sources of energy like solar water heater, solar lighting etc. Measures proposed for energy conservation.
4. Leak Detection and Repairing Programme (LDAR) for all the volatile organic solvent proposed for use in-house with detailed chemical properties including vapor pressure. LDAR shall endeavor prevention of losses of solvents to the best minimum extent.
5. Technical details of scrubber and source of VOC generation in each product plant area.
6. PP shall furnish status of all the applicable Rules, Acts, Regulation, Clearances in a tabular form.
7. Details of the treatability and feasibility of waste water to be disposed off by means of in-house MEE (MVR) and ATFD and its impact on Environment and Human Health. Submit Adequacy of MEE (MVR) and ATFD. Standard Operating Procedures (SOPs) for MEE(MVR) and ATFD shall be incorporated in EIA report.
8. Adequacy of utilization of various Hazardous waste reuse back in process with material balance for various products and management of balance quantity keeping Hazardous and Other Waste (Management and Trans boundary Movement) Rules, 2016 in view.

- The TOR prescribed as above and as per the standard TOR approved by SEIAA and the model ToRs available in the MoEF&CC'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.
- Further Project Proponent may be advised to submit final EIA Report with EC application within 100 days from the date of issuance of this ToR to expedite processing of Environment Clearance application.
- The project proponent shall have to apply for Environmental clearance through online portal http://environmentclearance.nic.in/along with final EIA report.

15.	SIA/GJ/IND2/41300/2019	**M/s. Asiatic Colour Chem Ind. Ltd** Plot No. 1503-04, 306-A, Phase-I, GIDC, Naroda, Ahemdabad	Screening and scoping

Project / Activity No.: **5(f)**

Project status: Expansion

- This office has received an application vide their online proposal no. SIA/GJ/IND2/41300/2019 dated 27/08/2019 regarding grant of Terms of Reference [ToR] for preparation of EIA/EMP report.
- Project proponent (PP) has submitted Form-1, PFR and relevant details/information.
- This is an existing unit and now proposes for expansion of Synthetic Organic Chemicals manufacturing plant as tabulated below:

Sr. No.	Product	CAS No.	Quantity MT/Month			End use of product
			Existing	Proposed	After Proposed	
SO DYES Group 1 (Direct Dyes, Acid Dyes, Reactive Dyes, Mordant Dyes and Azo Pigment)						
Acid Dyes						
1	Acid Black 210	99576-15-5	375	500	850	Textile & Leather Industries (Tannery)
2	Acid Black 234	157577-99-6				
3	Acid Black 194	61931-02-0				
4	Acid Black 173	61967-86-0				
5	Acid Black 107	12218-96-1				
6	Acid Black 84	6408-22-6				
7	Acid Black 71	127830-14-2				
8	Acid Black 52	5610-64-0				
9	Acid Black 1	1820-82-5				
10	Acid Green 111	58419-36-6				
11	Acid Green 104	61814-51-5				
12	Acid Green 73	12219-93-1				
13	Acid Green 68	61901-32-4				
14	Acid Green 20	5850-39-5				
15	Acid Green 1	19381-50-1				
16	Acid Violet 91	13221-09-5				
17	Acid Blue 119	1324-80-7				
18	Acid Blue 92	3861-73-2				
19	Acid Brown 425	119509-49-8				
20	Acid Brown 432	119509-50-1				
21	Acid Brown 452	152521-14-7				
22	Acid Brown 440	93376-15-9				
23	Acid Brown 431	---				
24	Acid Brown 417	83562-73-6				

25	Acid Brown 414	172287-09-7					
26	Acid Brown 357	61814-63-9					
27	Acid Brown 355	***60181-77**-3*					
28	Acid Brown 354	71799-43-4					
29	Acid Brown 349	72827-73-7					
30	Acid Brown 348	72827-72-6					
31	Acid Brown 322	61931-11-1					
32	Acid Brown 289	12219-72-6					
33	Acid Brown 282	12219-65-7					
34	Acid Brown 235	1269-90-8					
35	Acid Brown 214	37372-87-5					
36	Acid Brown 194	61931-08-6					
37	Acid Brown 188	12219-57-7					
38	Acid Brown 161	61724-13-8					
39	Acid Brown 147	12211-50-6					
40	Acid Brown 106	61724-11-6					
41	Acid Brown 105	8003-78-9					
42	Acid Brown 98	12269-88-4					
43	Acid Brown 85	77031-30-2					
44	Acid Brown 83	13011-68-2					
45	Acid Brown 78	94552-32-6					
46	Acid Brown 75	8011-86-7					
47	Acid Brown 70	---					
48	Acid Brown 58	12269-87-3					
49	Acid Brown 14	5850-16-8					
50	Acid Brown 1	6373-76-8					
51	Acid Red 414	172287-09-7					
52	Acid Red 362	61814-58-2					
53	Acid Red 357	61951-36-8					
54	Acid Red 315	12220-47-2					
55	Acid Red 186	52677-44-8					
56	Acid Red 151	6406-56-0					
57	Acid Red 119	70210-06-9					
58	Acid Red 97	10169-02-5					
59	Acid Red 88	1658-56-6					
60	Acid Red 44	2766-77-0					

61	Acid Red 18	2611-82-7					
62	Acid Orange 144	61814-64-0					
63	Acid Orange 142	61901-39-1					
64	Acid Orange 61	6408-33-9					
65	Acid Orange 60	30112-70-0					
66	Acid Orange 56	6470-20-8					
67	Acid Orange 8	5850-86-2					
68	Acid Orange 7	633-96-5					
69	Acid Orange 3	6373-74-6					
70	Acid Yellow 220	71603-79-7					
71	Acid Yellow 204	61814-53-7					
72	Acid Yellow 194	61814-52-6					
73	Acid Yellow 166	12220-86-9					
74	Acid Yellow 151	12715-61-6					
75	Acid Yellow 96	61901-50-6					
76	Acid Yellow 99	10343-58-5					
77	Acid Yellow 59	5601-29-6					
78	Acid Yellow 49	12239-15-5					
79	Acid Yellow 23	1934-21-0					
80	Acid Yellow 17	6359-98-4					
Reactive Dyes							
1	Reactive Black 5	12225-25-1					
2	Reactive Black WNN	-----					
3	Reactive Black TNN	---					
4	Reactive Blue 250	93951-21-4					
5	Reactive Blue 171	77907-32-5					
6	Reactive Yellow 145	93050-80-7					
7	Reactive Yellow 160	129898-77-7					
8	Reactive Orange 122	79809-27-1					
Direct Dyes							
1	Direct Black 19	6428-31-5					
2	Direct Black 80	8003-69-8					
3	Direct Black 22	6473-13-8 1					
4	Direct Blue 80	12222-00-3					
5	Direct Blue 71	4399-55-7					
6	Direct Red 239	89157-03-9					

		Blending of S O Dyes	275	-	275	Textile Industries
TOTAL			**S.O. Dyes 375 MT/Month & Blending of S O Dyes 275 MT/Month**	**S. O. Dyes 500 MT/ Month**	**S. O. Dyes 875 MT/Month & Blending of S O Dyes 275 MT/Month**	

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- PP was called for presentation in the SEAC meeting dated 25/09/2019.
- Salient features of the project including Water, Air and Hazardous waste management :

Sr. no.	Particulars	Details
A	Total **cost of Proposed** Project (Rs. in Crores):	Existing: 6.1 cr Proposed: 2.9 Cr. Total: 9.0 Cr.
B	**Total Plot area** (sq. meter)	Existing: 4422 Sq. m. Proposed: 2056.29 Sq. m. Total: 6478.29 Sq. m.
	Green belt area (sq. meter)	Existing: 50 Sq. m. Proposed: 250 Sq. m. Total:300 Sq. m.
C	**Employment generation**	Existing:50 Proposed:25 Total:75
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	Water will supplied by GIDC, Naroda , Ahmedabad
	Status of permission from the concern authority.	-

ii **Water consumption (KLD)**

Sr. No.	Description	Proposed (KLD)		
		Existing	Proposed	After Proposed
1)	Domestic	8.5	1.5	10
2)	Gardening	0.5	0.5	1
3)	Industrial			
	(a) Processing	145	105	250
	(b) Boiler	12	24	36
	(c) Washing	6.5	6.5	13
	(d) Scrubber	0.5	0.5	1
Total [a+b+c+d]		**164**	**136**	**300**
Total [1 + 2]		**173**	**138**	**311**

4) **Total water requirement** for the project:311 KLD
5) Quantity to be **recycled:** 105 KLD
6) Total **fresh water** requirement: 206 KLD

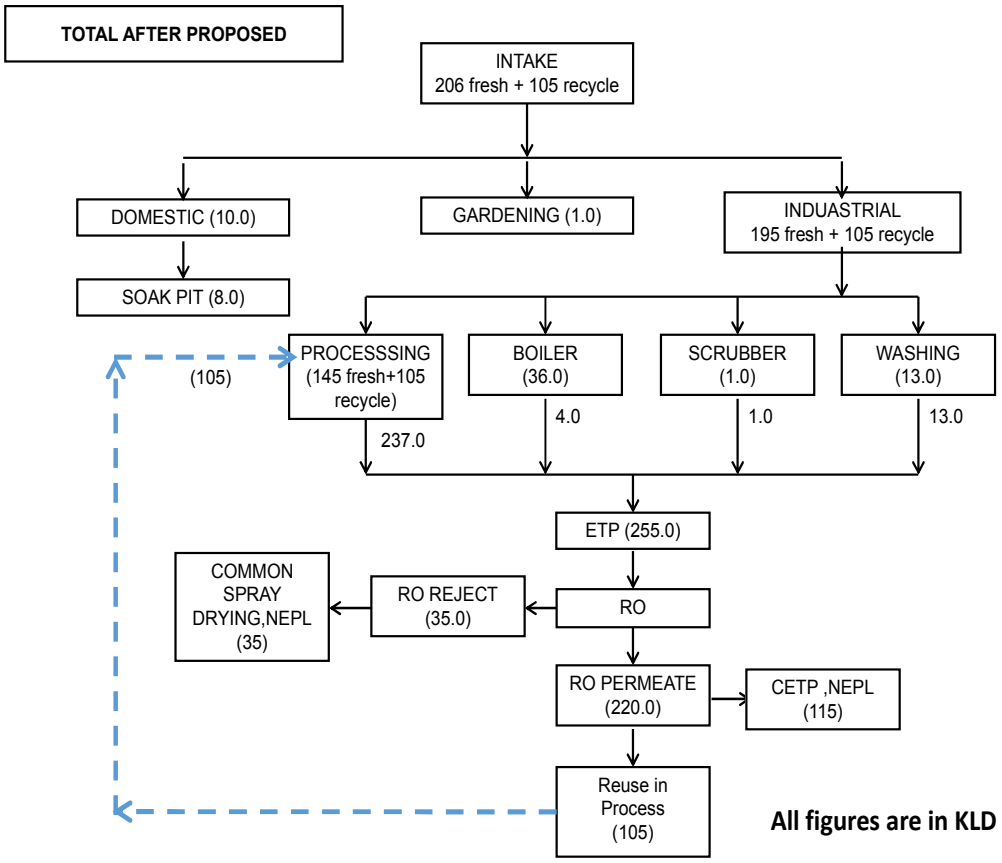
iii **Waste water generation (KLD)**

Sr. No.	Description	Proposed (KLD)		
		Existing	Proposed	After Proposed
1.	Domestic	7.0	1.0	8.0
2.	Gardening	0.0	0.0	0.0
3.	Industrial			
	(a) Processing	108.5	128.5	237.0
	(b) Boiler	1.5	2.5	4.0
	(c) Washing	6.5	6.5	13.0
	(d) Scrubber	0.5	0.5	1.0
Total [a+b+c+d]		**117**	**138**	**255**
Total [1 + 2]		**124**	**139**	**263**

NOTE:

- 255 KLD Generated industrial waste water treated in the ETP then Treated

		effluent passed to the RO system. • 115 KLD of RO permeate will be discharged to the CETP, Naroda as per CC&A discharged quantity & norms. • 35 KLD of RO concentrated will be sent to the spray drier(35 KLD to the common spray drying facility). • 105 KLD of remaining effluent will be reuse in process again.	
iv	Treatment facility within premises with **capacity [For existing and Proposed]** [In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc..		
	➢ ETP (Primary, Tertiary)		
v	Mode of Disposal & Final meeting point		
	Domestic:	Soak Pit	
	Industrial:	CETP as per CC&A : 115 KLD Recycled in process : 105 KLD Common spray drying facilities : 35 KLD	
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE, CHWIF etc. Name of Common facility		
	➢ Naroda Enviro Project Ltd. (CETP)		
	➢ Common Spray Drying Facility NEPL		
	➢ Society For Clean and Green Naroda		
	Membership of Common facility (CF)		
	(For waste water treatment)		
vii	**Simplified water balance diagram with reuse / recycle of waste water**		



vii Reuse/Recycle details (KLD)

[Source of reuse & application area]

Total reuse 105 KLD

Source of waste water for reuse with quantity in KLD	**Application area with quantity in KLD**		**Remarks regarding feasibility to reuse i.e. w/w characteristics (COD, BOD, TDS etc.)**
RO Permeate after primary treatment	Manufacturing Process	105 KLD	

Parameter	Concentration
pH	7.2
TDS (mg/L)	2000
COD (mg/L)	500
BOD (mg/L)	190
O & G(mg/L)	00
TSS(mg/L)	5

E **Air**

i Flue gas emission details

No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc.

Existing & Proposed

Sr. No.	Name	Stack Attached to	Stack Height : m	Type of Fuel	Quantity			APCM
					Existing	Proposed	After Proposed	
1.	Steam Boiler (6 Ton)	Steam Boiler (6 Ton)	31	Coal	4 MT/Day	5 MT/Day	9 MT/Day	Dual Cyclone + Water Scrubber + Bag Filter
2.	Hot Air Generator-I	Hot Air Generator-I	15	PNG	230 SCM/Hr.	310 SCM/Hr.	540 SCM/Hr.	Two stage water scrubber followed by cyclone separator
3.	Hot Air Generator-II	Hot Air Generator-II	15	PNG				
4.	Hot Air Generator-III	Hot Air Generator-III	15	PNG				
5.	D.G. Set (125 KVA & 500 KVA) (Stand By)	D.G. Set (125 KVA & 500 KVA) (Stand By)	3	Diesel	20 Lit/Hr.	-	20 Lit/Hr.	Adequate Stack Height

ii Process gas i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)

Existing & Proposed

Sr. No.	Name	Stack Attached to	Pollutant	Stack Height : m	APCM

	1	Spray Dryer (3500 Lit./hr.)	Spray Dryer (3500 Lit./hr.)	PM	16	Cyclone Separator followed by two stage water scrubber followed by dipping tank
	2	Spray Dryer (1000 Lit./hr.)	Spray Dryer (1000 Lit./hr.)	PM	15	Cyclone Separator followed by two stage water scrubber followed by dipping tank
	3	Diazotization Vessel	Diazotization Vessel	SO_2, HCl	12	Two Stage Alkali Scrubber

iii **Fugitive emission** details with its mitigation measures.

Proposed project is of manufacturing of S. O. ChemicalS(S.O. Dyes). Followings measures will take for existing & proposed project.

- Maintaining the house keeping regularly
- Transferring the liquid materials by pump
- To carry out regular leak detection and repair activities

Proper routine maintenance of equipment reduces the likelihood of leaks

F **Hazardous waste**

(as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.

Existing & Proposed

i

Sr. No.	Waste	Category as HWM Rules 2016	Source of waste Generation	Quantity (MT/Year)			Disposal Facility
				Existing	Proposed	Total After Proposed	
1.	Discarded Container +	33.1	Packing	142 + 12	188 + 24	330 + 36	Selling to actual/ buyer of carboys or return to raw material

			Empty Bags with Liner					supplier
		2	Used Oil	5.1	Machinery	0.024	0.026	0.050	Reuse as lubricant in our plant machinery
		3	Process Waste	26.1	Clarification of Dyes	67.8	180.2	248.0	Collection, Storage, Transportation, Disposal at TSDF.
		4	ETP Sludge	35.3	ETP	34.95	46.55	80.5	Collection, Storage, Transportation, Disposal at TSDF.
		5	Dust from Air Flotation System	26.2	Spray Drying & Receiving Dye powder	0.034	0.046	0.08	Spray Drying & Receiving Dye powder
		6	Bleed Liquor	26.1	Spray Dryer Scrubbing Process	30	40	70	Collection, Treatment in ETP
	ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**					TSDF site: Saurastra Enviro Project Pvt. Ltd., Kutchh		
	iii	Details of Non-Hazardous waste & its disposal(MSW and others)					Non Hazardous waste will be disposal by selling to the authorised vendor.		
	G	**Solvent management**, VOC emissions etc.							
	i	Types of solvents, Details of Solvent recovery, % recovery. reuse of recovered Solvents							

	No use of any Solvent.
ii	**VOC emission** sources and its mitigation measures
	we will provide closed transferring system of raw materials during manufacturing to avoid any leakages.

- During the meeting dated 25/09/2019, the project proponent along with their expert/consultant M/s. B. S. Rana attended the meeting and made presentation before the committee.
- During SEAC meeting dated 25/09/2019, Committee asked about existing plant CCA and legal action compliance for existing plant. PP informed that closure order and legal notices issued by the Board and its revocation order issued by GPCB after compliance of closure order conditions by the unit. Also unit is having CCA for existing plant and CCA compliance report submitted by the unit. Committee asked about area adequacy for proposed expansion project, PP informed that proposed project is expansion in same group of S.O. dyes and having sufficient area to accommodate proposed expansion. Committee asked about waste water management, Technical expert of PP informed that waste water after ETP and RO treatment, as per existing CCA will be discharged into GIDC underground drainage leading to CETP of NEPL for further treatment and disposal. Additional waste water will be sent to CMEE/Spray dryer facility of NEPL and society for clean and green , Naroda after primary and RO treatment. RO permeate partly will be reused back in process. Committee insisted for install online TOC and flow meter at final outlet of ETP line leading to CETP. Natural gas will be used as fuel in Hot Water Generator and coal will be used as fuel in boiler. Dual cyclone, bag filter and water scrubber as APCM will be provided with boiler . Committee deliberated on Hazardous Waste management in details.
- Considering the above project details, after detailed discussion, the terms of reference (ToR) were prescribed as below and as per the standard TOR for the Synthetic Organic Chemical projects recommended by SEAC vide letter no. EIA-10-GEN-21/1480 dated 14/09/2017 and approved by SEIAA in its 12th meeting dated 16/09/2017 for the EIA study to be done covering 10 Km radial distance from the project boundary.
    1. Unit shall install online TOC and flow meter at final discharge line leading to CETP.
    2. Details with respect to justification for proposed expansion: (1) To address proportionate availability of space for production plant. (2) To address proportionate availability of storage area for raw materials finished goods, utilities considering fire-safety norms & PESO standards and goods carrier movement within premises. (3) To address proportionate captive/common infrastructure available to accommodate additional load due to proposed expansion. (4) Environment impact and its mitigation measures for common/ captive infrastructure due to proposed production.
    3. Compliance of MoEFCC's OM dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER). Fund allocation for Corporate Environment Responsibility (CER) shall be made as per MoEFCC's O.M. No. 22-65/2017-IA.III dated 01/05/2018 for various activities therein.

The details of fund allocation and activities for CER shall be incorporated in EIA/EMP report.

4. Explore the use of renewable energy to the maximum extent possible. Details of provisions to make the project energy-efficient through energy efficient devices and adoption of modes of alternative eco-friendly sources of energy like solar water heater, solar lighting etc. Measures proposed for energy conservation.
5. Permission of Narcotics department for usage of Acetic anhydride as Raw material.
6. Segregation of waste water streams based on characteristics and its proper management keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP**. (COD, BOD, TDS etc. of each stream shall be given)**
7. Membership certificate of Common facility (Common Spray dryer, Common MEE, Common Incinerator etc.) with booking quantity in KLD along with other details/information like Spare capacity of Common Facility (CF), quality of waste water by member industry and assurance by CF that there is no adverse impact on Environment and Human Health due to treatment of waste water received from your industrial effluent.
8. Submit status of compliance of Environmental norms of existing Common Infrastructure of M/s: NEPL and M/s Society for clean and green, Naroda.
9. PP shall furnish status of all the applicable Rules, Acts, Regulation, Clearances in a tabular form.

- The TOR prescribed as above and as per the standard TOR approved by SEIAA and the model ToRs available in the MoEF&CC'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.
- Further Project Proponent may be advised to submit final EIA Report with EC application within 100 days from the date of issuance of this ToR to expedite processing of Environment Clearance application.
- The project proponent shall have to apply for Environmental clearance through online portal http://environmentclearance.nic.in/along with final EIA report.

16.	SIA/GJ/IND2/41388/2019	**M/s. BBELL Industry LLP.** Plot No. DP-119, GIDC- Saykha, Ta - Vagra, Dist -Bharuch	Screening and scoping

Project / Activity No.: **5(f)**

Project status: New

- This office has received an application vide their online proposal no. SIA/GJ/IND2/40297/2019 dated 27/08/2019 regarding grant of Terms of Reference [ToR] for preparation of EIA/EMP report.

- Project proponent (PP) has submitted Form-1, PFR and relevant details/information.
- This is a new unit proposes for Synthetic Organic Chemicals manufacturing plant as tabulated below:

Sr. No.	Name of Product	CAS. No.	Quantity (MTPM)	End Use
A	**DYE INTERMEDIATES**			
1	CMBI	4414-88-4	40	For producing Dye
B	**Dyes**			
1	**Synthetic Organic Dyes 1**			
1	Basic Red 46	79850-79-6	80	Dyeing
2	Blue 159	93783-70-1		
2	**Synthetic Organic Dyes 2**			
1	Solvent Red 196	52372-36-8	110	Dyeing
2	Basic Red 76	68391-30-0		
3	Solvent Red 197	52372-39-1		
4	Basic Brown 16	26381-41-9		
5	Basic Brown 17	68391-32-2		
6	Basic Orange 31	97404-02-9		
7	Basic Blue 99	68123-13-7		
8	Basic Red 51	88385-22-2		
9	Basic Yellow 87	68259-00-7		
10	Basic Red 1-1	3068-39-1		
11	Basic Red 1	989-38-8		
C	**FORMULATION OF DYE (Solid and Liquid)**		200	Dyeing
		Total	**430**	

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- PP was called for presentation in the SEAC meeting dated 25/09/2019.
- Salient features of the project including Water, Air and Hazardous waste management :

Sr. no.	Particulars	Details
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	**8 Crores**
B	**Total Plot area** (sq. meter)	**9752.05 Sq. m.**
	Green belt area (sq. meter)	**3051.48 Sq. m.**

C	**Employment generation**	**60 nos.**
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC Sayakha
	Status of permission from the concern authority.	Permission letter no: GIDC/ DEE (WS)/BRH/589 dtd. 2.8.2019 is attached with ToR application.
ii	**Water consumption (KLD)**	

-

Category	Quantity, KLD	Remarks
(U) Domestic	3.00	Fresh water
(V) Gardening	7.00	Fresh water
(W)Industrial		Fresh and treated water
Process	218.33	
Washing	6.00	
Boiler and Hot Water Generator	5.00	
Cooling	10.67	
Others	0.00	
Industrial Total	**240.00**	
Total (A + B + C)	**250.00**	

1) Total water requirement for the project: **250.00 KLD**

2) Quantity to be recycled: **186.00 KLD**

3) Total fresh water requirement: **64.00 KLD**

iii	**Waste water generation (KLD)**

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Category	Wastewater Generation KLD	Remarks
(M) Domestic	2.50	Sewage from domestic activities will be treated in septic tank/soak pit.

	(N) Industrial		
	Process – (Stream – 1)	186.00	Treated in in-house MEE
	Process (Stream – 2)	108.12	After primary treatment discharge to CETP Sayakha
	Washing	6.00	
	Boiler and Hot Water Generator	1.00	
	Cooling	2.67	
	other	0	
	Total Industrial	**303.79**	
	Total w/w generation	**306.29**	

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iv	Treatment facility within premises with **capacity** [In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc. 1. In-house ETP (for Primary treatment) : 303.79 KLD 2. In-house MEE : 207.00 KLD 3. In-house ETP (Secondary, Tertiary) : 207.00 KLD	
	Treatment scheme including segregation at source. • Effluent will be segregated at source. Stream – 1 (186 KLD) having high TDS/COD and Stream – 2 (117.79 KLD) having low TDS/COD. • Stream – 1 after primary treatment will be passes through solvent stripper and treated in in-house MEE along with RO reject (21.00 KLD). MEE condensate will be further treated in secondary clarifier and tertiary treatment facility. Followed by RO plant. RO permeate (186 KLD) will be reused in process, while RO reject will be treated in MEE. • Stream – 2 after primary treatment effluent stream (117.79 KLD) will be discharge to CETP Sayakha.	
	Note: (In case of CETP discharge) : **Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP**. ➢ Not Applicable.	
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ Not applicable as treated waste water will be discharged in CETP Sayakha	
v	Mode of Disposal & Final meeting point	
	Domestic:	Sewage from domestic activities will be treated in septic tank/soak pit.
	Industrial:	Primary treated effluent achieving CETP norms will be discharge in CETP, Saykha.

vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ **CETP, Saykha**
	Membership of Common facility (CF) **(For waste water treatment)**
	We will obtain membership of CETP, Saykha.
vii	**Simplified water balance diagram with reuse / recycle of waste water**

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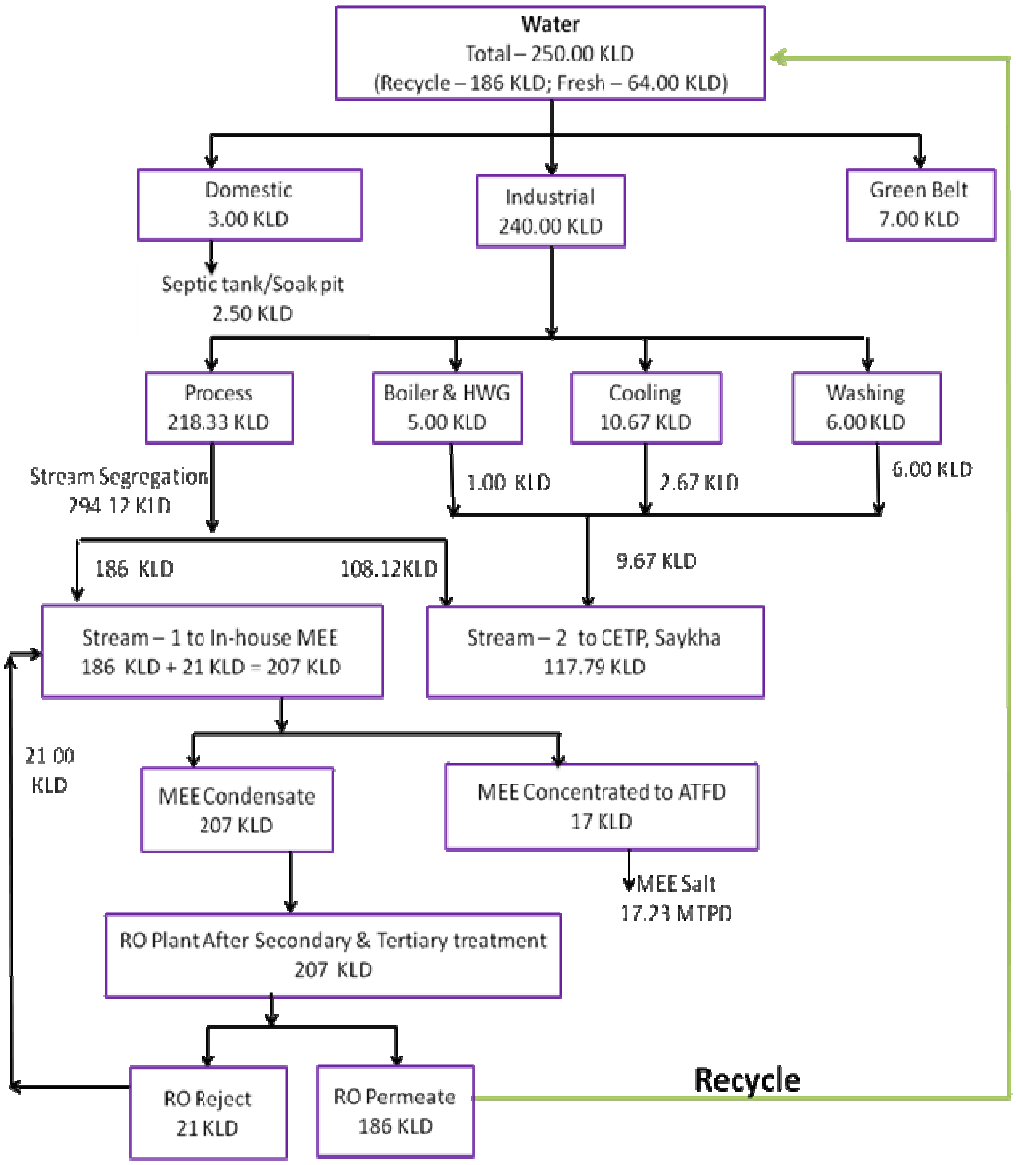

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vii	Reuse/Recycle details (KLD)			
i	**Total reuse: 186.00 KLD**			
	Source of waste	**Application area**	**Characteristics of**	**Remarks**

		water for reuse with quantity in KLD (From where it is coming)	**with quantity in KLD (Where it is used)**	**waste water to be reused (COD, BOD, and TDS etc.)**	**regarding feasibility to reuse i.e.**
		RO plant - 207.00 KLD	Used in process and washing 186.00 KLD	COD: 50 mg/L BOD: 5 mg/L TDS: 100 mg/L	--

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E	**Air**
i	Flue gas emission details No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc.

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Sr. no.	**Source of emission With Capacity**	**Stack Height (meter)**	**Type of Fuel**	**Quantity of Fuel MT/Day**	**Type of emissions i.e. Air Pollutants**	**Air Pollution Control Measures (APCM)**
1	Thermic Fluid Heater – 2 Nos. (10 Lac Kcal/Hr)	30 (Common stack)	FO	6.05 6.05	PM SO_2 NOx	Adequate stack Height with SMF
2	Thermic Fluid Heater – 1 No. (25 Lac Kcal/Hr)	30	FO	15.13	PM SO_2 NOx	Adequate stack Height with SMF
3	Hot Water Generator (15 Lac Kcal/Hr)	30	FO	4.54	PM SO_2 NOx	Adequate stack Height with SMF
4	Boiler (500kg/hr.)	20	Indonesian Coal	1.21	PM SO_2 NOx	Cyclone Seperator with Bag filter
5	D.G. Sets – 2 nos. (250 KVA)	11	HSD	120 L/Hr	PM SO_2	Adequate stack

					120 L/Hr	NOx	Height with SMF

-

ii	Process gas emission details i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)
	- No process gas emission from proposed project
iii	**Fugitive emission** details with its mitigation measures: As below:
	Fugitive emission will be expected from raw material handling, transportation activities, coal handling, etc. Following mitigation measures will be implemented, • Water shall be sprinkled during the construction activities • Water shall be sprinkled on fly ash • Mechanical seals at pumps should be used and maintained. • Closed unloading, conveying and packing system • All the reactors shall be closed. • Safety devices shall be provided to workers • Regular monitoring of work zone area. • Greenbelt development around the plant.
F	**Hazardous wastes** (as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.
i	-

Sr. no.	**Type/ Name of Hazardous waste**	**Specific Source of generation (Name of the Activity, Product etc.)**	**Category & Schedule as per HW Rules.**	**Quantity (MT/Annum)**	**Management of HW**
Hazardous Waste					
1	ETP Sludge	Primary and secondary treatment plant of ETP	35.3 Sch– I	92.98	Collection, Storage Transportation, Disposal at GPCB approved TSDF site for land filling.
2	Spent Solvent	Manufacturing of CMBI	26.4 Sch– I	3651.43	In process distillation for

						solvent recovery (1311.43 MTPA) and reuse in process.
	3	Distillation Residue	Solvent Distillation	36.1 Sche. – I	565.71	Collection, storage, Transportation and sent for incineration or co/pre-processing to common TSDF facility.
	4	MEE Salt	MEE	37.3 Sche. – I	6287.13	Collection, storage, Transportation and sent to common TSDF facility for land filling.
	5	Used/ Spent Oil	D. G. set and Utility	5.1 Sche. – I	1	Collection, Storage, Transportation, Disposal by selling to registered re-refiner
	6	Discarded Containers	RM/Chemical Handling	33.1 Sche. – I	30	Collection, Storage, Decontamination, Transportation, Disposal by selling to registered party.
	Solid Waste					
	6	Fly Ash	Boiler	--	43.58	Collection, Storage, Transportation and selling to brick manufacturer or Cement Industries
	-					
ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**				TSDF membership will apply after obtaining ToR.	

iii	Details of Non-Hazardous waste & its disposal (MSW and others)	Fly Ash: 43.58 MTPA
G	**Solvent management**, VOC emissions etc.	
i	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)	
	➢ Solvents like Ortho dichlorobenzene (ODCB), Methanol and Ethanol will be used in proposed project. ➢ Methanol and Ethanol will be recovered up to 95 – 97 % through in-built process and reuse in process. ➢ In-house solvent recovery plant will be installed for ODCB and recovered 85% of solvent.	
ii	VOC emission sources and its mitigation measures	
	- Fugitive emission mainly in form of VOCs emissions results from uses of solvents. - VOC emission will be taken place at solvents storage and handling area. - Solvent storage will be in closed area/system, which will reduce chances of VOC emission.	
H	• **Details regarding storage of Hazardous chemicals**	

Storage details	**Name of major Hazardous chemicals**	**Remarks**
Storage tanks	• Ortho-dichlorobenze (ODCB) • Ethanol • Methanol	--
Drum/Barrel storage	FO and HSD	--

• **Applicability of PESO** : Applicable for the storage of HSD&FO.

- During the meeting dated 25/09/2019, the project proponent along with their expert/consultant M/s. Envision Enviro Technologies Pvt. Ltd attended the meeting and made presentation before the committee.
- This is a new Greenfield project in GIDC Saykha.
- During SEAC meeting dated 25/09/2019, Committee asked about area adequacy for proposed production plant size, Technical expert of PP informed that proposed plot is of sufficient area for proposed production size. Committee asked about waste water management, PP informed that high COD effluent stream after primary treatment passing through solvent stripper evaporated in in-house MEE along with RO reject. Low COD effluent stream after primary treatment will be discharged into CETP Saykha. MEE condensate further will be treated in secondary ETP and tertiary ETP units and RO plant. RO permeate will be reused back in process. FO will be used as fuel in thermic fluid heater and hot water generator. Coal will be used as fuel in boiler and MCS and bag filter will be provided as APCM with

boiler.

- Considering the above project details, after detailed discussion, the terms of reference (ToR) were prescribed as below and as per the standard TOR for the Synthetic Organic Chemical projects recommended by SEAC vide letter no. EIA-10-GEN-21/1480 dated 14/09/2017 and approved by SEIAA in its 12th meeting dated 16/09/2017 for the EIA study to be done covering 10 Km radial distance from the project boundary.

    1. Details of the treatability and feasibility of waste water to be disposed off by means of in-house MEE & solvent stripper and its impact on Environment and Human Health. Submit Adequacy of in-house MEE & solvent stripper. Standard Operating Procedures (SOPs) for in-house MEE & solvent stripper shall be incorporated in EIA report.
    2. Membership certificate of CETP with booking quantity in KLD along with other details/information like Spare capacity of CETP, quality of waste water by member industry and assurance by CETP that there is no adverse impact on Environment and Human Health due to treatment of waste water received from your industrial effluent.
    3. Compliance of MoEF&CC's OM dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER). Fund allocation for Corporate Environment Responsibility (CER) shall be made as per MoEFCC's O.M. No. 22-65/2017-IA.III dated 01/05/2018 for various activities therein. The details of fund allocation and activities for CER shall be incorporated in EIA/EMP report.
    4. Explore the use of renewable energy to the maximum extent possible. Details of provisions to make the project energy-efficient through energy efficient devices and adoption of modes of alternative eco-friendly sources of energy like solar water heater, solar lighting etc. Measures proposed for energy conservation.
    5. Leak Detection and Repairing Programme (LDAR) for all the volatile organic solvent proposed for use in-house with detailed chemical properties including vapor pressure. LDAR shall endeavor prevention of losses of solvents to the best minimum extent.
    6. PP shall furnish status of all the applicable Rules, Acts, Regulation, Clearances in a tabular form.

- The TOR prescribed as above and as per the standard TOR approved by SEIAA and the model ToRs available in the MoEF&CC'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.

- Further Project Proponent may be advised to submit final EIA Report with EC application within 100 days from the date of issuance of this ToR to expedite processing of Environment Clearance application.
- The project proponent shall have to apply for Environmental clearance through online portal http://environmentclearance.nic.in/along with final EIA report.

Meeting ended with thanks to the Chairs.

Minutes approved by:

1.	Dr. Dinesh Misra, Chairman, SEAC	
2.	Shri S. C. Srivastav, Vice Chairman, SEAC	
3.	Shri V. N. Patel, Member, SEAC	
4.	Shri Rajesh I Shah, Member, SEAC	
5.	Shri A.K. Muley, Member, SEAC	
6.	*Shri N.M. Tabhani, Secretary, SEAC*	