Minutes of the 612thmeeting ofthe State Level Expert Appraisal Committee(SEAC) held on 18/03/2020 at Committee Room, Gujarat Pollution Control Board, Sector 10A,Gandhinagar.

The 612thmeeting of the State Level Expert Appraisal Committee (SEAC) was held on 18th March 2020 at Committee Room, Gujarat Pollution Control Board, Sector 10A, 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. R. J. Shah, Member, SEAC
5. Shri A. K. Muley, Member, SEAC
6. Dr. V. K. Jain, Member, SEAC
7. Shri A. V. Shah, Secretary, SEAC

The regular agenda of Appraisal, Screening & Scoping/ToR / EC – Reconsiderationcases were taken up. The Committee considered the applications made by project proponents, additional details submitted as required by the SEAC/SEIAA and details furnished in the Form-1, PFR, EIA-EMP reports.

	Proposal No.	**Name and Address of the Unit**	**Remarks**
1	SIA/GJ/IND2/27657/2018	**M/s. Lincoln Pharmaceutical Limited** Block No. 176 (old Block No. 95/5-B), At – Khatraj, Ta. Kalol, Dist. Gandhinagar.	Appraisal

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/27657/2018 on dated 05/11/2019 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 30/10/2018.
- Project proponent has submitted EIA Report prepared by M/s. Bhagwati Enviro Care Pvt. Ltd., Ahmedabad based on the TOR issued by SEIAA.
- **Public Hearing** of the Project was conducted by **Gujarat Pollution Control Board** at Project Site of **M/s. Lincoln Pharmaceutical Limited, Block No. 176 (old Block No. 95/5-B), At – Khatraj, Ta. Kalol, Dist. Gandhinagar** dated **13/11/2019**.
- This is new unit proposes for manufacturing of synthetic organic chemical as tabulated below:

Sr. No.	Product Name	CAS NO.	Quantity Kg/Month	Final Application of Product
1	Caroverine Hydrochloride **(1-[2-(Diethylamino)ethyl]-3-[(4-methoxyphenyl)methyl]-2(1H)-quinoxalinone monohydrochloride)**	55750-05-5	100	Pharmaceuticals Raw Material (For Capsule Manufacturing)

- 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 18/03/2020.
- Salient features of the project are as under:

Sr. no.	Particulars	Details
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	0.49 Crores
	Details of EMP	

Sr. No	System	Approximate Capital cost per annum (in Lac)	Approximate Recurring cost per year (Rs. In Lac)	Basis for cost estimates
1	Air pollution control	0.0	0.5	The capital cost will be zero for Air Pollution control because there will be no flue gas emission & process gas emission from the unit. The recurring cost will include control of fugitive emission.
2	Water pollution control	10.0	10.2	Capital cost would include cost of ETP, In capital cost civil work, mechanical work, Electrical work and piping work is included. Recurring cost is for operational phase regarding Evaporation cost of

				Spray Drying etc.
3	Noise pollution monitoring	0.0	0.25	The recurring cost would include cost of noise monitoring.
4	Solid and hazardous waste management	1.5	1.0	Capital cost would include cost of providing storage space for hazardous waste and membership of TSDF Fee. Recurring cost would include cost of land filling and transportation.
5	Environment monitoring and management	1.5	1.0	The recurring cost would be incurred on hiring of consultants and payment of various statutory fees to regulatory agencies.
6	Green belt	2.0	1.0	Development of Greenbelt including Gardening and Plantation.
7	Occupational health (OHC)	1.0	1.0	Occupational health check up of Employees and workers
	Total	16.0	14.95	

	Details of CER as per OM dated 01/05/2018	2% of Total Project Cost 1.02 Lac for 2 Year (2.06 % of total Plot Area)

M/s. Lincoln Pharmaceuticals Limited **CER Budget**: 1.02 Lacs (For Two Year) **Propose Planning for CER Activity (2020-2021)**	
Cost in Lacs/Yr	
2020	**2021**
– **0.51 Lacs give to <u>Gram Panchayat Khatraj Village</u> as per his requirement (mention in letter**) i.e. provide RO plant for drinking water, help in Education Sector, Infrastcture Development.	– **0.51 Lacs** give to **<u>Gram Panchayat Sanavad Village</u>** as per his **requirement (mention in letter**) i.e. provide RO plant for drinking water, help in Education Sector, Infrastcture Development.
Total: 0.51 Lacs	**Total: 0.51 Lacs**

B	**Total Plot area** (sq. meter)	1049 sq. m.

	Green belt area (sq. meter)	361.05 Sq. m.
C	**Employment generation**	08
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	Water tanker
	Status of permission from the concern authority.	Yes

ii **Water consumption (KLD)**

Category	Quantity KLD	Remarks
(A) Domestic	1	
(B) Gardening	2	
(C) Industrial		
Process	0.12	
Washing	1	
Industrial Total	1.12	
Total (A + B + C)	4.12	

1) **Total water requirement** for the project: 4.12 KLD
2) Quantity to be **recycled**: 0.00 KLD
3) Total **fresh water** requirement: 4.12 KLD

(Total water requirement = Fresh water + Recycled water)

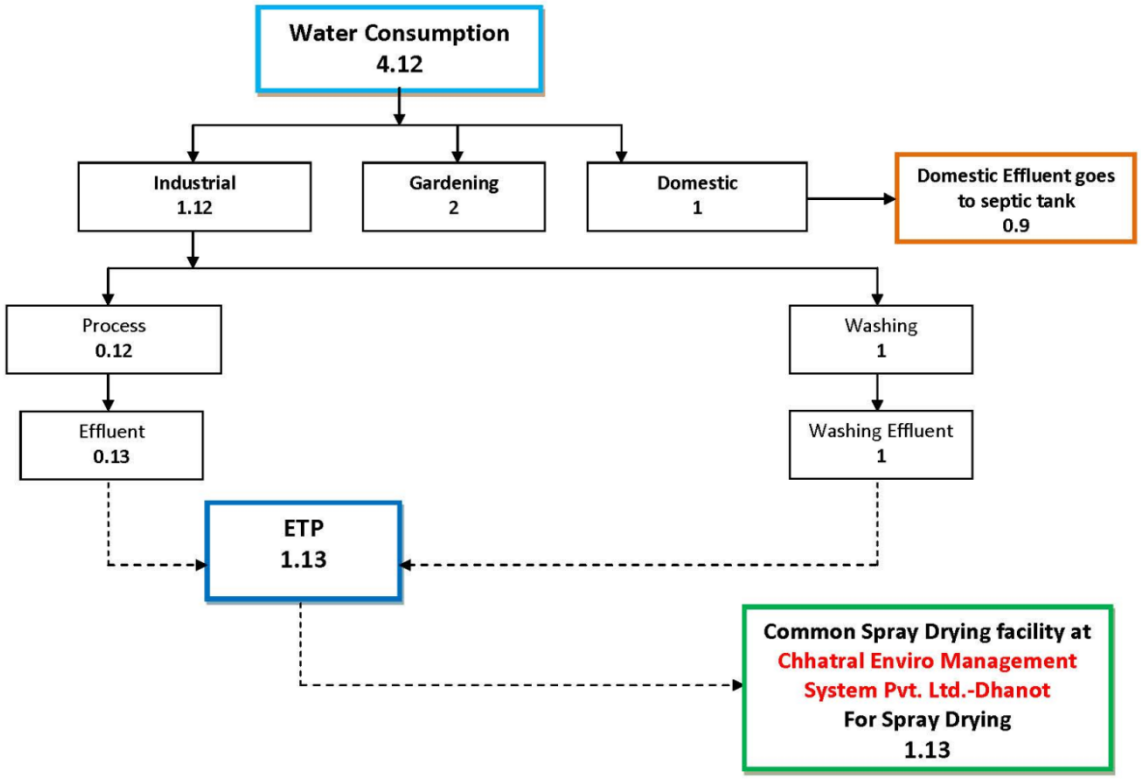
(4.12= 4.12 + 0.00)

iii **Waste water generation (KLD)**

Category	Waste water KLD	Remarks
(A) Domestic	0.9	
(B) Industrial		

		Process	0.13		
		Washing	1		
		Total Industrial waste water	1.13		
		Total [A + B]	2.03		

iv	Treatment facility within premises with **capacity** [In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc. ➢ ETP (Cap-5 KL having Primary Treatment Unit)	
	Treatment scheme including segregation at source. ➢ After Treatment of Industrial effluent, It will be send to Common Spray Drying facility at Chhatral Environment management system Pvt. Ltd. – Dhanot For spray drying.	
	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): ➢ Unit will achieve zero liquid discharge by discharge proposed effluent to common spray dryer.	
v	Mode of Disposal & Final meeting point	
	Domestic:	0.9 KLPD discharge to soak pit via septic Tank.
	Industrial:	➢ Industrial effluent generation will be **1.13 KLPD**. That will be primary treated in ETP (Having Primary Treatment Unit) and after treatment it will be send to Common Spray Drying facility at Chhatral Environment management system Pvt. Ltd. – Dhanot For spray drying.
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ Common Spray dryer – CEMSPL	
	Membership of Common facility (CF) **(For waste water treatment)**	
	➢ Common Spray dryer – CEMSPL	
vii	**Simplified water balance diagram with reuse / recycle of waste water**	



viii	Reuse/Recycle details (KLD)
	Total reuse 0.00 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.**
0.00	---	---	---

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.
	There will be no Flue gas emission from proposed activity
ii	Process gas emission details i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)
	There will be no process gas emission from proposed activity.
iii	**Fugitive emission** details with its mitigation measures: As below:

Fugitive emission could occur from the storage yard of raw materials and finished products. Due to smaller batch size of the product, The storage quantity is low maintained at site and proper handling methods will be adopted. 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 fro 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:

- Proper storage of raw materials and products.
- Ensuring closed feeding and sampling.
- Establishing SOPs for start-up, shut down and maintenance operational procedures.
- Regular work place monitoring and ambient air quality monitoring as per post project monitoring plan.

F **Hazardous wastes**

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

i

Sr. No.	Type of Waste	Category	Quantity	Management
1	ETP Waste	35.3	12 MT/Annum	Collection, Storage, Transportation & Disposal at approved TSDF site.
2	Spent Oil/Used Oil	5.1	72 Lit./Yr.	Collection, Storage, Transportation & Disposed by selling to Registered refiners or reuse as lubricant.
3	Discarded Containers (Bag, Barrel, Drum)	33.1	2.4 MT/Yr	Collection, Storage, Transportation & Disposed by selling to authorized recycler.

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	TSDF – Detox India PVT LTD
iii	Details of Non-Hazardous waste & its disposal	Not Applicable

	(MSW and others)	
G	**Solvent management**, VOC emissions etc. **Applicable**	
i	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)	

Sr. No.	**Product Name**	**Solvent Name**	**Quantity Kg/Batch**			**Solvent Recovery (%)**
			Use	**Recovered**	**Remaining Qty. carry forward with product mass**	
1	Caroverine Hydrochloride	Toluene	24	24	00	100
		Di ethyl ether	20	19.5	0.5	97.5

ii	VOC emission sources and its mitigation measures
	➢ We will measure level in our manufacturing unit as well as raw material storage area we will also do work place monitoring & according implementation.
H	➢ **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Storage tanks	---	---
Drum/Barrel storage	Di ethyl ether Sodium Hydroxide Toluene	200 KG 200 KG 200 KG
Carboy	Hydrochloric acid	250 KG

➢ **Applicability of PESO** :

Due to less storage quantity PESO permission was not required.

- During the meeting dated 18/03/2020, technical presentation made by project proponent.
- During the meeting, the project was appraised based on the information furnished in the EIA Report, various issues raised during the public hearing 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 January 2019 to March 2019. Ambient Air Quality monitoring was carried out for PM2.5, PM10, SO2, NOx, Benzene, Toluene, Xylene, CO& HC 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. 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 deliberated on the Minutes of the Public Hearing dated **13/11/2019** along with the representation made by the Public & Point wise Compliance Submitted by Project Proponent.
- Committee noted that proposal is new in Village: Khatraj. Source of water is Tanker. PP mentioned that effluent generated from process and washing will be treated in in-house primary ETP and treated effluent will be disposed into Common Spray Dryer of Chhatral Environment management system Pvt. Ltd. – Dhanot for final treatment and disposal. PP mentioned that there is no any process or flue gas stack as the fuel used is electricity. PP has addressed Hazardous Waste as per HWR – 2016. Committee noted that PP has addressed EMP & CER satisfactorily.
- Compliance of ToR found satisfactory.
- ***After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.***

2	SIA/GJ/IND2/35802/2019	**M/s. Tejika Labs Private Limited** Plot No. D-2-CH-151-1, Dahej-II, Industrial Estate, Dahej.Taluka: Vagra, Dist.: Bharuch.	Appraisal

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/35802/2019 on dated 05/11/2019 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 04/11/2019.
- Project proponent has submitted EIA Report prepared by M/s. Jyoti Om Chemical Research Centre Pvt. Ltd, Surat based on the TOR issued by SEIAA.
- This is new unit proposes for manufacturing of synthetic organic chemical as tabulated below:

Sr. no.	Name of the Products	CAS No.	QUANTITY in MT/MONTH	End-use of the products

	GROUP-1 (Sr. NO:- 1 to 3) (Not more than 100 MT/Month)			
1.	2,3,4,5–bis-O-[1-Methyl Ethyl idene]B-D-Fructopyranose	20880-92-6	100	For Topiramate (API)
2.	Di Methyl Formamide Di Methyl Acetal	4637-24-5		For Imatinib (API)
3.	4-Methyl Catechol Di-acetic acid Dimethyl ester	52589-39-6		For Watermelone Ketone (FRAGRANCE)
	GROUP-2 (Sr No:-4 to 8) (Not More than 50 MT/Month)			
4.	4-Methyl Catechol	452-86-8	50	For Watermelon Ketone (FRAGRANCE)
5.	Methylene dioxy phenol	533-31-3		For Paroxetine (API)
6.	4-Chloro-4'Hydroxy Benzophenone	42019-78-3		For Fenofibrate (API)
7.	2-Bromo Veratryl Bromide	53207-004		For Pinaverium Bromide (API)
8.	7-Ethyl tryptophol	41340-36-7		For Etodolac (API)
	GROUP-3 (Sr No:-9 to 53) (Not More than 30 MT/Month)			
9.	Di Methyl Formamide Di Iso Propyl Acetal	18503-89-4	30	For Cocaine (API)
10.	4-Methoxy Benzaldehyde dimethyl Acetal	2186-92-7		For Paclitaxel/Octinoxate (API)
11.	Benzaldehyde dimethyl Acetal	1125-88-8		For Rosuvastatin (API)
12.	Dimethyl Acetamide Dimethyl Acetal	018871-66-4		For Zaleplon (API)
13.	O-Benzyl hydroxyl amine Hydrochloride	2687-43-6		For Larsartan(API)
14.	Endo-9-methyl-9-azabicyclo[3,3,1]nonane 3-amine	76272-56-5		For Granisetron (API)
15.	2 3 Dihydrofuran	1191-99-7		For Etodolac

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

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

48	Methyl-6-methylnicotinate	2519-37-1		For Etoricoxib (API)
49	4-[(4-Methyl-1-piperazinyl)-methyl]-benzoic acid	106261-48-7		For Lematinib (API)
50	**2-(((2'-cyano-(1,1'biphenyl)-4-yl)-methyl)amino)-3-nitro benzoic acid)**	139481-28-0		For Cilexetile (API)
51	**Ndlic anhydride (endo- cis-bicyclo-(2.2.1)-5-heptane-2,3-dicarboxylic acid)**	3853-88-1		For Lurasidone Hcl (API)
52	**4- Methoxy-3-(3-methoxypropoxy) benzoic acid**	895240-50-**3**		For Aliskiren (API)
53	3- cyclopropyl-3-oxo Propionic Acid Methyl Ester	32249-35-7		For Pitavastatin (API)
	GROUP-4 (Sr No:-54To 127) (Not More Than 30 MT/Month)			
54	4-Hydroxy Benzyl Alcohol	623-05-2	30	For Bisoprolol Fumarate (API)
55	2,4,6 TrimethoxyBenzaldehyde	830-79-5		For Oncology (API)
56	4-Isopropyl catechol	2138-43-4		For Fragrance Intermediate
57	3-Methoxy Phenol	150-19-6		For Antioxidants (API)
58	Veratryl Alcohol	93-03-8		For Pinaverium Bromide (API)
59	3,4 Dihydroxy Benzaldehyde	139-85-5		For Protochuic Acid (API)
60	4-Propyl Catechol	2525-02-2		For Fragrance Intermediate
61	(3S,4R)-4-(4-Fluorophenyl)-3-hydroxymethyl-1-methylpiperidine(-alcohol)	105812-81-5		For Paroxetine (API)

62	3 –MethoxyPropiophenone	37951-49-8		For Tapentadol (API)	
63	**4-Hydroxy Benzaladehyde**	**123-08-0**		For Bisoprolol Fumarate (API)	
64	**Piperonyl Alcohol**	**495-76-1**		Antioxidants (API)	
65	3,4-Dimethoxy phenol	2033-89-8		For Thalicarpine (API)	
66	**4- Methyl Guaiacol**	**93-51-6**		For Fragrance Intermediate	
67	Isovanillyl Alcohol	4383-06-6		Aliskiren (API)	
68	3-Methoxy benzyl alcohol	6971-51-3		Sarpogrelate (API)	
69	2,5-dimethoxy Benzaldehyde	93-02-7		Midodrine (API)	
70	5-Nitrovanillin	6635-20-7		Entacapone (API)	
71	4-Hydroxy Anisole	150-76-5		For Fragrance Intermediate	
72	Salicylaldehyde	090-02-8		Midodrine (API)	
73	Isovanillin	621-59-0		For Galantamine (API)	
74	Watermelone ketone	28940-11-6		For Perfumes (Fragrance)	
75	(1R,2R)-1,2-cyclohexanedimethanol	65376-05-8		For Lurasidone Hcl (API)	
76	3',4'-(methylenedioxy)-acetophenone	3162-29-6		For Paroxetine Hcl (API)	
77	3,4-dihyroxy-5-nitro-benzaldehyde	116313-85-0		For Enatcapone (API)	
78	2,4- di Hydroxy Benzophenone	131-56-6		For Antioxidants (API)	
79	2-hydroxy benzyl alcohol	90-01-7		For Fragrance Intermediate	
80	**N-benzyl-4-**	22065-85-6		For Donepezil (API)	

	piperidinecarboxaldehyde			
81	5,6- Dimethoxy indanone	2107-69-9		For Donepezil (API)
82	3-(1-Piperaziny)-1,2-Benzisoxazole/Hydrochloride	87691-87-0/ 87691-88-1		For Ziprasidone (API)
83	5-Chloroethyl-6-Chloro-2-Oxindole	118289-55-7		For Ziprasidone (API)
84	4-[(4-Methyl-1-piperazinyl)-methyl]-benzoyl chloride dihydrochloride	**106261-64-7**		For Imatinib (API)
85	**1-(Benzo (d)(1,3)dioxol-5-yl))ethanol**	**6329-73-3**		For Proline (API)
86	2 -Bromo 2',5' – dimethoxyacetophenone	1204-21-3		For Midodrine (API)
87	(1R,2R)-1-2-bis (methane sulfonyloxy methyl) cyclohexane	186204-35-3		For Lurasidone Hcl (API)
88	Tert-butyl(4-bromophenyl) Methylcarbamate	639520-70-0		For Protecting Group
89	(2-cyclopropyl-4-(4-fluorophenyl)quinolone-3yl)methanol	121660-11-5		For Pitavastatin (API)
90	2-Bromo-3'-Chloro –Propiophenone	34911-51-8		For Bupropion Hcl (API)
91	**3- Bromo- 4-Hydroxy Benzaldehyde**	**2973-78-6**		For Bromoxynil (API)
92	**3,4-(methylenedioxy) bromo benzene**	**2635-13-4**		4-Bromo 1,2-Methylene DioxyBenzene (Speciality Chemical)
93	**3-Methoxy Benzyl chloride**	**824-98-6**		Sarpogrelate (API)
94	**4- Chloro Guaiacol**	16766-30-6		For Fragrance Intermediate

95	**4- Chloro Veratrole**	**16766-27-1**		For Reactant (Speciality Chemical)	
96	2-Bromo-4- Chloro Phenol	695-96-5		For Reactant (Speciality Chemical)	
97	4- Bromo Anisole	104-92-7		4-Bromo –(3-Methyl Phenol) Methanamine (Speciality Chemical)	
98	4-BromoPhenetole	588-96-5		For irritability (Fragrance)	
99	Endo-9-methyl-9-azabicyclo[3,3,1]nonane 3-amine 2 HCL	135906-03-5		For GranisetronHcl Int. (API)	
100	2-Bromo-4-Cyanophenol	82380-17-**4**		For 2-Bromo -4-Hydroxy -Benzonitrite (Speciality Chemical)	
101	2-Chloro-4,6-dimethoxy-[1,3,5]-triazine	3140-73-**6**		For Pemetrexed Disodium (API)	
102	Bicyclo[2.2.1]hep-tane-2,3-exo-dicarboximide	14805-29-9		For Lurasidone (API)	
103	4-Bromo Phenol	106-41-2		For Stilled Reaction (Speciality Chemical)	
104	2-(2-ethoxy phenoxy) ethyl bromide	3259-03-8		For Tamsulosin (API)	
105	Ethyl-3[1-(3 amino-4-(methyl amino)-phenyl)-n-(pyridine-2-yl)-foramido)proponate]	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-alanimate	211915-84-3		For Dabigartan (API)	
107	6-chloro 2-oxindole	56341-37-8		For Ziprasidone (API)	

108	6-chloro-5-(chloroactyl)-1-3-dihydro-2H-indole-2-one	118307-04-3		For Ziprasidone (API)	
109	3,4-(methylenedioxy)-toluene	**7145-99-5**		For Sitaxentan (API)	
110	2-chloro-4,6-dimethoxybenzaldehyde	18093-05-5		For Fenoldopam Mesylate (API)	
111	2-chloro-2',5'-dimethoxy Acetophenone	1204-22-4		For Midodrine (API)	
112	4-fluoro-alpha-(2-methyl-1-oxopropyl)-t-oxo-N,B,Diphenylbenzenebutanamide	125971-96-2		For Atorvastatin (API)	
113	**5-Bromo-6-bromomethyl-1,3-benzodioxole**	5434-47-9		For Iloperidone (API)	
114	**6-Fluoro-3-(4-piperidinyl)1,2-benzisoxazole**	84163-77-9		For Resperidone (API)	
115	2,4-dimethoxy benzyl chloride	55791-52-1		For Coumestan (Speciality Chemical)	
116	methyl-4-(Bromomethyl)-benzoate	2417-72-3		For Eprosartan (API)	
117	**1,2,3,4- tetrahydro-9-methyl-4H-carbazol-4-one**	27387-31-**1**		For Ondansetron (API)	
118	4,5-dimethoxy-2- nitro toluene	7509-11-7		For Chemical Ingredient (Speciality Chemical)	
119	Alpha-bromo-ortho-chloro-phenyl acetic acid	29270-30-**2**		For Clopidogrel (API)	
120	**3,4-(Dimethoxy)-6-methylbenzyl chloride**	34523-76-7		For Antibiotics (API)	
121	**Anisole**	100-66-3		For Fragrance Intermediate	

122	**Veratrol**	**91-16-7**		For Salmeterol Int. (API)
123	**Vanillin**	121-33-5		For Vanilla Bean (API)
124	**Ethyl Vanillin**	121-32-4		For Chocolate &Antioxidants (API)
125	3,4-methylenedioxy Benzaldehyde (piperonal)	120-57-0		For Tadalafil Int. (API)
126	1-[3-(benzyloxy)propyl]-5-formylindoline-7-carbonitrile	1375180-30-5		For Silodosin (API)
127	Dimethylformamide di-tert-butyl Acetal	36805-97-7		For Int. Veterinary Uses (API)
	GROUP-5 (Sr No:- 128 to 209) (Not More than 20 MT/Month)			
128	AfatinibDimaleate	850140-73-7	20	For Metastatic (pharma)
129	Arbutin	497-76-7		For Glycoside (pharma)
130	Agomelatine	138112-76-2		For Antidepressant (pharma)
131	Apixaban	503612-47-3		For Anticoagulant (pharma)
132	Aripiprazole	129722-12-9		For Antipsychotic (pharma)
133	Asenapine	65576-45-6		For Schizophrenia (pharma)
134	Axitinib	319460-85-0		For Carcinoma (pharma)
135	Azilsartan	147403-03-0		For Hypertension (pharma)
136	Abacavir Sulfate	188062-50-2		For HIV Medications (pharma)
137	Atorvastatin Calcium	134523-03-8		For Cardiovascular Diesease (pharma)
138	Bupropion HCL	31677-93-7		For Depressive Order (pharma)

139	Bisoprolol Fumarate	104344-23-2		For Antihypertensive (pharma)
140	Bazedoxifene	**198481-32-2**		For Cancer (pharma)
141	Canagliflozin	842133-18-0		For Diabetes (pharma)
142	Candesartan Cilexetil	145040-37-5		For Angiotensin (pharma)
143	Celecoxib	169590-42-5		For Non-Steroidal &Anti-inflammatory (pharma)
144	Clopidogrel sulphate	120202-66-6		For Antiplatelet (pharma)
145	Dabigatran	211915-06-9		For Anticoagulant (pharma)
146	Dapagliflozin	461432-26-8		For Glycemia (pharma)
147	Darifenacin	133099-04-4		For Overative Bladder (pharma)
148	Donepezil	120014-06-4		For Dementia (pharma)
149	Dronedarone	141626-36-0		For atrial fibrillation (pharma)
150	Desvenlafaxine Succinate monohydrate	386750-22-7		For Depressive Disorder (pharma)
151	Duloxetine Hydrochloride	136434-34-9		For Depression &Anxiety (pharma)
152	Erlotinib	183321-74-6		For Cancer (pharma)
153	Etoricoxib	202409-33-4		For Pain &Swelling (pharma)
154	Etodolac	41340-25-4		For Arthritis (pharma)
155	Escitalopram oxalate	219861-08-2		For Depression &Anxiety (pharma)
156	Febuxostat	144060-53-7		For Arthritis (pharma)
157	Felodipine	72509-76-3		For Hypertension (pharma)
158	Fluconazole	86386-73-4		For Antifungal

				(pharma)
159	**Fenofibrate**	49562-28-9		For High Good And loco cholesterol (pharma)
160	Granisetron HCl	107007-99-8		For Cancer (pharma)
161	Gefitinib	184475-35-2		For Lung Cancer (Pharma)
162	Gabapentin	60142-96-3		For Neurontin (Pharma)
163	ILoperidone	133454-47-4		For Proton Pump (Pharma)
164	Irbesartan	138402-11-6		For Hypertension (Pharma)
165	Itopride Hydrochloride	122892-31-3		For Dyspepsia (Pharma)
166	Lapatinib	388082-78-8		For Cancer (Pharma)
167	Lurasidone Hydrochloride & its intermediate	367514-88-3		For Schizophrenia (Pharma)
168	Losartan Potassium	124750-99-8		For Hypertension (Pharma)
169	Mem Chloride	3970-21-6		For API (Antibiotics)
170	Minodronic Acid	155648-60-5		For osteoporosis (Pharma)
171	Moclobemide	71320-77-9		For Depression &Anxiety (Pharma)
172	Modafinil	68693-11-8		For Sleep apnea& narcolepsy (Pharma)
173	Metoprolol Tartrate	37350-58-6		For Hypertension (Pharma)
174	Nisoldipine	63675-72-9		For Hypertension (Pharma)
175	Omeprazole	73590-58-6		For Antacids and Peptic Ulcer(Pharma)
176	O Des Venlafexine	93413-62-8		For Major Depression Disorder (Pharma)
177	Olmesartan	144689-63-4		For Hypertension

				(Pharma)
178	Pitavastatin	147511-69-1		For High & Low Cholesterol (Pharma)
179	Piperonylic Acid	94-53-1		For Piperonal (API)
180	PramipexoleDihydrochloride Monohydrate	191217-81-9		For Renal Liver (Pharma)
181	Prasugrel Hydrochloride	389574-19-0		For Heart Disease (Pharma)
182	Paroxetine hcl	61869-08-7		For Depression (Pharma)
183	Pinaverium Bromide	53251-94-8		For Irritable Bowel Syndromes (Pharma)
184	Pioglitazone HCl	112529-15-4		For Diabetes (Pharma)
185	QuetiapineFumarate	111974-72-2		For Schizophrenia (Pharma)
186	Rabeprazole Sodium	117976-90-6		For Gastroesophageal Reflux Disease (Pharma)
187	Rivaroxaban	117976-90-6		For Atrial fibrillation (Pharma)
188	Ropinirole Hydrochloride	91374-20-8		For Restless Legs Syndrome (Pharma)
189	Resperidone	106266-06-2		For Schizophrenia (Pharma)
190	Sertraline Hydrochloride	79559-97-0		For Depression (Pharma)
191	Solifenacin Succinate	242478-38-2		For Urination &incontinentia (Pharma)
192	Tadalafil	171596-29-5		For Erectile DysFunction (Pharma)
193	Ticagrelor	274693-27-5		For Angioplasty (Pharma)

194	Topiramate	97240-79-4		For Seizures (Pharma)
195	Vilazodone Hydrochloride	163521-08-2		For (Pharma)
196	Valsartan	137862-53-4		For Hypertension (Pharma)
197	Vortioxetine Hydrbromide	960203-27-4		For Depression (Pharma)
198	Vemurafinib	1029872-54-5		For Melonoma (Pharma)
199	Warfarin Sodiumclatharte	67430-45-9		For AntiCoagulant (Pharma)
200	Ziprasidone HCl	138982-67-9		For Schizophrenia (Pharma)
201	Vildagliptin	274901-16-5		For Diabetes (Pharma)
202	Memantine HCL	41100-52-1		For Alzeheimer (Pharma)
203	Linezolid	165800-03-3		For Infections (Pharma)
204	Ramelteon	96597-26-9		For Insomnia (Pharma)
205	Timolol maleate	26839-75-8		For Antibiotic (Pharma)
206	Salmeterol Xinafoate	94749-08-3		For Adrenergic (Pharma)
207	Ezetimibe	**163222-33-1**		For Primary Hypercholesterolemia (Pharma)
208	Ritonavir	**155213-67-5**		For HIV Protease Inhibitors (Pharma)
209	Glimepiride	93479-97-1		For Diabetes (Pharma)
GROUP- 6R&D PRODUCTS				
	Various New Product developed by In-House R & D	--	1	--

	TOTAL PRODUCTION CAPACITY	--	231	

- 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 18/03/2020.
- Salient features of the project are as under:

Sr. no.	Particulars	Details
A		
A	**Total cost of Proposed Project (Rs. in Crores):**	20 Crores
	Details of EMP	As given below

COMPONENT	CAPITAL COST OF EMP	RECURRING COST OF EMP (per Month)
TOTAL COST	610 lacs	1350.33 Lacs

Bifurcation of EMP Cost

Sr. No	Unit	Installed Capacity (KLD)	Capital Cost (Rs. in Lacs)	Operating Cost (Lacs /Month)	Maintenance Cost (Lacs /Month)	Total Recurring Cost (Lacs /Month)
1	Air pollution control	--	40	1.25	0.42	1.66
2	Water pollution control	50 KLD ETP	150	30.04	31.27	61.31
3	Noise pollution monitoring	-	1	0.09	0.07	0.16
4	Solid and hazardous waste management	-	20	19.36	9.53	28.89
5	Environment monitoring and management	-	300	12.99	3.67	16.66
6	Green belt	-	10	0.46	0.20	0.66
7	Occupational	-	9	0.46	0.20	0.66

	health (OHC)					
8	Water pollution control		80	1.48	1.03	2.5

	Details of CER as per OM dated 01/05/2018	As given below
The unit has planned to spend 2% of the total cost of the project over a period of five years towards CER activity. So, as per the project cost Rs. 40 Lakhs used in the CER activities.		
B	Total Plot area (sq. meter)	8984.55 Sq. m.
	Green belt area (sq. meter)	2968.32
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.	Water permission letter from GIDC Dahej is attached as Annexure-VIII in EIA Report.
Ii	Water consumption (KLD)	

Category	Quantity KLD	Remarks
(D) Domestic	5	Unit will use fresh water for it.
(E) Gardening	11	Unit will use fresh water for it.
(F) Industrial		
Process	75	

Washing	10	
Boiler	15	
Cooling	42	
Others	15	Process scrubber (3)+ Boiler scrubber (12) Boiler Blow Down water will be used for this purpose..
Industrial Total	157	
Total (A + B + C)	173	Fresh water requirement:- 161 KLD + Recycled water requirement:- 12 KLD

1) Total water requirement for the project: 173 KLD
2) Quantity to be recycled: 12 KLD
3) Total fresh water requirement: 161 KLD

(Total water requirement = Fresh water + Recycled water)

iii Waste water generation (KLD)

Category	Waste water KLD	Remarks
(C) Domestic	5	Unit will treat domestic effluent along with industrial effluent.
(D) Industrial		

	Process	80	Unit will bifurcate industrial effluent into 2 steams based on characteristics. STEAM 1:- High Ammonical Nitrogen Steam + High COD Steam (32 KLD) STEAM 2:- LOW COD steam (48 KLD) - treated in unit's own effluent treatment plant.
	Washing	10	10 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	6	6 KLD Cooling Tower Blow Down water will be subjected to unit's own effluent treatment plant.
	Others	3	3 KLD washing water will be subjected to unit's own effluent treatment plant.
	Total Industrial waste water	111	Total 111 KLD effluent will be generated from Industrial activity. STREAM 1:- High Ammonical Nitrogen Steam + HIGH COD steam – send to incinerator of M/s. BEIL after neutralization. (32 KLD) STREAM 2:- LOW COD steam (67 KLD) - treated in unit's own effluent treatment plant. Unit will use 12 KLD Boiler Blow Down water within the premises.

	Total [A + B]	116	Total 116 KLD effluent will be generated from unit. Total 72 KLD effluent will be treated in unit's own effluent treatment plant along with (5 KLD Domestic effluent + 67 KLD Industrial Effluent). 1 KLD ETP effluent chemical will also be added with treatment. Total 3 KLD water will be going along with ETP Sludge. Hence total 70 KLD effluent will be discharged to U/G drainage of GIDC Dahej.

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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.
  High COD+ High TDS+ Ammonical nitrogen steam will be subjected to CMEE of M/s. BEIL.

Treatment scheme including segregation at source.

- High COD, High TDS and High Ammonical nitrogen stream will be segregated at the source and sent to CMEE of M/s. BEIL after neutralization and LOW COD and LOW Ammonical nitrogen steam will be treated in units own effluent treatment plant and subjected to sea through GIDC pipeline.

ETP DESCRIPTION:

Total 2 types of streams will be generated during the manufacturing process.

1) HIGH COD STREAM- (> 10,000 mg/l) + HIGH AMMONICAL NITROGEN STREAM- (> 100 mg/l)

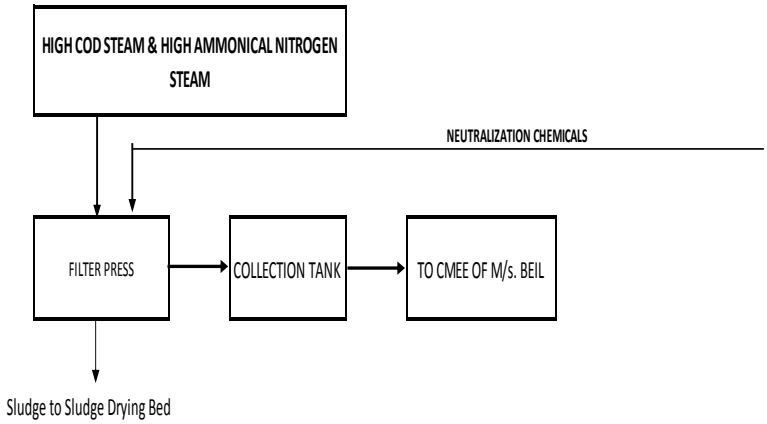
2) LOW COD AND LOW TDS STREAM (FROM PROCESS + WASHING+ BOILER BLOW DOWN + COOLING TOWER BLOW DOWN + DOMESTIC + SCRUBBER)

MANAGEMENT OF STREAMS

1) STREAM NO:-1:- HIGH COD STREAM

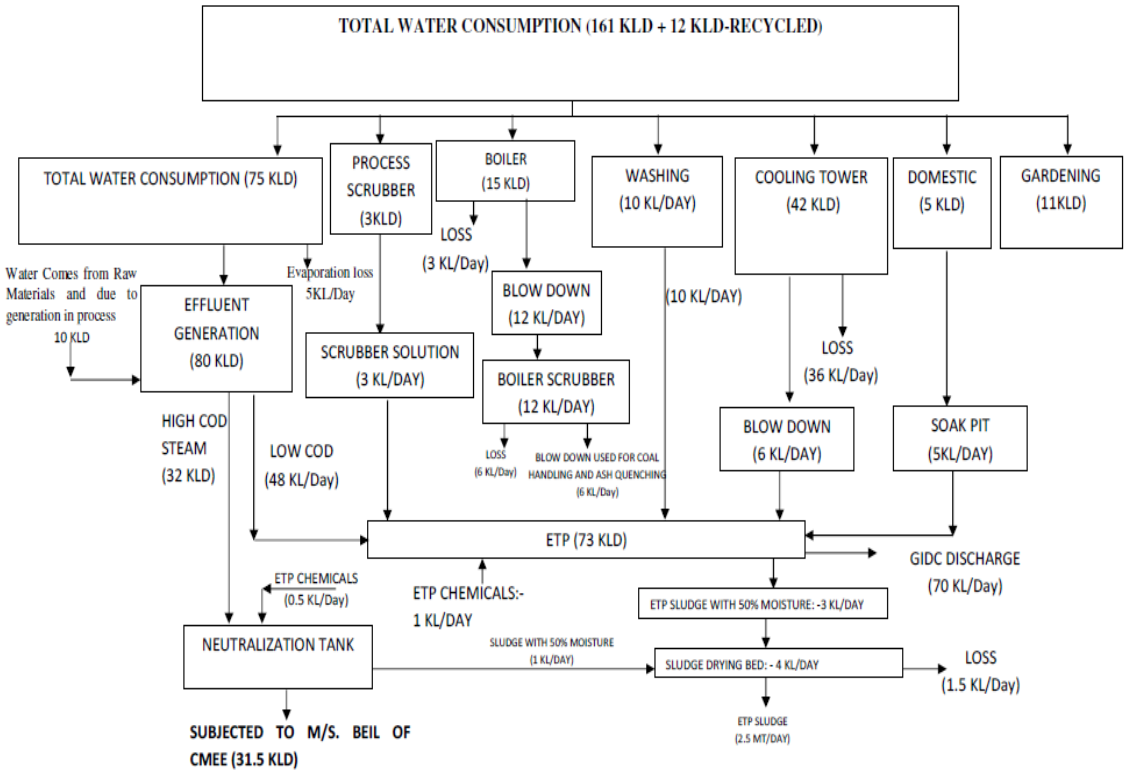
Unit will segregate HIGH COD stream-stream which is having more than 10,000 mg/l COD-& HIGH Ammonical Nitrogen Stream- Stream more than 100 mg/l-from the source. It will be directly subjected to CMEE of M/s. BEIL after neutralization.

2) STREAM NO:-3:- LOW COD AND LOW TDS STREAM

		This stream will be treated in conventional effluent treatment plant along with Cooling Tower Blow Down, Washing, and Scrubber Solution and with Domestic effluent. Unit will develop primary, secondary and tertiary treatment to achieve the stipulated norms of GPCB. DIAGRAM OF HIGH COD, HIGH TDS & HIGH AMMONICAL EFFLUENT TREATMENT PLANT 

	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): ➢ Not applicable.	
V	Mode of Disposal & Final meeting point	
	Domestic:	GIDC Discharge
	Industrial:	GIDC Discharge
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. Name of CF ➢ M/s. BEIL, CMEE	
	Membership of Common facility (CF) (For waste water treatment)	
	TSDF BEIL certificate is attached as Annexure-XII in EIA Report.	

vii	Simplified water balance diagram with reuse / recycle of waste water



viii	Reuse/Recycle details (KLD)

Total reuse 12 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.
12 KLD Boiler blow down	Water scrubber of boiler	pH: 8-9.5 COD: 50-70 mg/l TDS: 2500-3000mg/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	Type of Fuel	Quantity of Fuel	Type of emissions i.e.	Air Pollution Control

	With Capacity	(meter)		MT/Day	Air Pollutants	Measures (APCM)
1	Boiler-1 (2 MT/Hr.)	30	Natural Gas / Furnace Oil	2800 m^3/Day OR 2000 lit/Day	PM SO_2 Nox	Adequate Height.
2	Boiler-2 (5 MT/Hr.)	30	Coal/Briquette	13 MT/Day OR 15 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	2000 m3/Day OR 1500 Lit/Day	PM SO_2 Nox	Adequate Height
4	D.G.Set (750 KVA) (2 Nos)	12	Diesel	50 Lit/Hr	PM SO_2 Nox	Adequate Height

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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 attached to header line.	HCl SO_2 Br_2 HBr	15	Water Scrubber followed by Alkali Scrubber

2	Process Vessels attached to header line.	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	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	35.3	920	Collection, Storage, Transportation, Disposal at TSDF site authorized by the GPCB.
2.	Process Salt	From manufacturing Process Product no:- 10,11,17,18,27,58,75,89,91,93,95,98, 121, 122,123,124,125,154,168,174,175,179,195,196,202,204	35.3	720	
3	Used Oil	From lubricate of plant and machineries	5.1	6	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	Packing of raw materials.	33.1	60	Disposal, by send it to authorized decontamination facility/ recycled or reuse or send back to supplier.		
		5	Spent Catalyst	From manufacturing Process Product no:- 14,33,54,81,99,102, 106,119,130,140,146,182,198,206,207	28.2	30	Collection, Storage, and send to authorized units for regeneration who are having rule-9 permission.		
		6	Spent Carbon	From manufacturing Process Product no:- 132,133,148,164,168,171180,192	28.3	36	Collection, Storage, and send for co-processing or for incinerator.		
		7	Distillation Residue	From manufacturing Process Product no:- 56,60,126,130,132,133,140,141,145,146,147,155,159,162,168,172,178,191	26.3	360			
		8	Formic acid solution (50 to 60% soln);	From manufacturing Process Product no:- 5,27	26.3	1765	Collection, Storage, And sell to those units who are having permission of RULE-9 or who have applied under RULE-9.		
		9	Zinc chloride Solution (20 to 22%	From manufacturing Process Product no:- 5,76,83,86,117	26.3	3876	Collection, Storage, And sell to those units who are having permission		

			soln);				of RULE-9 or who have applied under RULE-9.		
		10	Sodium Bromide Solution (10 to 12% soln);	From manufacturing Process Product no:- 4,56,60,69,71,206	26.3	6180	Collection, Storage, And sell to those units who are having permission of RULE-9 or who have applied under RULE-9.		
		11	Aluminium Chloride Solution	From manufacturing Process Product no:- 6,16,43,59,62,65,78,108,111,156,	26.3	3710	Collection, Storage, And sell to those units who are having permission of RULE-9 or who have applied under RULE-9.		
		12	Acetic Acid (35% to 40% solu)	From manufacturing Process Product no:- 35	26.3	972	Collection, Storage, And sell to those units who are having permission of RULE-9 or who have applied under RULE-9.		
		13	Scrubber Solution	From Scrubber	--	1080	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 to incinerator of M/s. BEIL.			
		15	Date Expired Products	--	28.5	2				
		16	Spent Solvents	Product no:- 9,15,30,60,139,	28.6	560	Collection, Storage and send for co-processing or incinerator of M/s. BEIL. Or sale to sell to those units who are having permission of RULE-9 or who have applied under RULE-9.			
		17	Sodium sulfate salt	Product no:- 2,36.,40, 43, 44,63,69,72,	35.3	960	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 Solvents	From all the process	--	8400	It will be reused by the unit.

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ii	Membership details of TSDF, CHWIF etc. (For HW management)	Membership certificate from BEIL is attached as Annexure-XII, and LOI are attached as Annexure-XVI, XVII, XVIII, XIX& XX.
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)	

Name of Product	**Name of Solvent**	**Boiling Point**	**Vapour Pressure**	**Total Quantity**	**Quantity Fresh**	**Quantity recovered**	**% Recovery**
				(MT/MT)	(MT/MT)	(MT/MT)	
2,3,4,5–bis-O-[1-Methyl Ethyl idene]B-D-Fructopyranose	Acetone	56	30.6 kPa (25 °C)	2	0.1	1.9	95
	Toluene	111	2.8 kPa (20 °C)	0.6	0.04	0.56	94
4-Methyl Catechol Di-acetic acid Dimethyl ester	Methanol	54	13.02 kPa (at 20 °C)	5	0.15	4.85	97
	Toluene	111	2.8 kPa (20 °C)	2	0.06	1.94	97
4-Methyl Catechol	N-butanol	116	6 mmHg (20 °C)	1.4	0.05	1.35	98
Methylene dioxy phenol	Methelyen dichloride	39.8	2 kPa (−40 °C)	1.6	0.1	1.5	94

	Toluene	111	2.8 kPa (20 °C)	3.3	0.08	3.22	97.5
	Methanol	54	13.02 kPa (at 20 °C)	0.6	0.02	0.58	98
4-Chloro-4'Hydroxy Benzophenone	1,2 Di Chloro benzene	180.19 °C	1 mmHg (20° C)	1.6	0.06	1.54	96.2
2-Bromo Veratryl Bromide	Methelyen dichloride	39.8	2 kPa (−40 °C)	1	0.5	0.95	95
	Toluene	111	2.8 kPa (20 °C)	1	0.08	0.92	92
7-Ethyl tryptophol	Toluene	111	2.8 kPa (20 °C)	1	0.1	0.9	90
2 -Bromo 2',5'-dimethoxyacetophenone	Methelene chloride	39.8	2 kPa (−40 °C)	1.2	0.1	1.1	92
4-Methoxy Benzaldehyde Dimethyl Acetal	Methanol	54	13.02 kPa (at 20 °C)	1.4	0.07	1.33	95
Benzaldehyde dimethyl Acetal	Methanol	54	13.02 kPa (at 20 °C)	1.4	0.07	1.33	95
4-Hydroxy Benzyl Alcohol	Methanol	54	13.02 kPa (at 20 °C)	2	0.08	1.92	96
O-Benzyl hydroxyl amine Hydrochloride	Methelene dichloride	39.8	2 kPa (−40 °C)	3	0.15	2.85	95
	Toluene	111	2.8 kPa (20 °C)	1.6	0.05	1.55	97
	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95
Alpha –Bromo - 2-Chloro Phenyl Acetic Acid Methyl Ester	Toluene	111	2.8 kPa (20 °C)	4	0.2	3.8	95
	Methanol	54	13.02 kPa (at 20 °C)	1.4	0.1	1.3	93
	Chloro benzene	131 °C	9 mmHg	2	0.1	1.9	95
	Methelene	39.8	2 kPa (−40	1	0.1	0.9	90

	dichloride		°C)				
3-(1-Pleperazinuyl)-1,2 Hydrochloride	Methanol	54	13.02 kPa (at 20 °C)	7	0.1	6.9	97.5
	Toluene	111	2.8 kPa (20 °C)	8	0.5	7.5	94
5-Chloroethyl-6-Chloro-2-Oxindole	Methelene dichloride	39.8	2 kPa (−40 °C)	1.4	0.1	1.3	93
	DIMETHYL SULFOXIDE (DMSO)	189 °C	0.46 mm Hg @ 20 deg C	2	0.1	1.9	95
	Methanol	54	13.02 kPa (at 20 °C)	2	0.05	1.95	97.5
2,4,6 Trimethoxy Benzaldehyde	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95
4-Methoxy-3-nitrobenzylsulfonylacetic acid	Chlorobenzene	131 °C	9 mmHg	3.8	0.12	3.68	97
	Methanol	54	13.02 kPa (at 20 °C)	3	0.3	2.87	96
(1R,2R)-1-2-bis (methane sulfonyloxy methyl) cyclohexane	Methelyen dichloride	39.8	2 kPa (−40 °C)	2	0.2	1.8	90
	Tetrahydrofuran (THF)	66 °C	132 mmHg	1	0.04	0.96	96
4-Isopropyl catechol	Methelyne dichloride	39.8	2 kPa (−40 °C)	2	0.1	1.9	95
	N-Butanol	116	6 mmHg (20 °C)	2.8	0.06	2.74	98
	Copper sulfate	decomposes	--	2	0.1	1.9	95
3-Methoxy Phenol	Toluene	111	2.8 kPa (20 °C)	2	0.1	1.9	95
Veratrol Alcohol	Toluene	111	2.8 kPa (20 °C)	3.76	0.26	3.5	93

	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95
	Methelyen dichloride	39.8	2 kPa (−40 °C)	1	0.1	0.9	90
4-Propyl Catechol	N-Butanol	116	6 mmHg (20 °C)	2.8	0.06	2.74	98
	Methelyen dichloride	39.8	2 kPa (−40 °C)	2	0.1	1.9	95
Dimethyl Acetamide Dimethyl Acetal	Methanol	54	13.02 kPa (at 20 °C)	1	0.02	0.98	98
Tert-butyl(4-bromophenyl)	Dimethyl Formamide (DMF)	152 to 154 °C	516 Pa	1	0.05	0.95	95
Methylcarbamate	Methelyen dichloride	39.8	2 kPa (−40 °C)	3	0.2	2.8	94
4-[(4-Methyl-1-piperazinyl)-methyl]-benzoyl chloride dihydrochloride	Methelyen dichloride	39.8	2 kPa (−40 °C)	1	0.05	0.95	95
	Thionyl chloride	76	4.7 kPa	4	0.1	3.9	97.5
	chloroform	61.15 °C	7.89 kPa (0 °C)	2	0.1	1.9	95
(2-cyclopropyl-4-(4-fluorophenyl)quinolone-3yl)methanol	Methanol	54	13.02 kPa (at 20 °C)	1.2	0.05	1.15	96
	Toluene	111	2.8 kPa (20 °C)	4	0.1	3.9	97.5
	Cyclohaxen	80.74 °C	78 mmHg (20 °C)	1	0.05	0.95	95
(-) Alcohol	Iso propyl alcohol	82.6 °C	44 hPa (20 °C)	2	0.1	1.9	95
	DIMETHYL FORMAMIDE (DMF)	152 to 154 °C	516 Pa	0.4	0.02	0.38	95

3 –Methoxy	EDC	84 °C	65mmHg @29 deg C	2	0.1	1.9	95
Propiophenone	DIMETHYL FORMAMIDE (DMF)	152 to 154 °C	516 Pa	0.6	0.05	0.55	92
	Toluene	111	2.8 kPa (20 °C)	2	0.1	1.9	95
AfatinibDimalate	Methanol	54	13.02 kPa (at 20 °C)	1.29	0.3	1.26	97.67
Arbutin	MDC	39.8	2 kPa (−40 °C)	2	0.1	1.9	95
	Methanol	54	13.02 kPa (at 20 °C)	1.6	0.08	1.52	95
Agomelatine	Methanol	54	13.02 kPa (at 20 °C)	3	0.1	2.9	96.66
Apixaban	Ethyleglycoal	135 °C	4 mmHg (20°C)	2	0.1	1.9	0.95
Aripiprazole	Dimethylformamide	152 to 154 °C	516 Pa	1.7	0.06	1.64	96.47
	Iso Propyl Alcohol	82.6 ° C	44 hPa (20 °C)	3.1	0.14	2.96	95.48
Asenapine	Methanol	54	13.02 kPa (at 20 °C)	2.4	0.1	2.3	95.83
	MDC	39.8	2 kPa (−40 °C)	2.4	0.1	2.3	95.83
	Butanol	116	6 mmHg (20 °C)	2	0.1	1.9	95
	N-Butyl alcohol	117.7 ° C	6 mmHg (20 °C)	1.4	0.1	1.3	92.85
Azilsartan	MDC	39.8	2 kPa (−40 °C)	1.6	0.1	1.5	93.75
	Acetone	56	30.6 kPa (25 °C)	2	0.1	1.9	95
	Ethyl acetate	77.1 ° C	73 mmHg (9.7 kPa) at	2	0.1	1.9	95

			20 °C				
Abacavir Sulfate	Iso Propyl Alcohol	82.6 ° C	44 hPa (20 °C)	6	0.3	5.7	95
	Triethyl ortho formate	146 °C	10 hPa @ 40 °C	4	0.1	3.9	97.5
	Acetone	56	30.6 kPa (25 °C)	0.4	0.02	0.38	95
Atorvastatin Calcium	Cyclohexane	80.74 ° C	78 mmHg (20 °C)	1	0.05	0.95	95
	Ethyle acetate	77.1 ° C	73 mmHg (9.7 kPa) at 20 °C	1	0.05	0.95	95
	Methyl ethyl ketone	79.64 ° C	78 mmHg (20 °C)	1	0.05	0.95	95
	T-butanol	116	6 mmHg (20 °C)	0.5	0.05	0.45	90
	Methanol	54	13.02 kPa (at 20 °C)	1.5	0.09	1.41	94
Bupropion HCl	Iso Propyl Alcohol	82.6 ° C	44 hPa (20 °C)	1	0.05	0.95	95
	Methelene dichlorie	39.8	2 kPa (−40 °C)	2	0.1	1.9	95
	Ethlye acetate	77.1 ° C	73 mmHg (9.7 kPa) at 20 °C	1	0.05	0.95	95
Bazedoxifene	Acetone	56	30.6 kPa (25 °C)	1.8	0.1	1.7	94.44
Canagliflozin	Methanol	54	13.02 kPa (at 20 °C)	2.4	0.1	2.3	95.83
	Ethyle acetate	77.1 ° C	73 mmHg (9.7 kPa) at 20 °C	2.4	0.1	2.3	95.83
	Toluene + Heptane	111	2.8 kPa (20 °C)	2	0.1	1.9	95

Candesartan Cilexetil	Methelene dichloride	39.8	2 kPa (−40 °C)	4.6	0.2	4.4	95.65
	Acetone	56	30.6 kPa (25 °C)	2	0.1	1.9	95
	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95
	Acetonitrile	81.6	9.71 kPa (at 20.0 °C)	2	0.1	1.9	95
Clopidogrel bi sulfate	Methanol	54	13.02 kPa (at 20 °C)	3	0.2	2.8	93.33
Dabigatran	Acetone	56	30.6 kPa (25 °C)	3	0.1	2.9	96.66
Dapagliflozin	Methanol	54	13.02 kPa (at 20 °C)	2.2	0.1	2.1	95.45
Darifenacin	Dimethyl formamide	152 to 154 °C	516 Pa	2	0.1	1.9	95
	Acetone	56	30.6 kPa (25 °C)	2	0.1	1.9	96
	Methelene dichloride	39.8	2 kPa (−40 °C)	2	0.2	1.8	90
Donepezil	Methelye dichloride	39.8	2 kPa (−40 °C)	2.2	0.1	2.1	95.45
	Methanol	54	13.02 kPa (at 20 °C)	2.2	0.1	2.1	95.45
	Di isopropyl ether	68.5 °C	119 mmHg (20°C)	2	0.1	1.9	95
Dronedarone	Methelye dichloride	39.8	2 kPa (−40 °C)	4.2	0.1	4.1	98
	Ethyl acetate	77.1 ° C	73 mmHg (9.7 kPa) at 20 °C	4.2	0.1	4.1	98
Desvenlafaxine Succinate monohydrate	Acetonitrile	81.6	9.71 kPa (at 20.0 °C)	2	0.1	1.9	95
	Thiophenol	169	1 mmHg	0.306	0.026	0.28	91

		°C					
	Dimethyl sulfoxide (DMSO)	189 °C	0.46 mm Hg @ 20 deg C	1	0.05	0.95	95
Duloxetine Hydrochloride	Methanol	54	13.02 kPa (at 20 °C)	3	0.15	2.85	95
	Dimethyl Sulfoxide (DMSO)	189 °C	0.46 mm Hg @ 20 deg C	1	0.05	0.95	95
	Diisopropyl e amine	68.5 °C	119 mmHg (20°C)	1	0.05	0.95	95
	Acetone	56	30.6 kPa (25 °C)	1	0.05	0.95	95
Erlotinib	Methelyen e dichloride	39.8	2 kPa (−40 °C)	1.6	0.1	1.5	94
	Methanol	54	13.02 kPa (at 20 °C)	2.95	0.35	2.6	90
Etoricoxib	Tetrahydro furan	66 °C	132 mmHg	1.8	0.1	1.7	94.44
	Toluen	111	2.8 kPa (20 °C)	2.2	0.1	2.1	95.45
	IPA-Hexane	82.6 ° C	44 hPa (20 °C)	2	0.1	1.9	95
Etodolac	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95
Escitalopram oxalate	Iso propyl alcohol	82.6 ° C	44 hPa (20 °C)	2	0.1	1.9	95
	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95
	MDC	39.8	2 kPa (−40 °C)	1.5	0.1	1.4	93.33
	Toluene	111	2.8 kPa (20 °C)	2	0.1	1.9	95
Febuxostate	Methanol	54	13.02 kPa (at 20 °C)	2.4	0.1	2.3	95.83

	Acetone	56	30.6 kPa (25 °C)	1	0.05	0.95	95
Felodipine	Cyclo hexane	80.74 ° C	78 mmHg (20 °C)	1	0.05	0.95	95
	Isopropyl alcohol	82.6 ° C	44 hPa (20 °C)	1	0.05	0.95	95
Fluconazol	Ethyle acetate	77.1 ° C	73 mmHg (9.7 kPa) at 20 °C	2	0.1	1.9	95
	Methanol	54	13.02 kPa (at 20 °C)	3	0.1	2.9	96
Granisetron HCl	MDC	39.8	2 kPa (−40 °C)	2	0.1	1.9	95
Gefitinib	Iso propyl alcohol	82.6 ° C	44 hPa (20 °C)	1.6	0.1	1.5	93.75
	N-Propanol	97 to 98 °C	1.99 kPa (at 20 °C)	2	0.1	1.9	95
Gabapentin	Iso propyl alcohol	82.6 ° C	44 hPa (20 °C)	1	0.05	0.95	95
	Acetone	56	30.6 kPa (25 °C)	1	0.1	0.9	90
	Methanol	54	13.02 kPa (at 20 °C)	1	0.05	0.95	95
Irbesartan	Iso propyl alcohol	82.6 ° C	44 hPa (20 °C)	2	0.1	1.9	95
	Methyl-T-Butyl ether	55.2 ° C	268 mbar @ 20 °C	2	0.1	1.9	95
	Xylene	138.5 ° C	6.7 - 8.7 hPa	2	0.1	1.9	95
Itopride Hydrochloride	Toluene	111	2.8 kPa (20 °C)	2	0.05	1.95	97.5
	Acetone	56	30.6 kPa (25 °C)	2	0.05	1.95	97.5
Lapatinib	Tetrahydro furan	66 °C	132 mmHg	2	0.1	1.9	95
Lurasidone	IPA	82.6 °	44 hPa (20	3	0.1	2.9	96.6

Hydrochloride		C	°C)				6
	Acetone	56	30.6 kPa (25 °C)	0.4	0.04	0.36	90
	Toluene	111	2.8 kPa (20 °C)	2	0.1	1.9	95
	N-Xylene	138.5 ° C	6.7 - 8.7 hPa	0.4	0.04	0.36	90
Losartan Potassium	Methanol	54	13.02 kPa (at 20 °C)	2.4	0.1	2.3	96
Mem Chloride	1,3,5 Trioxane	115 °C	7.5 mbar @ 20 °C	1	0.1	0.9	90
Moclobemide	Toluene	111	2.8 kPa (20 °C)	2	0.1	1.9	95
	IPA	82.6 ° C	44 hPa (20 °C)	2	0.1	1.9	95
Modafinil	Acetic acid	117.9	2.09 kPa at 25°C	2	0.1	1.9	95
Metoprolol Tartrate	Acetone	56	30.6 kPa (25 °C)	1	0.1	0.9	90
	Toluene	111	2.8 kPa (20 °C)	2	0.05	1.95	97.5
Nisoldipine	Acetone	56	30.6 kPa (25 °C)	1	0.05	0.95	95
	Toluene	111	2.8 kPa (20 °C)	1.6	0.1	1.5	93.75
Omeprazole	Methanol	54	13.02 kPa (at 20 °C)	1	0.05	0.95	95
	Acetone	56	30.6 kPa (25 °C)	1	0.05	0.95	95
O Des Venlafexine	DIMETHYL FORMAMIDE (DMF)	152 to 154 °C	516 Pa	1.3	0.1	1.2	92.3
	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95

	Toluene	111	2.8 kPa (20 °C)	2.2	0.1	2.1	95.45
Olmesartan	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95
	Acetone	56	30.6 kPa (25 °C)	2	0.1	1.9	95
Pitavastatin	Methanol	54	13.02 kPa (at 20 °C)	1	0.05	0.95	95
	acetone	56	30.6 kPa (25 °C)	1	0.05	0.95	95
PramipexoleDihydrochloride Monohydrate	Methanol	54	13.02 kPa (at 20 °C)	4.9	0.2	4.7	95.91
Prasugrel Hydrochloride	Ethyl methyl ketone	80 °C	105 mbar @ 20 °C	2	0.1	1.9	95
	IPA	82.6 ° C	44 hPa (20 °C)	2	0.1	1.9	95
Paroxetine	Dimethyl Formamide (DMF)	152 to 154 °C	516 Pa	1	0.05	0.95	95
	Toluene	111	2.8 kPa (20 °C)	3	0.1	2.9	96.66
Pinaverium Bromide	IPA	82.6 ° C	44 hPa (20 °C)	2	0.1	1.9	95
	Acetone	56	30.6 kPa (25 °C)	2	0.1	1.9	95
Pioglitazone HCl	Toluene	111	2.8 kPa (20 °C)	3	0.2	2.8	93.33
	Dimethyl Sulfoxide (DMSO)	189 °C	0.46 mm Hg @ 20 deg C	0.5	0.04	0.46	92
	Ethanol	78 °C	59.3 mm Hg @ 20 deg C	1	0.05	0.95	95
QuetiapineFumarate	Toluene	111	2.8 kPa (20 °C)	3	0.2	2.8	93.33

	Ethanol	78 °C	59.3 mm Hg @ 20 deg C	2	0.1	1.9	95
	Dimethyl Sulfoxide (DMSO)	189 °C	0.46 mm Hg @ 20 deg C	0.5	0.04	0.46	92
Rabeprazole Sodium	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95
	Toluene	111	2.8 kPa (20 °C)	2	0.1	1.9	95
Rivaroxaban	Acetic acid	117.9	2.09 kPa at 25°C	2	0.1	1.9	95
Ropinirole Hydrochloride	Ethyl Acetate	77.1 ° C	73 mmHg (9.7 kPa) at 20 °C	2	0.1	1.9	95
	Methanol	54	13.02 kPa (at 20 °C)	2.5	0.1	2.4	96
	MDC	39.8	2 kPa (−40 °C)	2	0.1	1.9	95
Resperidone	Dimethyl Formamid e (DMF)	152 to 154 °C	516 Pa	2	0.05	1.95	97.5
Sertraline Hydrochloride	Ethyl Acetate	77.1 ° C	73 mmHg (9.7 kPa) at 20 °C	1	0.05	0.95	95
	Methanol	54	13.02 kPa (at 20 °C)	1	0.05	0.95	95
	Acetonitrile	81.6	9.71 kPa (at 20.0 °C)	2	0.1	1.9	95
1-[3-(benzyloxy)	Dimethyl Formamid e (DMF)	152 to 154 °C	516 Pa	2	0.1	1.9	95
propyl]-5-formaylindoline-7-carbonitrite	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95
Solifenacin Succinate	Dimethyl Sulfoxide	189 °C	0.46 mm Hg @ 20 deg C	2	0.1	1.9	95

	(DMSO)						
Dimethylformamide di-tert-butyl Acetal	t-butanol	116	6 mmHg (20 °C)	3	0.1	2.9	96.66
Tadalafil	Methanol	54	13.02 kPa (at 20 °C)	2.4	0.1	2.3	95.83
	IPA	82.6 °C	44 hPa (20 °C)	2	0.06	1.94	97
Ticagrelor	Methanol	54	13.02 kPa (at 20 °C)	2	0.1	1.9	95
	Cyclohexane	80.74 °C	78 mmHg (20 °C)	2	0.1	1.9	95
Topiramate	O-Xylene	144 °C	6.62 mm Hg at 25°C	2	0.1	1.9	95
	Tetrahydrofuran (THF)	66 °C	132 mmHg	3	0.1	2.9	96.66
	N-Hexane	68.5 to 69.1 °C	17.60 kPa (at 20.0 °C)	6	0.3	5.7	95
Valsartan	Ethyl Acetate	77.1 °C	73 mmHg (9.7 kPa) at 20 °C	2.4	0.1	2.3	95.83
	Di isopropyl ether	68.5 °C	119 mmHg (20°C)	2	0.1	1.9	95
Vortioxetine Hydrbromide	Tetrahydrofuran (THF)	66 °C	132 mmHg	2	0.1	1.9	95
Vemurafinib	Acetonitrile	81.6	9.71 kPa (at 20.0 °C)	2	0.1	1.9	95
Vemurafinib	Acetonitrile	81.6	9.71 kPa (at 20.0 °C)	2	0.1	1.9	95
Ziprasidone HCl	IPA	82.6 °C	44 hPa (20 °C)	1	0.05	0.95	90

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ii VOC emission sources and its mitigation measures

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Sr. No.	Source	Probable Pollutant Emission	Control Measures/ APCM
1	Flange joints of pipeline, pump & motors	Air pollutant (VOC)	• Routine & periodic inspection to check leakage • Preventive maintenance, follow SOP for maintenance • Pumps & motors mechanical seal type • LDAR program is followed.
2	Liquid raw material transferring to reactor	Air pollutant (VOC, Acid fumes)	• Feeding of liquid raw material is carried out by closed pipeline and mechanical seal pump.
3	Loading /unloading at storage area	Air pollutant (VOC)	• Unloading through pipeline to tank in a close system.

H ➢ Details regarding storage of Hazardous chemicals

Storage details	Name of major Hazardous chemicals	Remarks (Storage Capacity)
Storage tanks	- - -	- - -
Drum/Barrel storage	Hydrogen Gas Cylinder	7 M^3 Cylinder
	Trimethyl amine	50 Kg. Cylinder
	Bromine	18 Kg Glass Bottle
	Ammonia Solution.	2 MT
	Sulphric acid	2 MT
	Acetone	2 MT
	Toluene	2 MT
	Dimethyl formamide	2 MT
	Dimethyl sulphate (DMS)	2 MT
	Sodium Methoxide 25% solution (SMO)	2 MT
	Hydrochloric acid (HCL)	2 MT
	Methanol	2 MT
	Methyl Phenol	2 MT
	Hydro Bromic Acid(HBR)	2 MT
	Hydrogen Peroxide	2 MT

	Butanol	2 MT
	Methylene dichloride (MDC)	2 MT
	Zinc Chloride	2 MT
	Acetic Anhydride	2 MT
	Formic Acid	2 MT
	Ethyl Acetate	2 MT
	Iso Propyl Alcohol	2 MT
	Tri Ethyl Amine	2 MT
	Acetic Acid	2 MT
	Cyclohexane	2 Mt
	Benzaldehyde	2 MT
	Nitric Acid	2 MT
	Thionyl Chloride	2 MT
	Phenol	2 MT
	Phosphoric Acid	2 MT
	Acetonitrile	2 MT
	Cyclohexane	2 MT
	Xylene	2 MT

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

- During the meeting dated 18/03/2020, technical presentation made 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 March 2019 to May 2019. Ambient Air Quality monitoring was carried out for PM2.5, PM10, SO2, NO2, NH3, HCl, Br2, HBr&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 ISCST. 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 proposal is new in GIDC Dahej. Source of water is GIDC. PP mentioned that high COD effluent generated from process will be treated in in-house neutralization tank and treated effluent will be sent to CMEE of BEIL, Dahej for final treatment and disposal however Low COD effluent generated from

process will be treated in in-house ETP consisting of Primary, Secondary & Tertiary treatment along with scrubber solution, boiler blow down, washing, cooling tower blow down and domestic sewage and treated effluent and sewage will be disposed into deep sea via GIDC pipeline. Committee asked PP to clarify about disposal of Hazardous Waste of the Category Class C inorganic Acid into ETP and further into deep sea. PP could not reply satisfactorily for the same. PP has proposed two steam boiler and one TFH. Fuel used will be Natural Gas/Coal/Briquette. Committee noted PP has not addressed Process gas emission properly. Committee noted PP has not addressed Hazardous Waste as per HWR – 2016.

- ***After detailed discussion, Committee unanimously decided to consider the proposal only after submission of the following documents.***
    1. Membership Certificate from Common Facility (mentioning total capacity, consented quantity, occupied capacity and spare capacity and norms of acceptance of effluent from member units) in-line with the direction given by GPCB vide Letter No. GPCB/P-1/8-G (5)/550706 dated 08/01/2020.
    2. Clarification as to why Hazardous Waste of Class C Inorganic Acid along with SBS Solution, HBr solution, Sodium Bromide solution and Ammonium Sulfate Solution is taken into ETP instead of reuse/recycle or selling under rule – 9 as a valuable material and finally disposing into deep sea via GIDC pipeline which is having trace contaminants of API.
    3. Revised Water Balance Diagram along with its Characteristic with Proper stream segregation.
    4. Process gas emission Matrix along with its adequate APCM.
    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. Undertaking regarding not using FO as Fuel as per GPCB Notification dated 12th December, 2019.
    7. Hazardous Waste Matrix as per HWR – 2016 along with its proper source of generation, treatment and disposal mechanism.
    8. Revised Need based CER as per MoEF&CC's OM dated 01/05/2018 along with EMP with Fixed Capital Cost and Recurring Cost.

3	SIA/GJ/IND2/29454/2018	**M/s. Dishman Carbogen Amcis Limited** Plot No.Z/111/C & Z/111/D Dahej SEZ-II, Ta: Vagra, Dist: Bharuch – 392130.	EC – Reconsideration

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/29454/2018 on dated 05/02/2020 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 25/03/2019.

- Project proponent has submitted EIA Report prepared by Excel Enviro Tech, Ahmedabad based on the TOR issued by SEIAA.
- This is new unit proposes for manufacturing of synthetic organic plant tabulated as below:

Format

- 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 05/03/2020.
- Salient features of the project including water, air and hazardous waste management as below:

Format

- During the meeting dated 05/03/2020, technical presentation made 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 March to May 2019. Ambient Air Quality monitoring was carried out for PM2.5, PM10, SO2, NOx, CO & TVOC 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. 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 PP has proposed product profile for R & D activity for 200 MT/Annum which is on very higher side and asked PP to clarify the same on which PP replied that they will reduce the R & D production to 1 MT/Month or 12 MT/Annum. Committee asked PP to submit revised product profile for the same with the decrease in production along with its subsequent details. Committee noted that PP has not addressed water balance diagram properly along with stream segregation. Committee further noted that characteristic shown for decrease in pollution concentration does not have authentic data source and no were proper technical support is shown for the reduction in pollution concentration stream wise for Low and High COD stream. Committee asked PP to justify the data source from where it has been taken to which PP could not reply satisfactorily. Committee further noted that PP has not properly address the ToR relating to Best Available Technology (BAT) as to how the Air Pollution, Water Pollution and Hazardous Waste will be reduce by using the best available technology and asked PP to address the same in Tabular Form. Committee further noted that PP has not properly address the ToR pertaining to Need based CER and EMP along with Fixed Capital Cost and Recurring Cost and asked them to address the same properly with proper justification. PP mentioned they have proposed two steam boiler and one incinerator. Fuel used will be Briquettes/LDO. Committee noted that PP has proposed FO as fuel in the incinerator with LDO and asked

PP to drop FO as per the Notification Published by GPCB dated 12th December, 2019. Committee noted PP has not address LDAR program satisfactorily and asked to submit the same with proper calculation of loss and mitigation measures to control the same. Committee noted that PP has not address the Hazardous Matrix properly along with its disposal and asked to address the same in-line with the exact source of generation/activity and its final disposal as per HWR – 2016.

- **After detailed discussion, it was decided to defer the proposal and call the project proponent for presentation only after submission of the following details.**
- Revised Product Profile with decrease in Production from 200 MT/Annum to 12 MT/Annum.
- Technical Justification as to why no any water consumption and waste water generation is calculated for R & D activity and what will be the final disposal mechanism of waste water/hazardous waste if any batch of R & D activity fails.
- Revised Water Balance Diagram with Proper Stream Segregation and Characteristic for Stage Wise Reduction along with Authentic Data Source for Input of Data along with Decrease in Pollution Potential.
- Readdress ToR Pertaining to Best Available Technology (BAT) as to how the Air Pollution, Water Pollution and Hazardous Waste will be reducing by using the Best Available Technology.
- Revised Hazardous Matrix along with its sound management (disposal) in-line with the exact source of generation.
- Undertaking for not using FO as Fuel in Incinerator.
- Leak Detection and Repairing Programme (LDAR) for all the solvents/volatile organic chemicals proposed with detailed chemical properties including vapor pressure. LDAR with all mitigation measures shall endeavor prevention of losses of solvents/Volatile organic compounds to the best minimum extent.
- Revised EMP along with Fixed Capital Cost & Recurring Cost and revised need based CER as per OM dated 01/05/2018 of MoEF&CC's.
- Revised EIA Report Incorporating all the above mentioned correction.
- Project proponent made presentation for the above mentioned query dated 18/03/2020 for the above mentioned points.
- PP presented replied as below:
- PP presented Revised Product Profile with decrease in Production from 200 MT/Annum to 12 MT/Annum.
- PP mentioned that they have considered total process water consumption as 160 KL/day and process wastewater generation as 145 KL/day (100 KL/day Dilute stream and 45 KL/day concentrated stream); against stoichiometric process water consumption of regular products 121 KL per month and process wastewater generation from regular products 112 KL/day. Further PP clarified that the difference of water consumption considered for R&D is 2 KL/day and the wastewater generation considered for R&D activities is around 2 KL/day. So, they have already considered the water consumption and wastewater generation in water Balance diagram.
- PP presented revised water balance diagram with Proper Stream Segregation and Characteristic for Stage

Wise Reduction along with Authentic Data Source for Input of Data along with Decrease in Pollution Potential.

- PP presented ToR Pertaining to Best Available Technology (BAT) incorporating Air Pollution, Water Pollution and Hazardous Waste that will be reducing by using the Best Available Technology.
- PP presented Revised Hazardous Matrix along with its sound management however did not mention exact source of generation.
- PP submitted undertaking for not using FO as Fuel in Incinerator.
- PP presented Leak Detection and Repairing Programme (LDAR) for all the solvents/volatile organic chemicals proposed with detailed chemical properties including vapor pressure. LDAR with all mitigation measures shall endeavor prevention of losses of solvents/Volatile organic compounds to the best minimum extent.
- PP presented revised EMP along with Fixed Capital Cost & Recurring Cost and revised need based CER as per OM dated 01/05/2018 of MoEF&CC's.
- PP did not submit revised EIA report incorporating all the above mentioned correction.
- Committee deliberated on the reply submitted by PP and noted that PP has not satisfactorily address water balance diagram, LDAR, Hazardous Waste Matrix, EMP and Need based CER and asked to address the same in-line with the earlier query.
- **After detailed discussion, it was decided to consider the proposal only after submission of the following documents.**
    1. Revised Water Balance Diagram with Proper Stream Segregation and Characteristic for Stage Wise Reduction along with Authentic Data Source for Input of Data along with Decrease in Pollution Potential.
    2. Revised Hazardous Matrix along with its sound management (disposal) in-line with the exact source of generation.
    3. Leak Detection and Repairing Programme (LDAR) for all the solvents/volatile organic chemicals proposed with detailed chemical properties including vapor pressure. LDAR with all mitigation measures shall endeavor prevention of losses of solvents/Volatile organic compounds to the best minimum extent.
    4. Revised EMP along with Fixed Capital Cost & Recurring Cost and revised need based CER as per OM dated 01/05/2018 of MoEF&CC's.
    5. Addendum to EIA Report Incorporating all the above mentioned correction.

4	SIA/GJ/IND2/50683/2019	**M/s. Rushap Pharmachem Pvt. Ltd.** Plot No. C-238, GIDC Sayakha, Tal: Vagra, Dist. Bharuch-392140, Gujarat.	Appraisal

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) submitted online application vide no. SIA/GJ/IND2/50683/2019dated 13/11/2019 for obtaining Environmental Clearance.
- SEIAA issued TOR to PP vide their letter dated 24/05/2019.
- Project proponent has submitted EIA Report prepared by Green Leaf Envirotech Pvt. Ltd, Surat based on the TOR issued by SEIAA.
- This is an expansion project for manufacturing of synthetic organic chemical as tabulated below.

Sr. No.	Name of the Products	CAS no. / CI no.	Quantity MT/Month	End-use of the products
GROUP- A				
1.	2- Chloromethyl Ethyl- 3,5- Dimethyl- 4-Methoxypyridine Hydrochloride **(Ome Prazole Chloro)**	86604-75-3	65	Omeprazole
2.	2-(chloromethyl)-3-methyl-4-(2,2,2-trifluoroethoxy)pyridinehydrogen chloride **(Lanso Chloro)**	127337-60-4		Lansoprazole
3.	3,5-Dimethyl-4-Nitro Pyridine -N- Oxide **(Ome Prazole Nitro)**	14248-66-9		Omeprazole intermediates
4.	2,3-Dimethyl-4-Nitro Pyridine -N- Oxide **(Lanso Nitro/Rabi Nitro)**	37699-43-7		Lansoprazole & Rabeprazole intermediates
5.	2-(chloromethyl)-4-(3-methoxypropoxy)-3-methylpyridine—hydrogen **(Rabe Chloro)**	153259-31-5		(Rabe Chloro)
6.	5-methoxy-2-{[(4-methoxy-3,5-dimethylpyridin-2-yl)methyl]sulfanyl}-1H-benzimidazole **(Omeprazole Sulfide)**	73590-85-9		(Omeprazole Sulfide)
AND GROUP- B				
7.	1, 7'- dimethyl-2'- propyl- 1H, 3'H-2, 5'-bibenzimidazole **(Telmisartan Int.)**	152628-02-9	65	Telmisartan intermediates
8.	4-Fluoro-a-(2-methyl-1-oxopropyl)-y-oxo-N,B-diphenyl-benzene butanebutanamide **(Di Ketone)**	125971-96-2		Atorvastatin
9.	2,3,4- trimethoxybenzaldehyde	2103-57-3		Trimethoprim
10.	2-Ethoxybenzoic Acid	134-11-2		Sildenafil Citrate
11.	3,4-dimethoxybenzoic acid **(Veratric Acid)**	93-07-2		Antipyretic & Analgesic Agent

12.	4-(difluoromethoxy)-2-nitroaniline	887412-09-1		Pantoprazole intermediates
13.	4-methylbenzene-1,2-diol	452-86-8		Fragrance Intermediates
14.	1,1-dimethoxy-N,N-dimethylmethanamine	4637-24-5		Imatinib Itraconazole, Elvitegravir
Or GROUP- C				
15.	4-Methoxy-2-Nitroaniline (MNA)	96-96-8	50	Basic Pharma and pigments
*R & D			10 Kg/Month	
TOTAL (A) + (B Or C)			(65 + 65 or 50 respectively)	

- 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 18/03/2020.
- Salient features of the project are as under:

Sr. no.	**Particulars**	**Details**
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	4.153 Crores

Details of EMP (Capital Cost & Recurring Cost)

Brief details of EMP

COMPONENT	**CAPITAL COST OF EMP**	**RECURRING COST OF EMP (per Month)**
Cost	Rs. 169.3 Lakhs	Rs. 91.07 Lakhs

Bifurcation of EMP Cost

Sr. No	**Unit**	**Installed Capacity (KLD)**	**Capital Cost (Rs. in**	**Operating Cost (Lacs/Month)**	**Maintenance Cost (Lacs/Month)**	**Total Recurring Cost (Lacs/Month)**

			Lakhs)			
1	Effluent Treatment Plant	56 KLD	140.5	70.0	3.0	73.08
2.	APCM	--	20.0	0.1	0.025	0.125
3.	Hazardous Waste (Expense)	--	5.0	17.3	--	17.33
4.	AWH Monitoring Cost	--	1.0	0.16	--	0.17
5.	OH & Safety		1.0	0.03	0.011	0.041
6.	Greenbelt	--	1.80	0.25	0.07	0.32
	Total		**169.3**			**91.07**

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

As per OM no. 22-65/2017 on dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER), Greenfield projects have to contribute 2% of the Additional Capital Investment, the company will contribute Rs. 0.08 Cr as funds for CER activities

Component	**Project Cost**	**As per Norms**	**Allocation**
CER	4.153 Cr (Green field)	Rs. 0.083 Cr (2 %)	Rs. 0.083 Cr (2 %)

Activities to be carried out under CER:

CER Activities	**Phase Wise Budget st**		
	1st Year	**2nd Year**	**TOTAL**
As per discussion with Sarpanch, we will give contribution towards school bags, uniform, water bottles, Notebooks, toilet blocks for primary school of Village: Sayakha. School Bag, Uniform, Water Bottles, Notebook Set – 1 X 100 Students =100 Set INR 3500/ Student = 3500 X 100 = 3,50,000/- Toilet Block in Primary School, Saykha Village.	**0.03**	**0.023**	**0.053**

	2 Nos Toilet Block – 1.8 Lakh			
	As per discussion with Sarpanch, we will give contribution towards setting up of LED lights in Sayakha Village. LED Light = 4 Nos/House = 4 X 231 Houses = 924 LED Lights Budget – INR 220/ LED = 220 X 924 = 2 Lakhs As per discussion with Sarpanch, we will give contribution towards construction of Toilet Block in Anganvadi, Saykha Village. 1 Nos Toilet Block – 1 Lakh	**0.015**	**0.015**	**0.03**
	Total Cost	**Approx.INR**		**0.083 Crore**

B	**Total Plot area** (sq. meter)	4993.75 Sq. m.
	Green belt area (sq. meter)	1965.04 Sq. m. (39.34%)
C	**Employment generation**	Direct = 15 Employees Indirect = 10 Employees
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC Water Supply Authority
	Status of permission from the concern authority.	Permission for water supply Vide letter No. GIDC/EE(W/D)/BRH/348 Date-30/04/2019.
ii	**Water consumption (KLD)**	

Category	**Proposed (KL/Day)**	**Remark**
Domestic	2.0	-
Gardening	2.0	-
Industrial		GIDC Water Supply Authority
Process	32.0	Worst Case: Lanso Chloro:16 & 2,3,4- trimethoxybenzaldehyde: 16
Washing	1.5	-
Boiler	6.0	-

Cooling	1.5	-
Others (Scrubber)	2.0	-
Total Ind.	**43.0**	**-**
Total (A+B+C)	**47.0**	**-**

1) **Total water requirement** for the project: 47.0 KLD
2) Quantity to be **recycled**: 0 KLD
3) Total **fresh water** requirement: 47.0 KLD

(Total water requirement = Fresh water + Recycled water)

iii **Waste water generation (KLD)**

Category	Proposed (KL/Day)	Mode of disposal
Domestic	1.8	Septic tank & Soak pit
Gardening	-	--
Industrial		
Process	56.0	Worst Case: Rabe Chloro: 24 & 2,3,4- trimethoxy benzaldehyde: 32
Washing	1.5	--
Boiler	1.0	
Cooling	0.5	
Scrubbing	1.0	To ETP
	1.0	To End User
Total Ind.	**61.0**	
Total (A+B+C)	**62.8**	

-

iv Treatment facility within premises with **capacity**

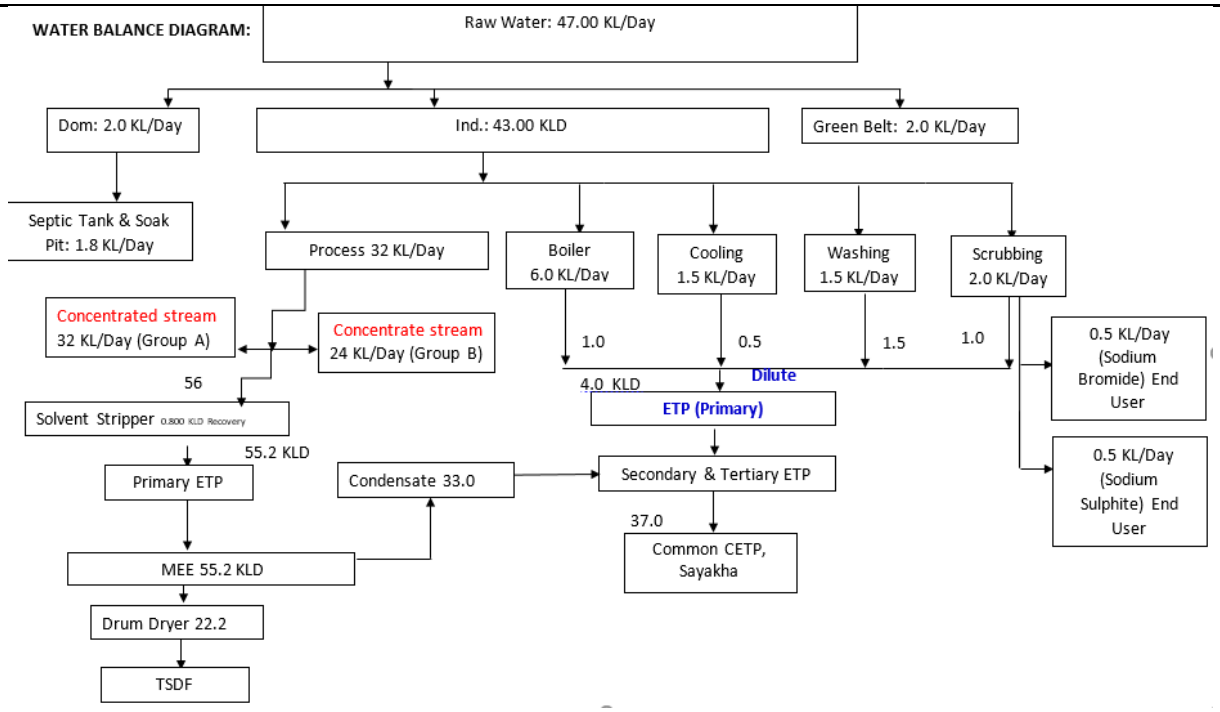
[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc.

- Hydraulic Load – 56.0 KLD (Concentrated Effluent), 4.0 (Dilute Effluent)
- In-house ETP (Primary Treatment) Capacity – 60.0 KLD, 7 KLD
- In-house MEE Capacity – 60 KLD
- Secondary and Tertiary ETP Hydraulic Load – 37 KLD
- Secondary and Tertiary ETP Capacity – 41 KLD

Treatment scheme including segregation at source.

- 56.0 KLD from Process is sent to primary treatment and then the effluent stream shall be subjected to solvent stripper. 55.2 KLD effluent from solvent stripper is sent to In-house MEE, from where 22.2

	KLD of MEE bottom is sent to Drum Dryer and the remaining 33.0 KLD of condensate is mixed with dilute stream. ➢ 1.5 KLD from Washing, 1.0 KLD Boiler, 0.5 KLD Cooling Blow Down, 1.0 KLD from Scrubber = 4.0 KLD Waste Water will be treated in In-house Primary ETP. ➢ Both concentrated stream @ 33 KLD and dilute stream @ 4 KLD shall be combined and sent for secondary and tertiary treatment. ➢ Final treated Waste Water will be sent to common ETP of M/s. GIDC - Sayakha. ➢ High COD range from 81254 mg/L (2,3,4-Trimethoxy Benzaldehyde) to 56846 mg/L (4-Fluoro-a-(2-methyl-1-oxopropyl)-y-oxo-N, B-diphenyl-benzene butane butanamide (Di Ketone)) ➢ Low COD range from Boiler Blowdown 100 mg/L to Washing Section 2298 mg/L.	
	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**. ➢ Treated Effluent 37.0 KLD will be sent to Common ETP, M/s. GIDC - Sayakha.	
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ Not Applicable	
v	Mode of Disposal & Final meeting point	
	Domestic:	Domestic wastewater will be discharged through Septic Tank/ Soak Pit System
	Industrial:	• Total industrial waste water @ 37 KLD will be sent to Common CETP (M/s. GIDC - Sayakha) after primary treatment. • Scrubbing solution Sodium Bromide @ 0.5 KLD will be sold to end users having permission under Rule 9. • Scrubbing solution Sodium Sulphite @ 0.5 KLD will be sell to end users having permission under Rule 9. • Scrubbing solution NaCl @ 0.5 KLD will be treated with dilute stream. • Scrubbing Solution Sodium Nitrite @ 0.5 KLD will be treated with dilute stream.
v i	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ Common ETP of M/s. GIDC - Sayakha	
	Membership of Common facility (CF) **(For waste water treatment)**	
	Unit has obtained Membership of M/s. GIDC - Sayakha Vide letter no.: GIDC/BRH/DEE (DRG)325 dated: 10-06-2019.	
v ii	**Simplified water balance diagram with reuse / recycle of waste water**	



v ii i Reuse/Recycle details (KLD)

Total reuse–No Reuse

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.
--	--	--	--

Concentrated Stream wastewater Characteristics:

SR. No.	Para	Unit	Worst case Process Water		Combined Effluent	After Solvent Stripper
			2-(chloromethyl)-4-(3-methoxy propoxy)-3-methylpyridine — hydrogen (Rabe Chloro)	2,3,4-trimethoxy benzaldehyde		
Quantity (KLD)			24	**32**	**56**	**55.2**
1	pH	pH Unit	3-5	2-3	2-5	2-5

2	TSS	mg/L	312	330	322	<250
3	TDS	mg/L	25023	27624	26509	26509
4	BOD	mg/L	30125	33215	31890	19134
5	COD	mg/L	77585	81254	79681	39840
6	Ammo. Nitrogen	mg/L	100	Nil	<50	Nil

SR. No.	Para	Unit	After Primary Treatment	MEE Condensate	MEE Bottom subjected to Drum Dryer
Quantity (KLD)			55.2	33.0	22.2
1	pH	pH Unit	7-8	7-8	7-8
2	TSS	mg/L	<100	<30	>100
3	TDS	mg/L	28158	<1250	>57500
4	BOD	mg/L	14357	6777	>13000
5	COD	mg/L	31872	16932	>37000
6	Ammo. Nitrogen	mg/L	Nil	Nil	Nil

Dilute Stream wastewater Characteristics:

SR. No.	**Para**	**Unit**	**Dilute Stream from other utilities Characteristics**				**Combined Effluent**	**After Primary Treatment**
			Boiler	Cooling	Washing	Scrubber		
Quantity (KLD)			**1.0**	**0.5**	**1.5**	**1.0**	**4**	**4**
1	pH	pH Unit	6-8	6-8	6-8	6-8	6-8	7-8
2	TSS	mg/L	56	87	150	68	98	30
3	TDS	mg/L	840	1150	2500	500	1900	2090
4	BOD	mg/L	50	80	487	190	252	214
5	COD	mg/L	100	250	2298	524	1049	891
6	Ammo. Nitrogen	mg/L	Nil	Nil	Nil	Nil	Nil	Nil

SR.	Para	Unit	Dilute	Concentrated	Combin	After	After

No.			Stream After Primary Treatment	Stream MEE Condensate	ed Effluent	Secondary Treatment (Stage I)	Secondary Treatment (Stage II)
Quantity (KLD)			4.0	33.0	37.0	37.0	37.0
1	pH	pH Unit	7-8	7-8	7-8	7-8	7-8
2	TSS	mg/L	30	30	30	<30	<30
3	TDS	mg/L	2090	1250	1654	1600	<1600
4	BOD	mg/L	214	6777	7483	1497	<90
5	COD	mg/L	891	16932	18744	3749	<250
6	Ammo. Nitrogen	mg/L	Nil	Nil	Nil	Nil	Nil

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.	**Stack attached to**	**Stack Height/Dia. (Meter)**	**Fuel Consumption**	**Fuel Qty.**	**APCM**	**Permissible limit**
1.	Steam Boiler (1.5 TPH)	18	Bio Coal / Briquette / Agro Waste / Coal **OR** Imp. Coal	3.5 MT/Day **OR** 2.0 MT/Day	MCS + Water Scrubber	PM < 150 mg/Nm^3 SO_2< 100 ppm NO_X< 50 ppm
3	D.G. Set (0.5 MW)	11	Diesel	20.0 lit/Hr.	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.	Vent attached to	Type of emission	APCM	Stack / Vent Height (meter)
	1.	Reaction Vessel (Sulphonation) (2- Chloromethyl Ethyl- 3,5- Dimethyl- 4- Methoxypyridine Hydrochloride (Ome Prazole Chloro) & (2-(chloromethyl) -3-methyl-4-(2,2,2-trifluoroethoxy)pyridine hydrogen chloride (Lanso Chloro))	SO_2< 40 mg/Nm3	Two Stage Alkali Scrubber	9.0 m
	2.	**Reaction Vessel** (Nitration) (MNA)	NO_2< 25 mg/Nm3	Two Stage Alkali Scrubber	9.0 m
	3.	**Reaction Vessel** (Bromination) (4-methylbenzene-1,2-diol)	HBr < 30 mg/Nm3	Two Stage Alkali Scrubber	9.0 m
	4.	**Reaction Vessel** (Chlorination) (4-(difluoromethoxy)-2-nitroaniline)	HCl < 20 mg/Nm3	Two Stage Alkali Scrubber	9.0 m

ii i **Fugitive emission** details with its mitigation measures:

As below:

- Whole process will be carried out in close loop.
- Pipe line will be having minimum flange.
- Pump with double mechanical seals
- Proper ventilation.

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	Used oil	Utility	5.1/ SCH-I	0.050	Collection, Storage, Transportation & Disposal by selling

					to Authorised re-refiners or reused as lubricant within premises.
2	Spent Solvent	Mfg. Process (Omeprazole Sulfide & Telmisartan Int.)	28.6/ SCH-I	31700.0	Collection, Storage, & recover by distillation & Reuse in process within the premises.
		Stripper	28.6/SCH-I	300	Collection, Storage, & recover by distillation & Reuse in process within the premises. OR send to pre/ co processing unit/ send to CHWIF.
3	Acetic Acid (70%)	Mfg. Process 2-(chloromethyl)-3-methyl-4-(2,2,2-trifluoroethoxy) pyridinehydrogen chloride (Lanso Chloro)	28.6/SCH-I	4300	Collection, Storage, & transportation & sell to end users having permission under Rule 9.
4	Discarded containers, barrels, Liners, plastic Bags	Raw material Supply	33.1/ SCH-I	60.0 (3600 Drums, 1.200 Bags)	Collection, Storage, Transportation Sale to Authorised Recyclers
5	ETP Sludge	ETP	35.3/ SCH-I	316.0	Collection, Storage, Transportation & Disposal at TSDF (M/s. BEIL, Dahej) **OR** send to

					cement industries as Gypsum.
6	Inorganic Salt (Ammonium Sulphate)	Mfg. Process (3,5-Dimethyl-4-Nitro Pyridine -N- Oxide)	28.1/SCH-I	4250	Collection, Storage, Transportation & sell to end user under Rule 9.
7	Organic Waste	Mfg. Process {1, 7'- dimethyl-2'- propyl-1H, 3'H-2, 5'-bibenzimidazole (Telmisartan Int.)}	28.1/SCH-I	385	Collection, Storage, Transportation send to pre/ co processing unit (cement industries) Or send to CHWIF (M/s. SEPPL-Kutch).
8	Spent Carbon	Mfg. Process	36.2/ SCH-I	2.0	
9	Distillation residue	Distillation	36.1/ SCH-I	936.0	
10	$NaNO_2$ (10% Solution)	Scrubbing system (4-Methoxy-2-Nitroaniline)	28.1/SCH-I	180.0 KL	Collection, Storage, Treatment in ETP
11	Sodium chloride (10%)	Scrubbing system (4-(difluoromethoxy)-2-nitroaniline)	28.1/SCH-I	180.0 KL	
12	Sodium Sulphite (30%)	Scrubbing system (Ome Prazole Chloro & Lanso Chloro)	28.1/SCH-I	180.0 KL	Collection, Storage, Transportation Sell to End Users having permission under Rule-9.
13	Sodium bromide (40-48%)	Scrubbing system (4-methylbenzene-1,2-diol)	28.1/SCH-I	180.0 KL	Collection, Storage, Transportation Sell to End Users having permission

						under Rule-9.
	14	MEE Salt	MEE	35.3/SCH-I	500.0	Collection, Storage, Transportation & Disposal at TSDF (M/s. BEIL-Dahej)

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	Unit has got NOC of Common TSDF of M/s. BEIL Dahej, Vide letter no.: BEIL/ANK/2019 dated: 07-10-2019. & CHWIF of SEPPL of DETOX, Kutch on letter Dated : 07/06/2019
iii	Details of Non-Hazardous waste & its disposal (MSW and others)	No such waste will generate
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.	Product Name	Solvent	B.P. °C	Va. Pr. Kpa	Vapour Density kg/m3	Qty. Used MT/MT	Qty. Recovered MT/MT	Total (A TO D)	Solvent Recovery (%)
1	2- chloro methyl-3,5- dimethyl- 4-methoxy pyridine hydrochloride (omeprazole chloro)	Methanol	64.5	0.3	2.51	8.08	7.82	0.26341	97
		Isopropyl alcohol	82.5	3.8	3.1	3.2	3.07	0.17472	96
2	2-(chloromethyl)-3-methyl-4-(2,2,2-trifluoroethoxy) pyridinehydrogen chloride (Lanso Chloro)	MIBK	117	2.13	3.5	3.75	3.56	0.31725	95
		Methanol	64.5	0.3	2.51	1.63	1.58	0.05314	97
		Toluene	111	12.3	1.11	12.75	12.11	1.33365	95
		Acetone	56	4.4	2.07	0.5	0.49	0.02230	97
3	2,3-Dimethyl-4-	MDC	39.6	12.3	1.11	5.1	4.93	0.1662	97

	Nitro Pyridine -N-Oxide							6	
		Toluene	111	12.3	1.11	1.2	1.14	0.12552	95
4	2-(chloromethyl)-4-(3-methoxypropoxy)-3-methylpyridine—hydrogen chloride (Rabe Chloro) CAS	IPA	82.5	12.4	3.04	2.67	2.56	0.14578	96
		Toluene	111	12.3	1.11	2	1.90	0.20920	95
		Acetone	56	4.4	2.07	0.67	0.65	0.02988	97
5	5-methoxy-2-{[(4-methoxy-3,5-dimethyl pyridin-2-yl) methyl] sulfanyl}-1H-benzimidazole (Omeprazole Sulfide)	Toluene	111	12.3	1.11	7.4	7.03	0.77404	95
		Acetone	56	4.4	2.07	0.4	0.39	0.01784	97
6	1,7'- dimethyl-2'-propyl- 1H,3'H-2,5'-bibenzimidazole	Methanol	64.5	0.3	2.51	10.57	10.23	0.34458	97
		MDC	39.6	12.3	1.11	2.9	2.81	0.09454	97
		Toluene	111	12.3	1.11	5.71	5.42	0.59727	95
		Acetone	56	4.4	2.07	0.4	0.39	0.01784	97
7	4-Fluoro-a-(2-methyl-1-oxopropyl)-y-oxo-N,B-diphenyl-benzene butane butanamide	IPA	82.5	12.4	3.04	1.14	1.09	0.06224	96
8	2,3,4-trimethoxybenzaldehyde	EA	77	3.8	3.1	4	3.88	0.17840	97
9	3,4-	EDC	83.6	10.2	4.1	1.25	1.20	0.0932	96

	dimethoxybenzoic acid							5	
10	4-(difluoromethoxy)-2-nitroaniline	Chloroform	60.5	22.3	4.1	10.77	10.33	0.48034	96
11	4-methylbenzene-1,2-diol	Butanol	116	0.5	2.56	5.56	5.28	0.63718	95
		Toluene	111	12.3	1.11	2.78	2.64	0.29079	95
12	1,1-dimethoxy-N,N-dimethylmethanamine	DMF	153	3.8	3.1	0.65	0.62	0.08099	95
13	4-Methoxy-2-Nitroaniline (MNA)	MDC	39.6	12.3	1.11	4	3.87	0.13040	97

ii VOC emission sources and its mitigation measures

Sources - Charging Materials

Measures

- Enclose Process
- Minimum flanges & joints
- Handled by pump with double mechanical seals
- Proper Ventilation
- Adequate PPEs

H

- **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Storage tanks	Toluene, Ethylene Dichloride, Methanol, Sulphuric Acid, Nitric Acid (98%), Hydrochloric Acid, MDC, Chloroform	Storage at ATP
Drum/Barrel storage	Acetonitrile, Acetone, Acetic acid, Triethylamine, Isopropyl Alcohol, Dimethyl Sulphate, Dimethyl Formamide, Ethyl acetate	Storage at ATP
Cylinder	Dry HCl	Under Pressure
Bank	Hydrogen	Under Pressure

	➢ **Applicability of PESO** : Will be obtained

- During the meeting dated 18/03/2020, technical presentation made by the 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 for the study area of 10 km radial distance from project site for the period October 2018 to December2018. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, NOX, NH3, VOC, HCl &HBr 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 ISCST – 3. 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 noted that proposal is new in GIDC Sayakha. Source of water is GIDC. PP mentioned that high COD effluent generated from process will be first subjected to solvent stripper followed by primary ETP – 1 and in-house MEE, Condensate from MEE will be treated in secondary and tertiary ETP – 2 while concentrate will be subjected to dryer and salt generated will be disposed at approved TSDF while effluent generated from washing, scrubber, boiler blow down and cooling tower blow down will be treated in in-house ETP – 2 consisting of primary, secondary and tertiary treatment units and treated effluent will be sent to CETP Sayakha for further treatment and disposal. PP has proposed one steam boiler. Fuel used will be Bio Coal /Briquette / Agro Waste / Coal/Imp. Coal. PP has addressed Hazardous Waste as per HWR – 2016. Committee noted that PP has addressed EMP & CER satisfactorily.
- Compliance of ToR found satisfactory.
- ***After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.***

5	SIA/GJ/IND2/49661/2019	**M/s. Mentor Pharma Chem** Plot No. D2-CH-319, GIDC – Dahej, Tal: Vagra, Dist. Bharuch-392130 Gujarat.	Appraisal

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) submitted online application vide no. SIA/GJ/IND2/49661/2019 dated 13/11/2019 for obtaining Environmental Clearance.
- SEIAA issued TOR to PP vide their letter dated 24/05/2019.

- Project proponent has submitted EIA Report prepared by Green Leaf Envirotech Pvt. Ltd, Surat based on the TOR issued by SEIAA.
- This is an expansion project for manufacturing of synthetic organic chemical as tabulated below.

Sr. No.	Name of the Products	CAS no. /CI no.	Quantity MT/Month	End-use of the products
1	Bronopol	52-51-7	50	Antimicrobial
2	Diacereine	13739-02-1		Anti-Osteoarthritis
3	Glimepiride	93479-97-1		Anti-Diabetic
4	Perindropil erbumine	107133-36-8		Anti-Hypertensive
5	Bis-(2-chloroethyl amine)hydrochloride	821-48-7		Phenyl Piper zine
6	2-Diethyl amino ethyl chloride hydrochloride	869-24-9		Clomifen Citret
7	2-Dimethyl aminoethylchloride hydrochloride	4584-46-7		Diltizem HCl
8	4-(2- Chloro Ethyl) morpholine hydrochloride	3647-69-6		Nimorazol
9	N 2-chloroethyl piperidine hydrochloride	2008-75-5		Pitofenone
10	Piperidine hydrochloride	106266-04-0		Tolperisone
11	2-chloro ethyl amine hcl	870-24-6		Ifosfamide
12	4 CHLORO BUTYRYL CHLORIDE	4635-59-0		Antibiotic
13	3-amino acetophenone	99-03-6		Phenylephedrine
14	(R)-(-)-3-(Carbamoyl methyl)-5-methyl hexanoic acid (R-CMH)	181289-33-8		Pregabaline
15	2-n-Butyl-3(4-Hydroxy Benzoyl) Benzofuran	1951-26-4		Intermediate
16	Sulphonamide	63-74-1		Antibiotics
17	Etoricoxib	202409-33-4		Arthritis
18	Tolperisone hydrochloride	3644-61-9		Muscle Relaxant
19	Prilocaine	721-50-6		Anaesthetics
20	Terbinafine	91161-71-6		Antifungal
21	Ketosulfone	202409-33-4		Intermediate
22	Luliconazole	187164-19-8		Antifungal
23	Palenesetron hydrochloride	135729-62-3		Anti Nauseant
24	Lercanidipine	100427-26-7		Anti-Hypertensive
25	Voriconazole	137234-62-9		Anti-Fungal

26	Topiramate	97240-79-4		Anti-Epileptic
27	Ondansetron hydrochloride	99614-02-5		Anti Nauseant
28	2 –n- butyl Benzofuran	4265-27-4		Amiodarone
29	Metoclopramide base	364-62-5		Anti Nauseant
30	2-(2 chloro Ethoxy)Ethanol	628-89-7		Intermediate
31	Linzolide	165800-03-3		Anti-Bacterial
32	1-(3-Chlorophenyl)-4-(3-Chloropropyl) Piperazine Hydrochloride (T2.HCl)	52605-52-4		Trazadon
33	3-Dimethyl aminopropylchloride hydrochloride	5407-04-5		Citalopram Hbr
34	(±)-3-(Carbamoyl methyl)-5-methyl hexanoic acid (CMH)	181289-15-6		Pregabaline
35	N,N-Diethyl Ethylene Diamine	100-36-7		Antimalarial
36	Levo cetirizine	130018-77-8		Anti-Allergic
37	3-hydroxy acetophenone	121-71-1		Phenyl Ephidrine
38	Pregabaline	148553-50-8		Anti-Epileptic
39	5-Chloro Aniline- 2,4 -Disulphonamide (CADS)	121-30-2		Hydrochlorothizde
R&D			**10 Kg/Month**	
Total			**50 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 18/03/2020.
- Salient features of the project are as under:

Sr. no.	**Particulars**	**Details**
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	4.00 Crores
	Details of EMP (Capital Cost & Recurring Cost) **Brief details of EMP**	

COMPONENT	**CAPITAL COST OF EMP**	**RECURRING COST OF EMP (per Month)**
Cost	Rs. 39.0 Lakhs	Rs. 9.88 Lakhs

Bifurcation of EMP Cost

Sr. No	Unit	Installed Capacity (KLD)	Capital Cost (Rs. in Lakhs)	Operating Cost (Lacs/Month)	Maintenance Cost (Lacs/Month)	Total Recurring Cost (Lacs/Month)
1	Effluent Treatment Plant	20 KLD	3.5	4.0	1.21	5.21
2.	APCM	--	30.0	0.16	0.09	0.25
3.	Hazardous Waste (Expense)	--	1.0	4.17	--	4.17
4.	AWH Monitoring Cost	--	1.5	0.008	--	0.008
5.	OH & Safety		2.0	0.05	0.03	0.08
6.	Greenbelt	--	1	0.10	0.07	0.17
	Total		**39.0**			**9.888**

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

As per OM no. 22-65/2017 on dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER), Greenfield projects have to contribute 2% of the Additional Capital Investment, the company will contribute Rs. 0.08 Cr as funds for CER activities

Component	Project Cost	As per Norms	Allocation
CER	4.0 Cr (Green field)	Rs. 0.08 Cr (2 %)	Rs. 0.08 Cr (2 %)

Activities to be carried out under CER:

CER Activities	Phase Wise Budget st		
	1st Year	2nd Year	TOTAL
Drinking Water Supply– (On basis of Needs Assessment) • Common Drinking Water Facility– Village Atali @ 1.0 Lakh Filtration Unit • Common Drinking Water Facility– Village Galenda @ 1.0 Lakh Filtration Unit	**0.01**	**0.01**	**0.02**

	Plantation / Greenbelt in Community Area– (On basis of Needs Assessment) Environment plantation on the approach road to the premises and outside: • Plantation along the Periphery of the plant along with plantation around habitation area with various location areas as – Villages – Jolva, Ambetha & Vav : cost of 1 plant – 500/- with digging, fertilizer & maintenance of water. (200plants)	**0.005**	**0.005**	**0.01**
	Road & Infrastruture Development – (On basis of Needs Assessment) Construction of wall around the pond-Village Vav @ 1.7 Lacs Build Shed at boundary wall around the pond periphery -Village Vav @ 0.80 Lacs Build a wall around it on the outside of the pond-Village Samatpor @ 1.85 Lacs Installation of ovaro for cloth washing at pond-Village Samatpor @ 0.65 Lacs	**0.025**	**0.025**	**0.05**
	Total Cost	**Approx.INR**		**0.08 Crore**

B	**Total Plot area** (sq. meter)	4149.007 Sq. m.
	Green belt area (sq. meter)	1381.61 Sq. m. (33.30%)
C	**Employment generation**	Direct = 20 Employees Indirect = 10 Employees
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC Water Supply Authority
	Status of permission from the concern authority.	Permission for water supply Vide letter No. GIDC/DEE(WS)/BRH/562 Date-23/07/2019.
ii	**Water consumption (KLD)**	

Category	**Proposed (KL/Day)**	**Remark**
Domestic	2.0	-

Gardening	2.0	-
Industrial		GIDC Water Supply Authority
Process	12.0	Mfg. Process (5-Chloro Aniline- 2,4 - Disulphonamide (CADS))
Washing	2.0	-
Boiler	4.0	-
Cooling	1.0	-
Others (Scrubber)	5.0	-
Total Ind.	**24.0**	**-**
Total (A+B+C)	**28.0**	**-**

1) **Total water requirement** for the project: 28.0 KLD
2) Quantity to be **recycled**: 0 KLD
3) Total **fresh water** requirement: 28.0 KLD

(Total water requirement = Fresh water + Recycled water)

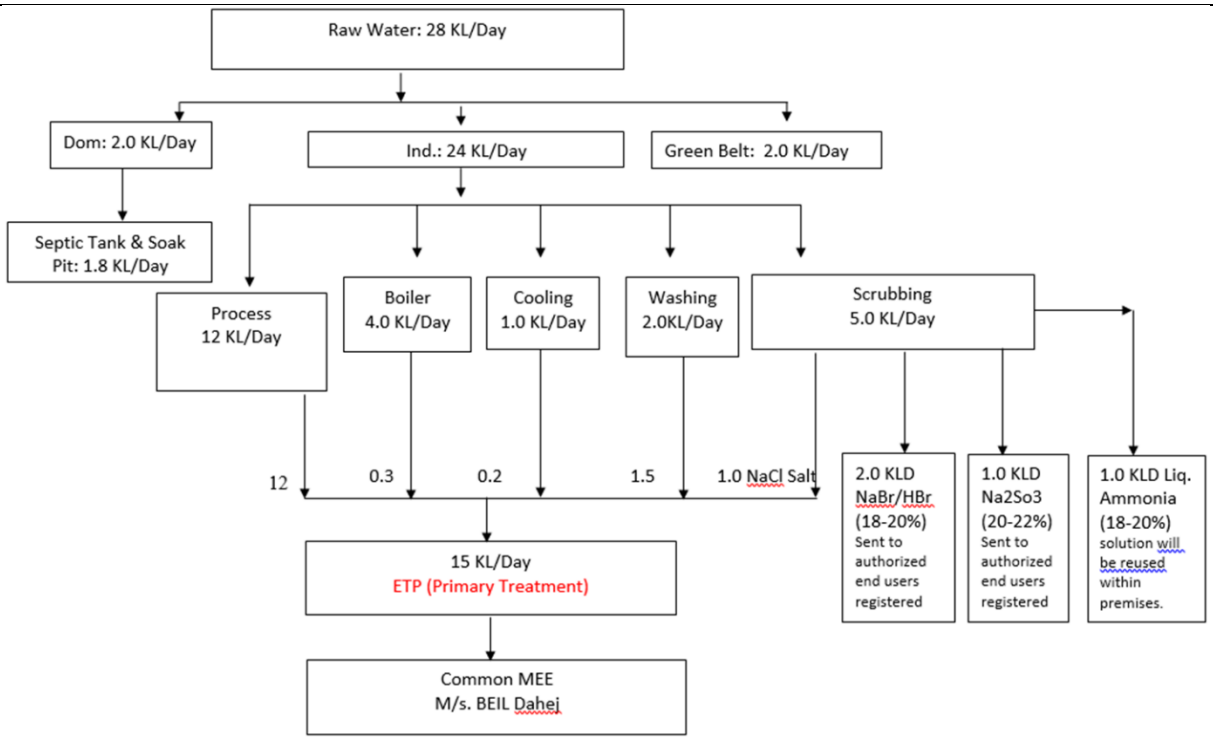
iii **Waste water generation (KLD)**

Category	**Proposed (KL/Day)**	**Mode of disposal**
Domestic	1.8	Septic tank & Soak pit
Gardening	-	--
Industrial		
Process	12.0	Mfg. Process (5-Chloro Aniline- 2,4 -Disulphonamide (CADS))
Washing	1.5	--
Boiler	0.3	
Cooling	0.2	
Others (10% NaCl)	1.0	1.0 KLD NaCl Salt in ETP
Scrubbing Solution (NaBr/HBr)	2.0	To End User
Scrubbing Solution (Na_2SO_3)	1.0	To End User
Scrubbing Solution (Liq. Ammonia)	1.0	Reuse within premises
Total Ind.	**19.0**	
Total (A+B+C)	**20.8**	

-

Iv	Treatment facility within premises with **capacity** [In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc. ➢ Hydraulic Load – 15.0 KLD ➢ In-house ETP (Primary Treatment) Capacity – 20.0 KLD	
	Treatment scheme including segregation at source. ➢ 12.0 KLD from Process, 1.5 KLD from Washing, 0.3 KLD Boiler,0.2 KLD Cooling Blow Down 5.0 KLD from Scrubber (1.0 KLD NaCl Salt in ETP, 1 KLD Liq. Ammonia Reuse within Premises and Other Sell to End user) =15.0 KLD Waste Water will be treated in in-house ETP. ➢ Final treated (Primary ETP) Waste Water will be sent to common MEE of M/s. BEIL-Dahej. ➢ High COD range from 59590 mg/L (2-n-Butyl-3(4-Hydroxy Benzoyl) Benzofuran) to 70600 mg/L (5-Chloro Aniline- 2,4 -Disulphonamide (CADS)) ➢ Low COD range from Boiler Blowdown 100mg/L to Washing Section 2298 mg/L.	
	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:	Domestic wastewater will be discharged through Septic Tank/ Soak Pit System
	Industrial:	• Total industrial waste water@ 15 KLD will be sent to Common MEE (M/s. BEIL- Dahej) after primary treatment. • Scrubbing solution Liq. Ammonia @ 1.0 KLD will be reuse in process. • Scrubbing solution HBr/NaBr @ 2.0 KLD will be sell to end users having permission under Rule 9. • Scrubbing solution Na_2SO_3 @ 1.0 KLD will be sell to end users having permission under Rule 9.
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ Common MEE of M/s. BEIL, Dahej	
	Membership of Common facility (CF) **(For waste water treatment)**	

	Unit has obtained Membership of M/s. BEIL, Dahej Vide letter no.: BEIL/ANK/11 dated: 18-07-2019.
vii	**Simplified water balance diagram with reuse / recycle of waste water**



viii Reuse/Recycle details (KLD)

Total reuse–No Reuse

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.**
--	--	--	--

S R. N o.	**Para**	**Unit**	**Stream from utilities Characteristics**				Process Water 5-Chloro Aniline-2,4 – Disulphonamide (CADS)	**Combined Effluent**	**After Primary treatment**
			Boiler	Cooling	Washing	Scrubbing		**Total Trade effluent**	
Quantity (KLD)			**0.3**	**0.2**	**1.5**	**1.0**	**11.17**	**15.0**	**15.0**
1	pH	pH	6-8	6-8	2-5	6-8	6-8	6-8	6-8

		Unit							
2	TSS	mg/L	56	40	150	68	250	205	145
3	TDS	mg/L	800	1000	2500	500	25120	19065	22100
4	BOD	mg/L	<50	50	487	190	21200	15850	12500
5	COD	mg/L	<100	100	2298	524	70600	52845	45500
6	Ammo. Nitrogen	mg/L	Nil	Nil	Nil	Nil	100	100	< 100

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.	Stack attached to	Stack Height/Dia. (Meter)	Fuel Consumption	Fuel Qty.	APCM	Permissible limit
1.	Steam Boiler (1.0 TPH)	25/0.35	Bio Coal/ Briquette **OR** Coal	2.5 MT/Day **OR** 2.0 MT/Day	MCS + Water Scrubber	PM < 150 mg/Nm^3 SO_2< 100 ppm NO_X< 50 ppm
2.	Thermic Fluid Heater (2 Lac KCal/Hr.)	25/0.5	Bio Coal/ Briquette **OR** Coal	1.0 MT/Day **OR** 0.8 MT/Day	MCS + Water Scrubber	PM < 150 mg/Nm^3 SO_2< 100 ppm NO_X< 50 ppm
3	D.G. Set (40 KVA)	11/0.25	Diesel	11.0 lit/Hr.	Adequate Stack Height	PM < 150 mg/Nm^3 SO_2< 100 ppm NO_X< 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.	Vent attached to	Type of emission	APCM	Stack / Vent Height (meter)
1.	Prilocaine - Reaction Vessel (Bromination)	HBr: 20 mg/Nm^3	Two Stage Alkali Scrubber	11 m/0.35
2.	(Bis-(2-chloroethyl amine)hydrochloride) - Reaction Vessel (Sulphonation)	SO_2: 40 mg/Nm^3	Two Stage Alkali Scrubber	11 m/0.35
3.	Bis-(2-chloroethyl amine) Hydro chloride Reaction vessel (Chlorination)	HCl < 20 mg/Nm^3	Two Stage Alkali Scrubber	11 m/0.35
4.	5-chloroaniline-2,4-disulphonamide (CADS) Reaction vessel	NH_3<175 mg/Nm^3	Two Stage Water Scrubber	11 m/0.35

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

- Whole process will be carried out in close loop.
- Pipe line will be having minimum flange.
- Pump with double mechanical seals
- Proper ventilation.

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	Used oil	Maintenance Activities	5.1/ SCH-I	0.200	Collection, Storage, Transportation & Disposal by selling to Authorised re-refiners
2	Spent Solvent	Mfg. Process ((R)-(-)-3-(Carbamoyl methyl)-5-methyl hexanoic acid (R-CMH))	28.6/ SCH-I	24282.0	Collection, Storage, & recover by distillation & Reuse in process within the premises.
3	Discarded containers, barrels, Liners, plastic Bags	Used containers, drums, Liners	33.1/ SCH-I	60.0 (3600 Drums, 1.200 Bags)	Collection, Storage, Transportation Sale to Authorised Recyclers having permission under Rule-9.
4	ETP Sludge	ETP	35.3/ SCH-I	36.0	Collection, Storage, Transportation & Disposal at TSDF (M/s. DIPL, Kutch) **OR** send to cement industries as

						Gypsum.
	5	Spent Carbon	Mfg. Process	36.2/ SCH-I	2.0	Collection, Storage, Transportation send for Pre/co processing **OR** send to CHWIF. (M/s. SEPPL, Kutch)
	6	Distillation residue	Distillation	36.1/ SCH-I	48.0	Collection, Storage, Transportation send to cement industries for Pre/co processing **OR** send to CHWIF (M/s. SEPPL, Kutch)
	7	Process Residue & Waste	Mfg. Process (1-(3-Chlorophenyl)-4-(3-Chloropropyl) Piperazine Hydrochloride (T2. HCl))	28.1/ SCH-I	60.0	Collection, Storage, Transportation send to cement industries for Pre/co processing **OR** send to CHWIF (M/s. SEPPL, Kutch)
	8	Scrubbing Solution 30% NaCl	Scrubber	Sch-II-Class B (15)	365.00 KL	Collection, Storage and allow for Neutralization in ETP.
	9	Hydrogen Peroxide	Mfg. Process (Etoricoxib)	28.1/ SCH-I	156.0 KL	Collection, Storage,

		[H_2O_2]				Transportation Sell to End Users having permission under Rule-9.
	10	Sodium Acetate Solution	Mfg. Process (Palenesetron hydrochloride)	28.1/ SCH-I	547.0 KL	Collection, Storage, Transportation Sell to End Users having permission under Rule-9.
	11	Pthalic acid	Mfg. Process (Linzolide)	28.1/ SCH-I	313.0	Collection, Storage, Transportation Sell to End Users having permission under Rule-9.
	12	Acetic Acid	Mfg. Process (2 –n- butyl Benzofuran)	28.1/ SCH-I	432.0	Collection, Storage, Transportation Sell to End Users having permission under Rule-9.
	13	Scrubbing Solution NaBr/HBr (18-20%) Solution	Scrubber Mfg. Process (Prilocaine)	Sch-II-Class B (15)	730.0 KL	Collection, Storage, Transportation Sell to End Users having permission under Rule-9.
	14	Sodium Sulphite Solution [20-22%]	Scrubber Mfg. Process (Bis-(2-chloroethyl amine) hydrochloride)	28.1/ SCH-I	366.0 KL	Collection, Storage, Transportation Sell to End Users having permission under Rule-9.
	15	Sodium thio-sulphate	Mfg. Process (3-amino acetophenone)	28.1/ SCH-I	3600.0	Collection, Storage,

						Transportation Sell to End Users having permission under Rule-9.
	16	Scrubbing Solution Liq. Ammonia Solution (18-20%)	Scrubber Mfg. Process (5-Chloro Aniline- 2,4 - Disulphonamide (CADS))	28.1/SCH-I	365.0 KL	Collection, Storage & Reuse in Mfg. Process of 5-chloroaniline-2,4-disulphonamide (CADS) (1266 KL/Annum)
	17	Spent H2SO4	Mfg. Process (Pregabaline)	Sch-I / 28.1	1200	Collection, Storage, Transportation and sell to end users having permission under Rule-9*.

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	Unit has got NOC of Common TSDF of M/s. BEIL. Vide letter no.: BEIL/ANK/11 dated: 18-07-2019.
iii	Details of Non-Hazardous waste & its disposal (MSW and others)	No such waste will generate
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.	**Product Name**	**Solvent**	**F.P. °C**	**B.P. °C**	**Va. Pr. Kpa**	**Vapour Density kg/m3**	**Qty. Used MT/MT**	**Qty. Recovered MT/MT**	**Losses**

									Solvent Loading (A)	Solvent Handling (B)	Solvent Operation (C)	Distillation Loss (D)	T
1	Diacereine	Methanol	12	64.5	12.3	1.11	0.208	0.201	0.00008	0.00006	0.00033	0.00623	0
2	Glimepiride	Acetone	-9	56.2	24	2	0.073	0.071	0.00003	0.00002	0.00012	0.00183	0
		Methanol	12	64.5	12.3	1.11	0.146	0.141	0.00006	0.00004	0.00023	0.00438	0
3	Perindropilerbumine	IPA	-24	82.5	4.4	2.07	0.097	0.093	0.00004	0.00003	0.00016	0.00775	0
		MDC	-	39	35	2.93	0.058	0.056	0.00002	0.00002	0.00009	0.00145	0
4	Bis-(2-chloroethyl amine)hydrochloride	Acetone	-9	56.2	24	2	0.050	0.049	0.00002	0.00002	0.00008	0.00125	0
		EDC	13	84	8.13	1.25	0.350	0.340	0.00014	0.00011	0.00056	0.01750	0
5	2-Diethyl amino ethyl chloride hydrochloride	Acetone	-9	56.2	24	2	0.100	0.097	0.00004	0.00003	0.00016	0.00250	0
		Toluene	6	111	3.8	3.1	0.150	0.144	0.00006	0.00005	0.00024	0.01350	0
6	2-Dimethyl aminoethylchloride hydrochloride	EDC	13	84	8.13	1.25	0.050	0.049	0.00002	0.00002	0.00008	0.00250	0
		IPA	-24	82.5	4.4	2.07	0.200	0.192	0.00008	0.00006	0.00032	0.01600	0
7	4-(2- Chloro Ethyl) morpholine hydrochloride	EDC	13	84	8.13	1.25	0.294	0.285	0.00012	0.00009	0.00047	0.01468	0
8	N 2-chloroethyl piperidine hydrochloride	EDC	13	84	8.13	1.25	0.294	0.285	0.00012	0.00009	0.00047	0.01470	0

9	2-chloro ethyl amine hcl	EDC	13	84	8.13	1.25	0.375	0.363	0.00015	0.00011	0.00060	0.01875	
10	(R)-(-)-3-(Carbamoyl methyl)-5-methyl hexanoic acid (R-CMH)	Chloroform	-	61	20.95	1.7	4.063	3.923	0.00163	0.00122	0.00650	0.12190	
11	2-n-Butyl-3(4-Hydroxy Benzoyl) Benzofuran	Methanol	12	64.5	12.3	1.11	0.120	0.116	0.00005	0.00004	0.00019	0.00359	
12	Sulphonamide	Toluene	6	111	3.8	3.1	0.072	0.069	0.00003	0.00002	0.00012	0.00647	
13	Etoricoxib	Toluene	6	111	3.8	3.1	0.064	0.062	0.00003	0.00002	0.00010	0.00577	
14	Tolperisone hydrochloride	Toluene	6	111	3.8	3.1	0.108	0.104	0.00004	0.00003	0.00017	0.00975	
		IPA	-24	82.5	4.4	2.07	0.048	0.046	0.00002	0.00001	0.00008	0.00381	
15	Prilocaine	Toluene	6	111	3.8	3.1	0.073	0.070	0.00003	0.00002	0.00012	0.00655	
16	Terbinafine	MDC	-	39	35	2.93	0.064	0.062	0.00003	0.00002	0.00010	0.00160	
17	Ketosulfone	THF	-14.5	65	20	1	0.112	0.107	0.00004	0.00003	0.00018	0.00448	
18	Luliconazole	Methanol	12	64.5	12.3	1.11	0.128	0.124	0.00005	0.00004	0.00021	0.00385	
19	Palenesetron hydrochloride	IPA	-24	82.5	4.4	2.07	0.107	0.103	0.00004	0.00003	0.00017	0.00856	
		Hexane	-7.6	62	20	2.97	0.107	0.104	0.00004	0.00003	0.00017	0.00513	
		THF	-14.5	65	20	1	0.107	0.102	0.00004	0.00003	0.00017	0.00428	

20	Lercanidipine	Toluene	6	111	3.8	3.1	0.090	0.087	0.00004	0.00003	0.00014	0.00812	
		Methanol	12	64.5	12.3	1.11	0.068	0.065	0.00003	0.00002	0.00011	0.00203	
		MDC	-	39	35	2.93	0.045	0.044	0.00002	0.00001	0.00007	0.00113	
21	Voriconazole	MDC	-	39	35	2.93	0.066	0.064	0.00003	0.00002	0.00011	0.00164	
		THF	-14.5	65	20	1	0.055	0.053	0.00002	0.00002	0.00009	0.00219	
22	Topiramate	EDC	13	84	8.13	1.25	0.107	0.104	0.00004	0.00003	0.00017	0.00535	
23	Ondansetron hydrochloride	IPA	-24	82.5	4.4	2.07	0.356	0.342	0.00014	0.00011	0.00057	0.02846	
24	Metoclopramide base	Toluene	6	111	3.8	3.1	0.179	0.171	0.00007	0.00005	0.00029	0.01607	
		IPA	-24	82.5	4.4	2.07	0.179	0.171	0.00007	0.00005	0.00029	0.01429	
25	Linzolide	EDC	13	84	8.13	1.25	0.100	0.097	0.00004	0.00003	0.00016	0.00498	
		Ethyl Acetate	-4	77	103	3.04	0.075	0.072	0.00003	0.00002	0.00012	0.00415	
26	1-(3-Chlorophenyl)-4-(3-Chloropropyl) Piperazine Hydrochloride (T2.HCl)	Methanol	12	64.5	12.3	1.11	0.323	0.312	0.00013	0.00010	0.00052	0.00969	
		Toluene	6	111	3.8	3.1	0.075	0.072	0.00003	0.00002	0.00012	0.00677	
		Acetone	-9	56.2	24	2	0.009	0.0089	0.00000	0.00000	0.00001	0.00023	
27	3-Dimethyl aminopropylchloride hydrochloride	Toluene	6	111	3.8	3.1	0.250	0.240	0.00010	0.00008	0.00040	0.02250	
28	(±)-3-(Carbamoyl	Toluene	6	111	3.8	3.1	0.147	0.141	0.00006	0.00004	0.00024	0.01322	

	methyl)-5-methyl hexanoic acid (CMH)												
29	N,N-Diethyl Ethylene Diamine	Toluene	6	111	3.8	3.1	0.200	0.192	0.00008	0.00006	0.00032	0.01800	0
30	Levo cetirizine	Toluene	6	111	3.8	3.1	0.103	0.098	0.00004	0.00003	0.00016	0.00923	0
		MDC	-	39	35	2.93	0.115	0.112	0.00005	0.00003	0.00018	0.00288	0
		Triethyl amine	-14.99	88.8	68.99	3.49	0.051	0.049	0.00002	0.00002	0.00008	0.00410	0
		Acetone	-9	56.2	24	2	0.195	0.189	0.00008	0.00006	0.00031	0.00487	0
31	3-Hydroxy Acetophenone	Toluene	6	111	3.8	3.1	0.200	0.192	0.00008	0.00006	0.00032	0.01800	0
32	Pregabaline	IPA	-24	82.5	4.4	2.07	0.454	0.435	0.00018	0.00014	0.00073	0.03629	0

ii VOC emission sources and its mitigation measures

Sources - Charging Materials

Measures

- Enclose Process
- Minimum flanges & joints
- Handled by pump with double mechanical seals
- Proper Ventilation
- Adequate PPEs

H

- **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Storage tanks	Caustic lye, Liq. Ammonia, Hydrochloric Acid, Acetone, IPA, Toluene, Methanol.	Storage at ATP
Drum/Barrel storage	MDC, Hexane, Thionyl Chloride, Acetic Anhydride, THF, Diethyl Amine,	Storage at ATP

	Morpholine, Triethyl amine, Diethylene Glycol Acrylamide.	
Cylinder	Ammonia gas, HCl gas, Chlorine gas, Hydrogen gas.	Under Pressure
Carboys	Chloroform, Ethyl acetate, EDC, Piperidine, p-formaldehyde.	Storage at ATP
Glass Bottle	Bromine.	Storage at ATP

- **Applicability of PESO** : Will be obtained

- During the meeting dated 18/03/2020, technical presentation made by the 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 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, NH3 & VOCat 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 ISCST – 3. 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 noted that proposal is new in GIDC Sayakha. Source of water is GIDC. PP mentioned that effluent generated from process, washing, scrubber, boiler blow down and cooling tower blow down will be treated in in-house ETP consisting of primary treatment and treated effluent will be sent to Common MEE of BEIL, Dahej for further treatment and disposal. PP has proposed one steam boiler and one TFH. Fuel used will be Bio Coal /Briquette /Coal. PP has addressed Hazardous Waste as per HWR – 2016. Committee noted that PP has addressed EMP & CER satisfactorily.
- Compliance of ToR found satisfactory.
- ***After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.***

6	**SIA/GJ/IND2/49298/2019**	**M/s. Ketul Chem Pvt. Ltd.** Plot No. D2/CH/132, GIDC Dahej-II, Dist: Bharuch.	EC – Reconsideration

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/49298/2019 on dated 21/01/2020 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 16/11/2019.
- Project proponent has submitted EIA Report prepared by M/s. Aqua Air Environmental Engineers Pvt. Ltd. based on the TOR issued by SEIAA.
- This is new unit proposes for manufacturing of synthetic organic chemical as tabulated below:

SR.NO	NAME OF PRODUCTS	CAS NO.	Quantity (MT/Month)	END USE
Pharma Intermediate Group-1				
1	1, 1-Cyclohexane diacetic acid monomide	99189-60-3	70	Pharma Intermediate/Gabapentin
2	1,1- Cyclohexane diacetic acid (Di-Acid)	11/7/4355		Pharma Intermediate/Gabapentin
3	2-Cyanoacetamide	107-91-5		Pharma Intermediate/pregablin
4	Ethyl cyanoacetate	105-56-6		Pharma Intermediate/pregablin
5	Methyl cyanoacetate	105-34-0		Pharma Intermediate/pregablin
6	± 3-(Carbamoyl methyl)-5-methyl hexanoic acid (CMMHA)	181289-15-6		Pharma Intermediate/pregablin
7	3R-(-)-3-(Carbamoyl methyl)-5-methyl hexanoic acid	181289-33-8		Pharma Intermediate/pregablin
8	2-Cyano pyrazine	19847-12-2		Pharma Intermediate/pyrazinamide
9	2-Cyano pyridine	100-70-9		Pharma Intermediate/bromazepine
10	4-Cyano pyridine	100-48-1		Pharma Intermediate/bromazepine
11	Cyanoacetic acid	372-09-8		Pharma Intermediate/pregablin
Pharma Intermediate Group-2				
12	4-hydroxy Acetophenone	99-93-4	75	Pharma Intermediate/atenolol
13	4-Hydroxy phenyl acetamide	17194-82-0		Pharma Intermediate/atenolol
14	2-(4-Hydroxyethyl)phenol	56718-71-9		Pharma Intermediate/Metoprolol
15	2-{4-(2-Methoxy ethyl) phenoxy} methyl oxirane	56718-70-8		Pharma Intermediate/Metoprolol

16	4-(2-Methoxy ethyl Phenol) OR MEP	501-94-0		Pharma Intermediate/Metoprolol
17	2-Chloro ethanol	107-07-3		pharma intermediate/ thiodiglycol
18	4'-Methyl-2-cyanobiphenyl	114772-53-1		pharma intermediate/ losartan
19	4'-(bromomethyl)-[1,1'-biphenyl]-2-carbonitrile	114772-54-2		Pharma Intermediate/losartan
20	4'-methyl-2-biphenyl carboxylic acid methyl ester	114772-34-8		pharma intermediate/ valsartan
21	2-(Thiophen-2yl) ethanol	5402-55-1		Pharma Intermediate/clopidogrel
22	4-Hydroxy benzaldehyde	123-08-0		pharma intermediate/ Pioglitazone
23	2,4-Dichloro-5-fluoro acetophenone	704-10-9		Pharma Intermediate/ketaconazole
24	2',4'-dichloroacetophenone	2234-16-4		Pharma Intermediate/ketaconazole
25	Ethyl ethoxy methylene malonate	87-13-8		Pharma Intermediate/glibenclamide
26	N-Acetyl thiazolidine-4-caboxylic acid	5025-82-1		Pharma Intermediate/ Folcisteine
27	Methyl Isobutyryl acetate	42558-54-3		Pharma Intermediate/ atorvastatin
28	D (-) P-Hydroxyphenyl glycine methyl ester	57591-61-4		Pharma Intermediate/amoxicillin
29	5-Methyl-2-pyrazine carboxylic acid	5521-55-1		Pharma Intermediate/glipizide
30	Iminostilbene carbonyl chloride	33948-22-0		Pharma Intermediate/carbamazepine
31	10-Methoxy Iminostilbene	4698-11.7		Pharma Intermediate/oxcarbamezepine
32	2-Chloro-4-(4-chloro phenoxy) acetophenone.	119851-28-4		Pharma Intermediate/difenoconazole
33	2-Amino-4-Hydroxy Acetophenone	90033-64-0		Pharma Intermediate/ractopamine
34	2-Bromo-4'-hydroxy Acetophenone	2491-38-5		Pharma Intermediate/ractopamine
35	2-Chloro-4'-hydroxy Acetophenone	6305-04-0		Pharma Intermediate/ractopamine
Bulk Drugs Group-1				

36	Pregabalin	148553-50-8		api/anti covulsant
37	Albendazole	54965-21-8		api/anti worm
38	Atenolol	29122-68-7		api/beta bocker
39	Atorvastatin Calcium	134523-00-5		api/cardiovascular
40	Carbamazepine	298-46-4		api/anti epileptic
41	Gabapentin	60142-96-3		api/anti covulsant
42	Ketoconazole	65277-42-1		api/anti fungal
43	Losartan potassium	124750-99-8		api/hypertension
44	Metoprolol Succinate	98418-47-4		api/hypertension
45	Metoprolol Tartrate	37350-58-6		api/hypertension
46	Oxcabazepine	28721-07-5		api/anti epileptic
47	Pantaprazol Sodium	138786-67-1		api/anti ulcer
48	Ractopamine hydrochloride	90274-24-1		api/beta agonist
49	Ritonavir	155213-67-5	30	api/antiretroviral
50	Rivaroxaban	366789-02-8		api/anticoagulant
51	Salmeterol xinafoate	94749-08-3		api/anti asthamatic
52	Saxagliptin Monohydrate	945667-22-1		api/anti diabetic
53	Soterenol	13642-52-9		api/anti asthamatic
54	Sitagliptin	486460-32-6		api/anti diabetic
55	Valsartan	137862-53-4		api/hypertension
56	Glipizide	29094-61-9		api/anti diabetic
57	Rosuvastatin Calcium	147098-20-2		api/cardiovascular
58	Sofosbuvir	1190307-88-0		api/anti viral
59	Telmisartan	144701-48-4		api/hypertension
60	Mirtazapine	61337-67-5		api/anti histamine
61	Nevirapine	129618-40-2		api/HIV/AIDS curing
62	Octopamine	104-14-3		api/veternary
63	Tranexamic acid IP	1197-18-8		api/antifibrinolytics
Specialty Chemicals				
64	p-Chloro phenol	106-48-9	120	Raw material for 4,2(Methoxyethyl)phenol
65	o-Chloro phenol	95-57-8		Raw material for 2-Chlorobenzaldehyde
66	2,6-Dichloro toluene	118-69-4		Raw material for 2 methyl 3 biphenyl methanol

67	Hydrazine hydrate	10217-52-4		Raw material for 1,2,4-Triazole
68	1,2,4-Triazole	288-88-0		Raw material for 1-Methyl-1,2,4-Triazole
69	3-Cyano pyridine	100-54-9		Raw material for nictonic acid/nictonamide
70	Phenyl Ethyl Alcohol (PEA)	60-12-8		Raw material for Phenyl Methyl Alcohol
71	Phenyl ethyl methyl ether (PEME)	3558-60-9		Raw material for Phenyl ethyl methyl ether
72	Triclosan	5-34-3380		Raw material for Irgasan
73	2–Amino–4, 4' – Dichloro Diphenyl Ether	121-27-7		Raw material for Yellow acid
74	2–Hydroxy–4, 4'–Dichloro Diphenyl Ether	3380-44-7		Raw material for Tinosan
75	Decabromo diphenyl oxide	1163-19-5		Raw material for Saytex
76	Alpha phenyl ethyl amine dl	618-36-0		Raw material for R+ 1 phenylethylamine
77	(R)-(+)-1-Phenylethylamine	3886-69-9		Raw material for R- carbommoyl methyl 5 methyl hexanoic acid
78	(S)-(-)-1-Phenylethylamine	2627-86-3		Raw material for (S)-3-Cyano-5-methylhexanoic acid
79	L-(+)-Mendelic acid	17199-29-0		Raw material for Dulexotine Hydrochloride
80	Malononitrile	109-77-3		Rawmaterial for 2 chlorobenzaldehyde malononitrile
81	2,4-Difluoro aniline	367-25-9		Raw material for 2,4-difluoro-5-chloronitrobenzene
82	2,2-Dibromo-2-Cyanoacetamide	10222-01-2		Raw material for Bioban (dbnpa)
83	2-(4-tert-butyl)phenyl) ethanol	5406-86-0		Raw material for 2-Benzoxazol-2-yl-1-(4-tert-butylphenyl)ethanol
	Total		**295**	

- 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 18/02/2020.
- Salient features of the project are as under:

Sr.	Particulars	Details

no.		
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	22.0 Crores
	Details of EMP	

Environment Issue/ Component	**Remedial Measures**	**Component**	**Capital Cost of EMP**	**Recurring Cost of EMP**
Hazardous waste generation & disposal	Proper collection, Safe Handling, Storage within premises and disposal of waste at approved TSDF, incineration facility, re-cyclers, re-processors.	Cost of TSDF/CHWIF membership letter of M/s. SEPPL, Dahej	Rs. 75,000/-	--
		Construction of Hazardous waste storage yard	Rs. 15,00,000/-	--
		Cost for TSDF disposal	--	Rs. 1,53,60,000/- per year
		Cost for incineration disposal	--	Rs. 3,74,40,000/- per year
Effluent generation and treatment	Low COD effluent from ETP will be sent to in-house RO & High COD effluent will be treated in in-house MEE.	Construction cost Effluent treatment plant & RO	Rs. 1,00,00,000/-	
		Treatment cost of effluent/ year	--	Rs. 4,38,60,000/- per year
Details of Air Emission	Adequate pollution control system will be provided for control of gaseous emission. ▪ Adequate stack height for better dispersion of pollutants ▪ Dust Control During Construction	Cost of stack installation	Rs. 2,00,000/-	--
		Cost of multi-cyclone separator with bag filter and Water Scrubber	Rs. 8,00,000/-	--
		Cost of scrubber	Rs. 8,00,000/-	--
		Cost of maintenance of APCM System	Rs. 75,000 /-	Rs. 5,00,000/- per year

Plantation	30 % of the plant area will be developed as greenbelt.	Cost of tree plantation	Rs. 15,60,000/-	
		Cost of maintenance	--	Rs. 1,00,000/- per year
Monitoring of Environmental parameters	Regular monitoring of various environmental parameters will be carried out to check the effectiveness of the control system.	Cost of monitoring of various environmental parameters	Rs. 35,00,000/-	Rs. 3,00,000/-per year
TOTAL			**Rs. 1,85,10,000/-**	**Rs. 9,75,30,000/- per Year**

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

As per OM no. 22-65/2017 on dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER), Brownfield projects have to contribute 2% of the Additional Capital Investment, the company will contribute Rs 44.0 Lakhs as funds for CER activities

Activities to be carried out under CER:

- Education,
- Health,
- Environment,
- Agriculture

B	**Total Plot area** (sq. meter)	13,923 Sq. m.
	Green belt area (sq. meter)	4,177 Sq. m.
C	**Employment generation**	**150**
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.	GIDC/DEE(WS)/BRH/235

ii **Water consumption (KLD)**

Category	**Quantity KLD**	**Remarks**
(G) Domestic	10.0	
(H) Gardening	2.0	
(I) Industrial		
Process	136.4	
Washing	20.0	
Boiler	40.0	
Cooling	10.0	
Scrubber	4.0	
Industrial Total	210.4	
Total (A + B + C)	**222.4**	

1) **Total water requirement** for the project:222.4 KLD
2) Quantity to be **recycled**: 9.6 KLD
3) Total **fresh water** requirement: 212.8 KLD

(Total water requirement = Fresh water + Recycled water)

iii **Waste water generation (KLD)**

Category	Waste water KLD	Remarks
(E) Domestic	8.0	
(F) Industrial		
Process	114.2	Low COD & TDS: 103.8 KLD (ETP-1) High COD & TDS: 10.4 KLD (ETP-2)
Washing	20.0	Low COD & TDS: 20.0 KLD (ETP-1)
Boiler	10.0	RO: 12 KLD, RO Reject of 2.4 KLD will be treated with ETP-1.
Cooling	2.0	
Scrubber	5.33	Reuse and sell under rule-9 permission
Total Industrial waste water	151.5	
Total [A + B]	**159.5**	

-

iv Treatment facility within premises with **capacity**

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

- ETP-1 (Primary, Secondary, Tertiary) : **126.2 KLD**
- ETP-2 (Primary) : **10.4 KLD**
- ETP-3 (RO) : **12.0 KLD**

Treatment scheme including segregation at source.

- **Stream I (Low COD & TDS Stream) (123.8 KLD + 2.4 RO Reject)**
- First all non-toxic and biodegradable streams (low & medium COD & TDS) of wastewater shall pass through oil & grease removal tank (ogrt-01) where floating o & g shall be removed manual from top and collected in o & g collection tank (ogct-01). Then effluent shall be collected in collection cum equalization tanks-01 (cets-01). Pipe grid is provided at bottom of the cets-01 to keep all suspended solids in suspension and to provide proper mixing. 2 nos. Of air blowers (1w+1 stand-by) shall supply air through to pipe grid.
- Then after, equalized wastewater shall be pumped to neutralization tank-1 (nt-01-b) where the continuous addition and stirring of lime solution is done to maintain neutral ph of wastewater from lime dosing tanks (ldt-01-a/b) as per requirement with help of lime dosing pumps. Then after, neutralized wastewater shall go to flash mixer (fm-01) by gravity. Alum shall be dosed from alum dosing tanks (adt-01-a/b) with help of dosing pumps. Then coagulated effluent shall be collected in flocculator (fl-01) where polyelectrolyte shall be dosed from polyelectrolyte dosing tank-1 (pedt-01) with help of pumps to carry out flocculation with help of flocculator mechanism. Then after, coagulated wastewater shall be settled in primary clarifier-1 (pcl-01).
- Clear supernatant from pcl-01 shall be passed in aeration tank-1 (at-01). Here, condensate from MEE and ATFT through condensate storage tank (cst-01) mix with effluent. Here, biodegradation of organic matter of the wastewater shall be carried out by bacteria (suspended growth) in the at-01 and for that oxygen shall be supplied by 2 nos. of air blowers (b-02) through diffusers. Air blowers also keep MLSS in suspension.
- Then after, wastewater shall go to secondary clarifier-1 (scl-01). Here, the suspended solids shall be settled. Sludge shall be removed from bottom of scl-01 and pumped to at-1 to maintain MLSS and excess activated sludge shall be sent to sludge sump (ss-01).
- Clear supernatant from scl-01 shall go to aeration tank-2 (at-02). Here biodegradation of left out organic matter of the wastewater shall be carried out by bacteria (suspended growth) and for that oxygen shall be supplied by two nos. Of blowers (b-03) with help of diffusers. Then after, wastewater shall go to secondary clarifier-2 (scl-02) from at-2. Here, the suspended solids shall be settled. Activated sludge shall be removed from bottom of scl-02 and pumped to at-02 to maintain MLSS and remaining will be sent to ss. Nutrients will be added from nutrient dosing tanks (ndts-01) to aeration tank-1 & 2 for growth of bacteria. Clear shall be collected in intermediate sump (is-01) by gravity.
- Thereafter, the wastewater shall be passed through multi grade filter (mgf-01) to remove left out

TSS and activated carbon filter (acf-01) for final effluent polishing. After tertiary treatment, effluent shall be collected in treated effluent sump-01 (tes-01) before sent to CETP Dahej for further treatment.

- Sludge settled in pcl-01, pcl-02 and excess sludge from scl-01-b/02-b shall be collected in sludge sumps (sss-01-a/b) then sludge shall be pumped to centrifuge (cf-01) where poly shall be mixed from poly dosing tank-2 (pdt-02) with sludge to increase efficiency of centrifuge sludge dewatering. Then, dewatered sludge shall be stored in in HWSA and then ultimate disposal to TSDF. Leachate from cfs-01 and backwash from mgf-01 and acf-01 shall be collected in drain pit and pumped back to cet-01-a/b for further treatment**.**

- **Stream II (High TDS stream) (10.4 KLD Process)**
- All high TDS streams of wastewater shall be collected in equalization cum neutralization tank-01 (ent-01). Here caustic shall be added from ldt-01 by gravity. Mixer is provided at bottom of the ent-01 to keep all suspended solids in suspension and for proper mixing.
- Then, neutralized wastewater shall be pump to flash mixer-02 (fm-02) where alum and polyelectrolyte shall be dosed from alum dosing tank (adt-01) and polyelectrolyte dosing tank (pedt-01) respectively by gravity. Then it will go into pst-01 where solids are allowed to settle and clear supernatant from pst-01 shall be collected in treated effluent sump (tes-01) before sent to common MEE M/s. BEIL for further treatment.

- **Stream-III (12 KL)**
- All utilities streams of wastewater shall be passed through duel media filter (dmf-01) to remove left out TSS. After treatment, effluent shall be collected in RO feed tank (roft-01) before sent to RO-01 for further treatment. RO-01 permeate water shall be collected in RO permeate tank (ropt-01) before reuse in process & RO-01 reject shall be sent to ETP for further treatment.
-

Note: (In case of CETP discharge) :

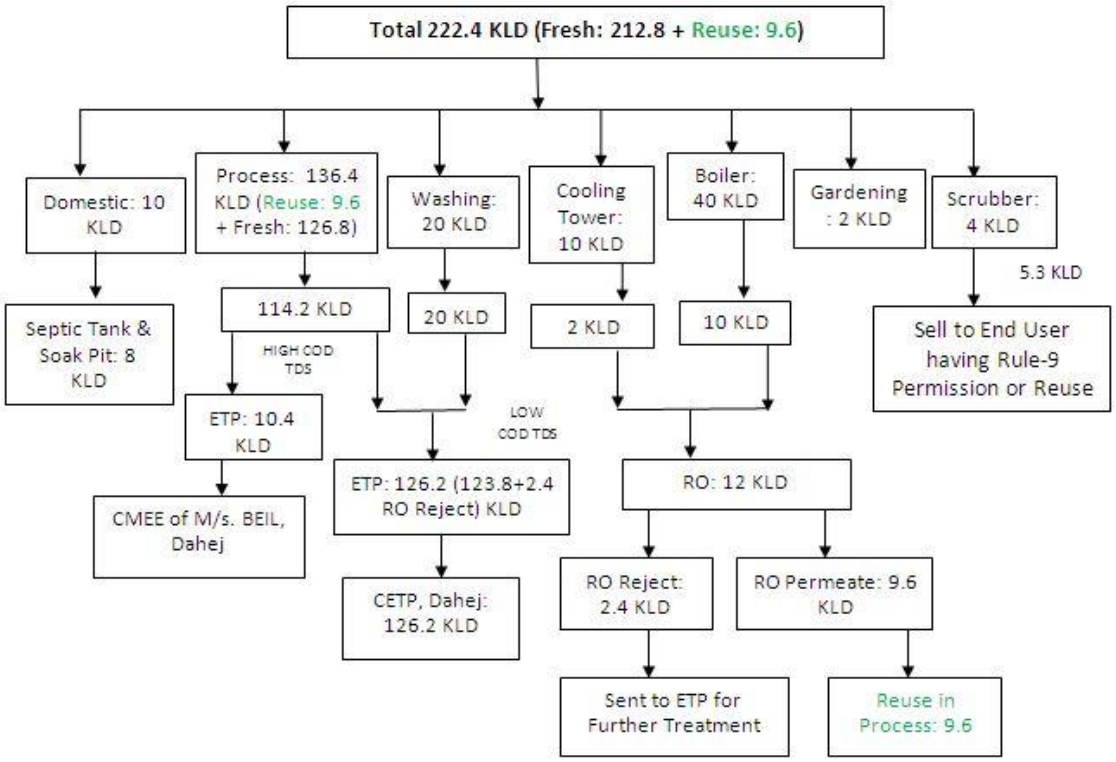
Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP.

- Unit has proposed ETP to achieve CETP norms, and then after unit will discharge the effluent to CETP, Dahej through Pipeline.

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

- Low COD & TDS effluent will be discharge into CETP, Dahej after treated in Primary, Secondary and tertiary treatment. High COD & TDS effluent will be treated in primary treatment and then sent to CMEE of BEIL, Dahej and waste water from Cooling and boiler will be treated in RO and reuse within premises.

v	Mode of Disposal & Final meeting point	
	Domestic:	Septic tank/Soak Pit System
	Industrial:	Low COD & TDS: Effluent will be treated in Primary, Secondary and tertiary treatment, after that sent to CETP, Dahej. High COD & TDS: Effluent will be treated in in primary treatment and then sent to CMEE of BEIL, Dahej. Waste water from Cooling and boiler will be treated in RO and reuse within premises. ➢ 126.2 KLD Low COD & TDS effluent will be discharge into CETP, Dahej after treated in Primary, Secondary and tertiary treatment. ➢ 10.4 KLD High COD & TDS effluent will be treated in primary treatment and then sent to CMEE of BEIL, Dahej and waste water from Cooling and boiler will be treated in RO and reuse within premises. ➢ RO Permeate of 9.6 KLD will be reuse in Process. ➢ Domestic waste water (8.0 KL/day) will be disposed by septic tank or soak pit system.
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ CETP, Dahej, CMEE of BEIL,Dahej	
	Membership of Common facility (CF) **(For waste water treatment)**	
	GIDC/BRH/DEE (DRG)/362	
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.**
RO Permeate: 9.6 KLD	Boiler: 9.6 KLD	COD: 120 mg/l BOD: 30 mg/l TDS: 300 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 With**	**Stack Height (meter)**	**Type of Fuel**	**Quantity of Fuel MT/Day**	**Type of emissions i.e. Air**	**Air Pollution Control Measures**

	Capacity				Pollutants	(APCM)
1	Boiler (4 TPH)	30	Coal	4	SPM < 150 mg/Nm^3 SO_2 < 100 ppm NO_x < 50 ppm	Multi Cyclone Separator with Bag Filter & Water Scrubber
2	D. G Set (750 KVA)	11	HSD	2	SPM < 150 mg/Nm^3 SO_2 < 100 ppm NO_x < 50 ppm	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 Vent (Ketoconazole)	HCl	11	Two stage Water scrubber
2	Process Vent (Valsartan)	SO_2	11	Two stage Alkali scrubber
3	Process Vent (Ketoconazole)	HBr	11	Two stage Water scrubber
4	Process Vent (4-Hydroxy Phenyl Acetamide)	NH_3	11	Two stage Water scrubber

-

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

As below:

Following measures will be adopted to prevent and control fugitive emissions:

1. Airborne dust at all transfers operations/ points will be controlled either by spraying water or

providing enclosures.

2. Adequate ventilation will be provided.
3. Regular maintenance of valves, pumps, flanges, joints and other equipment will be done to prevent leakages and thus minimizing the fugitive emissions.
4. Entire process will be carried out in the closed reactors with proper maintenance of pressure and temperature.
5. Periodic monitoring of work area will be carried out to check the fugitive emission.
6. Stand by pumps will be provided on all scrubbers. Besides, scrubbers will be equipped with on-line pH meter with hooter system for better operational control.
7. Close feeding system will be provided for centrifuges. Centrifuge and filtrate tank vents will be connected to vent chillers.
8. Minimum number of flanges, joints and valves in pipelines.
9. Regular inspection of floating roof seals and proper preventive maintenance of roofs and seals for tanks.
10. Fugitive emission over reactors, formulation areas, centrifuges, chemical loading, transfer area will be collected through hoods and ducts by induced draft and controlled by scrubber/ dust collector.
11. Dedicated scrubber will be provided are used for fugitive emissions to control.
12. For dust emissions bag filter will be provided.

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.

F **Hazardous wastes**

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

i

Sr. No.	Type Of Waste	Source Of Generation	Category	Quantity (MT/Annum)	Mode Of Treatment And Disposal
1	Spent carbon	± 3-(Carbamoyl methyl)-5-methyl hexanoic acid (CMMHA), 4-Hydroxy phenyl acetamide, Triclosan, Sitagliptin, Nevirapine	Schedule-(I)-(28.3)	504	Collection, Storage, Transportation and sent for co-processing in cement industries or sent to Incineration site.
2	Sulphuric Acid (50-	1,1- Cyclohexane diacetic	Schedule-	13,629	Collection, Storage,

	65%)	acid (Di-Acid), 2–Hydroxy–4, 4'–Dichloro Diphenyl Ether, Triclosan,	(I)-(28.1)		Transportation and Sell to end users Having Rule-9 permission.
3	HCl (30%)	4-hydroxy Acetophenone, 2,6-Dichloro toluene, Saxagliptin Monohydrate & Scrubber	Schedule-(I)-(28.1)	1,402	Collection, Storage and Reuse in 3R-(-)-3-(Carbamoyl methyl)-5-methyl hexanoic acid (Reqd Qty. 5712 MT/Annum)
4	Dil. Formic Acid	1,2,4-Triazole	Schedule-(I)-(28.1)	2,706	Collection, Storage and Reuse in 1,2,4-Triazole (Reqd Qty. 2978.0 MT/Annum)
5	NaCl Salt	Cyanoacetic acid, 2–Amino–4, 4' – Dichloro Diphenyl Ether, Malononitrile, Pregabalin	Schedule-(I)-(28.1)	1,872	Collection, Storage, Transportation and Disposal to TSDF site.
6	Discarded Drums/Bags/Liners	Raw Material and Storage	Schedule-(I)-(33.1)	1,500 Nos.	Collection, Storage, Decontamination, Reuse, Transportation and sale to authorized vendor.
7	Spent Catalyst	4-(2-Methoxy ethyl Phenol) OR MEP, Phenyl Ethyl Alcohol (PEA), Ritonavir	Schedule-(I)-(28.2)	72	Collection, Storage, Transportation and Sell to Regenerator Having Rule-9 permission.
8	Organic Waste	Saxagliptin Monohydrate, Rosuvastatin Calcium	Schedule-(I)-(28.1)	1,020	Collection, Storage, Transportation and sent for co-processing in cement industries or sent to common incineration site.
9	Iron Sludge	2–Amino–4, 4' – Dichloro	Schedule-	756	Collection, Storage,

		Diphenyl Ether	(I)-(28.1)		Transportation and Disposal to co-processing in cement industries or sent to TSDF site.
10	Inorganic Waste	2',4'-dichloroacetophenone, Soterenol, Triclosan, Octopamine	Schedule-(I)-(28.1)	3,372	Collection, Storage, Transportation and Disposal to co-processing in cement industries or sent to TSDF site.
11	Spent Solvent	Manufacturing Process	Schedule-(I)-(28.6)	31,500	Collection, Storage and reuse within premises after distillation.
12	Distillation Residue	Distillation plant	Schedule-(I)-(20.3)	948	Collection, Storage, Transportation and sent for co-processing in cement industries or sent to common incineration site.
13	Off Specification Products	Failure of Batch	Schedule-(I)-(28.4)	24	Collection, Storage, Transportation and sent for co-processing in cement industries or sent to common incineration site.
14	Used Oil	From Moving Machineries	Schedule-(I)-(5.1)	12	Collection, Storage, Transportation, Reuse and sale to authorized recycles.
15	Sodium Acetate (25%)	Atorvastatin Calcium	Schedule-(I)-(28.1)	18	Collection, Storage, Transportation and Sell to end users Having Rule-9

					permission.
16	Sodium Sulphate (95%)	Ritonavir	Schedule-(I)-(28.1)	45	Collection, Storage, Transportation and Sell to end users Having Rule-9 permission.
17	Sodium Bromide (95%)	2,2-Dibromo-2-Cyanoacetamide, Telmisartan	Schedule-(I)-(28.1)	144	Collection, Storage, Transportation and Sell to end users Having Rule-9 permission.
18	Sodium Bisulfite (30-40%)	Triclosan	Schedule-(I)-(28.1)	726	Collection, Storage, Transportation and Sell to end users Having Rule-9 permission.
19	KCl (50%)	Sofosbuvir	Schedule-(I)-(28.1)	492	Collection, Storage, Transportation and Sell to end users Having Rule-9 permission.
20	Ammonium Chloride (10-15%)	Sofosbuvir	Schedule-(I)-(28.1)	15	Collection, Storage and Reuse in Sofosbuvir (Reqd Qty. 14.4 MT/Annum) excess qty will be sold to end users having rule-9 permission.
21	Magnesium Sulphate Salt	1,2,4-Triazole & Scrubber	Schedule-(I)-(28.1)	144	Collection, Storage and Reuse in Sofosbuvir (Reqd Qty. 144 MT/Annum)
22	Liq. Ammonia (20-25%)	1,2,4-Triazole & Scrubber	Schedule-(I)-(28.1)	1,836	Collection, Storage and Reuse in Hydrazine Hydrate

					(Reqd Qty. 3000 MT/Annum)
23	Potassium Acetate (50%)	Telmisartan	Schedule-(I)-(28.1)	72	Collection, Storage, Transportation and Sell to end users Having Rule-9 permission.
24	HBr (30-35%)	2-Amino-5-nitro thiazole	Schedule-(I)-(28.1)	84	Collection, Storage, Transportation and Sell to end users Having Rule-9 permission.
25	Sodium Sulphite (28%)	Scrubber	Schedule -(II)-B36	504	Collection, Storage, Transportation and Sell to end users Having Rule-9 permission.
26	Dil. Hydrogen Bromide (25%)	Scrubber	Schedule -(II)-B36	480	Collection, Storage, Transportation and Sell to end users Having Rule-9 permission.
27	ETP Sludge	ETP Treatment	Schedule-(I)-(35.3)	1,680	Collection, Storage, Transportation and Disposal to co-processing in cement industries or sent to TSDF site.

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ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	Proponent has applied for membership
iii	Details of Non-Hazardous waste & its disposal (MSW and others)	There will be no generation of Non-Hazardous waste.
G	**Solvent management**, VOC emissions etc.	

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

Solvent	Boiling Point (^{0}C)	Vapor Pressure	Input (MT)	Output (MT)	Loss	% Recovery	% Loss
EDC	83.47	100 mm Hg @ 30^{0}C	513	492	21	95.91	4.09
MDC	39.6	400 mm Hg @ 24.1^{0}C	389	379	10	97.43	2.57
Toluene	111	22 mm Hg @ 20^{0}C	654	629	25	96.18	3.82
Methanol	64.7	96 mm Hg @ 20^{0}C	803	765	38	95.27	4.73
Phenol	181.7	0.4 mm Hg @ 20^{0}C	615	597	18	97.07	2.93
IPA	82.2	82.2 mm Hg @ 20^{0}C	356	346	10	97.19	2.81
Xylene	139.3	8.3 mm Hg @ 20^{0}C	543	528	15	97.24	2.76
Ethyl Acetate	96.5	10 mm Hg @ 20^{0}C	750	732	18	97.60	2.40
Acetone	76.4	11.1 mm Hg @ 20^{0}C	687	663	24	96.51	3.49
DMF	153	3.7 mm Hg @ 25^{0}C	369	353	16	95.66	4.34

ii VOC emission sources and its mitigation measures

During operation stage, leakage through valves/pumps, leakage and emission from open drum containing chemicals, open feeding, storage tanks, etc. will be major sources of fugitive emissions and VOCs. Excess use of solvent/s may also results fugitive emission from the process vessels.

- 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. Centrifuge and filtrate tank vents will be connected to vent chillers.
- Fugitive emission over reactors, formulation areas, centrifuges, chemical loading, transfer area, will be collected through hoods and ducts by induced

draft and controlled by scrubber/dust collector.

- Emphasis will be given to solvent management/solvent loss prevention.
- Control by having proper scrubbing system.
- Condenser to trap VOC.
- 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 maintenance schedule will be adhered to avoid emissions through flange joints, pump seals etc.
- Minimum number of flanges, joints and valves in pipelines.

➢ 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.
- Solvent tank vents will be connected to vent chillers.
- Adequate ventilation will be provided.
- Airborne dust at all transfers operations/ points will be controlled either by spraying water or providing enclosures.

➢ Breather valves will be provided on solvent tanks.

H

➢ **Details regarding storage of Hazardous chemicals**

Storage details	**Name of major Hazardous chemicals**	**Remarks**
Storage tanks	HCl, H_2SO_4, Methanol, Toluene, Ethylene Oxide, Chloroform, Liq. Ammonia	
Drum/Barrel storage	Ammonium Chloride, Chloro Acetyl Chloride, Phenol, Methyl Cynoacetate,	

		Cylinder	Chlorine, Hydrogen, Nitrogen	

- **Applicability of PESO** : Yes Applicable

- During the meeting dated 18/02/2020, technical presentation made 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 October 2018 to December 2018. Ambient Air Quality monitoring was carried out for PM10, PM2.5, Sulphur Dioxide, Nitrogen Oxide, CO, O3, NH3, 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 ISCST3. 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 new in GIDC Dahej-II, Bharuch.
- During SEAC meeting on 27/12/2019, committee noted that Source of water is GIDC. Committee noted that PP has mentioned green belt 30% of total area instead of as per CPCB guidelines. PP mentioned that Low COD effluent from Plant is treated in primary and secondary and tertiary ETP and will be used discharged into GIDC drainage leading to CETP. High COD and TDS effluent will be sent to CMEE, Dahej after primary treatment. Boiler and cooling blow down will be treated in RO plant while exhausted scrubbing media effluent will be sold to end users having Rule- 9 permission and reuse in plant. Committee insisted for segregation of stream like high COD/TDS, Low COD/TDS with distinctly mentioning characteristics of each segregated stream and its source and explores possibility for reuse of effluent rather than discharge. Committee asked PP to submit revised membership certificate of CMEE with mentioning total consented capacity, actual capacity, Booked load and spare capacity of CMEE. Committee noted that PP has addressed MCS and bag filter and water scrubber as APCM with coal fired boiler and two stage scrubber with process reactor. Committee noted that PP has not addressed Hazardous Waste table as per HWR – 2016 along with MoU/LOI for selling of spent acid, scrubber bleed liquer disposal etc. Committee also insisted for explore possibility for reuse of hazardous waste like spent acid. Committee noted that PP has not properly addressed LDAR for each solvent with its technical details and its mitigation measures for curb solvent losses. Committee also noted that PP has not submitted need based CER activity for surrounding villages. Committee also asked PP to submit revised EMP with mentioning mitigation measures for dust control during construction phase as per MoEF &CC OM dated 25/01/2018. Committee deliberated on

baseline data, green belt and LDAR etc for proposed project

- **<u>After detailed discussion, Committee unanimously decided to defer the proposal and call the project proponent for presentation only after satisfactory submission of the following details.</u>**
  1. Segregation of stream like high COD/TDS and Low COD/TDS effluent with distinctly mentioning Characteristics of each segregated stream and its source.
  2. Explore possibility for reuse of waste water rather than discharge and revised membership certificate for CMEE with mentioning total consented capacity, actual capacity, booked load capacity and spare capacity.
  3. Submit revised EMP with mentioning mitigation measures for dust control during construction phase as per MoEF & CC OM dated 25/01/2018.
  4. Submit need based CER activity for surrounding villages with budgetary provision for five years.
  5. Readdress LDAR for each solvent with its technical details and its mitigation measures for curb solvent losses in atmosphere.
  6. MoU/LOI for selling of Hazardous waste like spent acid, scrubber bleed liquor etc to end users having Rule- 9 permission and explore possibility for reuse of hazardous waste like spent acid.
- Project proponent made presentation for the above mentioned query dated 18/03/2020 for the above mentioned points.
- PP presented replied as below:
  1. PP presented Segregation of stream like high COD/TDS and Low COD/TDS effluent with distinctly mentioning Characteristics of each segregated stream and its source.
  2. PP presented that 32.0 KL/day Boiler, washing & Cooling Blow down water stream will be treated in **RO plant. 25.6 KLD RO permeates will be reuse in process water**. RO reject will be sent to ETP for further treatment. Further PP presented membership certificate for CMEE by mentioning total consented capacity, actual capacity, booked load capacity and spare capacity.
  3. PP presented revised EMP by mentioning mitigation measures for dust control during construction phase as per MoEF & CC OM dated 25/01/2018.
  4. PP submitted need based CER activity for surrounding villages with budgetary provision for five years.
  5. PP readdressed LDAR for each solvent with its technical details and its mitigation measures for curb solvent losses in atmosphere.
  6. PP submitted MoU/LOI for selling of Hazardous waste like spent acid, scrubber bleed liquor etc to end users having Rule- 9 permission.
- Committee deliberated on the reply submitted by PP and found it satisfactory.
- Compliance of ToR found satisfactory.
- ***<u>After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.</u>***

7	SIA/GJ/IND2/47825/2019	**M/s. Shivam Inchem**	**EC – Reconsideration**

		Plot No - D-2/CH/202, GIDC Ind Estate, Dahej-2, Ta - Vagra, Dist –Bharuch.	

Category of the unit: 5(f)

Project status: Expansion

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/47825/2019 dated 05/07/2017 for obtaining Environmental Clearance.
- SEIAA issued TOR to PP vide letter dated 03/10/2019.
- Project proponent has submitted EIA Report prepared by M/s: Aqua Air Environmental Engineering Pvt. Ltd 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 MT/Month			End-Use Of the Products	Remark
			Existing	Proposed	Total		
EXISTING							
1	Ferrous Sulphate	7782-63-0	600	0	600	Hematinic	--
2	Magnesium Sulphate	7487-88-9	600	0	600	Laxative	--
3	Copper Sulphate	7758-98-7	100	0	100	Anti fungal	--
4	Zinc Sulphate (Heptahydrate & Monohydrate)	7446-20-0 & 7446-19-7	150	0	150	Pregnancy Category	--
5	Sodium Thiosulphate	7772-98-7	300	0	300	Anti fungal	--
PROPOSED Group-A							
6	7-(1,3-Dioxolan-2-ylmethyl)-1,3-dimethyl purine-2,6-dione Doxofylline	69975-86-6	0	40	40	Anti Asthmatic	**Unit is mfg either individual or total production of Group – A shall not exceed 40 MT/Month.**
7	2-[2-(4-dibenzo [b,f] [1,4] Thiazepin -11-yl-1-piperazinyl)ethoxy]-ethanol Quetiapine fumarate	111974-72-2				Antipsychotic	

8	3-Ethyl 5-methyl 2-{(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-6-methyl-1,4-dihydropyridine-3,5-dicarboxylate Amlodipine besylate	113994-41-5				Anti Hypertensives	
9	Aceclofenac	89796-99-6				Anti asthematic	
10	Diclofenac Sodium	15307-79-6				Anti Inflammatory	
11	Pregabalin	148553-50-8				Pharma	
12	Atorvastatin Calcium	134523-00-5				Anti Cholesteremic	
13	Phenylephrine Hydrochloride	61-76-7				Decongestant Drug	
Group-B							
14	Ethyl Peridone	28141-13-1	0	80	80	Dyes Intermediates	**Unit is mfg either individual or total production of Group-B shall not exceed 80 MT/Month.**
15	Methyl Peridone	694-85-9				Dyes Intermediates	
16	Synthetic Rubber Adhesive	--	0	200	200	Auto Sector	**--**
		Total	**1750**	**320**	**2070**		

- 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 04/03/2020.
- Salient features of the project for Water, air and Hazardous waste management are as under:

Sr. no.	Particulars	Details

A	Total **cost of Proposed** Project (Rs. in Crores):	Existing:0.45 Crores Proposed:4.05 Crores **Total: 4.50 Crores**

ii **EMP details (Capital cost & Recurring cost)**

Brief details of EMP

COMPONENT	CAPITAL COST OF EMP	RECURRING COST OF EMP (per Month)
Cost	Rs.95 Lakhs	Rs. 27.179 Lakhs

Bifurcation of EMP Cost

Sr. No	Unit	Installed Capacity (KLD)	Capital Cost (Rs. In Lakhs)	Operating Cost (Lacs/Month)	Maintenance Cost (Lacs/Month)	Total Recurring Cost (Lacs/Month)
1	Effluent Treatment Plant	30 KLD	60.0	25.20	--	85.2
2	APCM	--	14.5	--	0.75	15.25
3	Hazardous Waste	--	9.5	6.02	--	15.52
4	AWH Monitoring Cost	--	5.0	0.062	--	5.06
5	Greenbelt	--	6.0	--	0.16	6.16
	Total		**95.0**	**31.282**	**0.91**	**127.192**

iii **CER details (As per MoEF&CC OM dated 01/05/2018)**

As per OM no. 22-65/2017 on dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER), Greenfield projects have to contribute 2% of the Capital Investment, the company will contribute Rs. 9.0 Lakhs as funds for CER activities

Component	As per Norms	Allocation
CER	Rs. 9.0 Lakhs (2 %)	Rs. 9.0 Lakhs (2 %)

Activities to be carried out under CER:

CSR Activities	Fund (Rs.)
2020-2021	

Diabetics detection &, Senior Citizen Health Care Camps & donate free medicine in Jolva village	1,00,000/-
2021-2022	
Supply & Fixing of CC Precast interlocking paving blocks in Prathamik School about 100 Sq. Meter in Jolva Village	3,00,000/-
2022-2023	
Provided Solar street light set with battery backup (18W -10 Nos.204 KW to 5 KW) in Glenda Village	3,50,000/-
2023-2024	
To provide fund for Road development in vadadla village	1,50,000/-
TOTAL	**9,00,000 /-**

B	**Total Plot area** (sq. meter)	Existing: 3832.49 Sq. m. Proposed: 4500 Sq. m. Total: 8332.49 Sq. m.
	Green belt area (sq. meter)	Existing: 500 Sq. m. Proposed: 2250 Sq. m. Total: 2750 Sq. m. (33 %)
C	**Employment generation**	Direct - 10 Employees Indirect - 20 Employees Total - 30 Employees
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.	GIDC Water Supply
ii	**Water consumption (KLD)**	

Category	**Existing KLD**	**Proposed (Additional) KLD**	**Total after Expansion KLD**
(J) Domestic	1.5	1.5	3.0
(K) Gardening	2.0	3.0	5.0
(L) Industrial			
Process	6.5	27.0	33.5
Washing	0	1.0	1.0
Boiler	0	5.0	5.0
Cooling	0	5.0	5.0

Others	0	1.5	1.5
Industrial Total	6.5	39.5	46.0
Grand Total (A+B+C)	10	44	54

1) **Total water requirement** for the project: 54 KLD
2) Quantity to be **recycled:**10KLD
3) Total **fresh water** requirement: 46KLD

iii **Waste water generation (KLD)**

	Existing KLD	**Proposed (Additional) KLD**	**Total after Expansion KLD**
(A) Domestic	1.0	1.0	2.0
(B) Industrial			
Process	0	20	20
Boiler	0	0.5	0.5
Cooling	0	0.5	0.5
Washing	0	1.0	1.0
Others (Scrubber)	0	2.0	2.0
Industrial Total	0	24.0	24.0
Grand Total (A+B)	1.0	25.0	26.0

iv Treatment facility within premises with **capacity**

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

- In-house ETP (Primary & Secondary) & MEE- 30 KLD Capacity

Treatment scheme including segregation at source.

Source of water will be met through Saykha GIDC Water Supply.

Total water requirement will be 54 m^3/day (Fresh - 44 m^3/day + Reuse - 10 m^3/day).

Total 26.0 m^3/day (22 m^3/day: Industrial + 2 m^3/day: Scrubber + 2.0 m^3/day: Domestic) of effluent shall be generated.

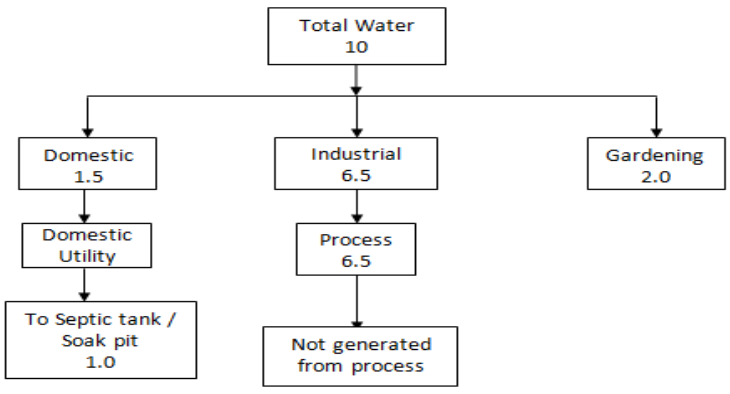
Company will be treated effluent 12 m^3/day {10 m^3/day High COD first treated into solvent stripper out of 9.2 m^3/day & 2.0 m^3/day Utility) shall be treated into ETP & In house MEE plant and MEE Condensate water shall be reused into boiler & cooling.

Scrubbing media (2.0 m^3/day) will be reused in plant premises and sell to end user who is having

	Rule-9 Permission. Domestic Waste water - 2.0 m^3/day will be disposed by septic tank & 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**. ➢ Applicable	
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ Not Applicable	
v	Mode of Disposal & Final meeting point	
	Domestic:	2.0 m^3/day domestic wastewater will be disposed through Septic Tank/Soak Pit.
	Industrial:	Unit shall propose solvent stripper, primary & MEE for high COD & Utility effluent. And primary, secondary, tertiary treatment plant for low COD effluent will be treated into ETP and send to CETP, Dahej for further treatment & final disposal.
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE, CHWIF etc. **Name of CF**	
	Common MEE Facility	
	Membership of Common facility (CF) **(For waste water treatment)**	
	Common CETP Facility Unit have obtained membership of Common CETP of Dahej vide letter no. GIDC/Bharuch/DEE (Drg)/909 dated 18/11/2016	

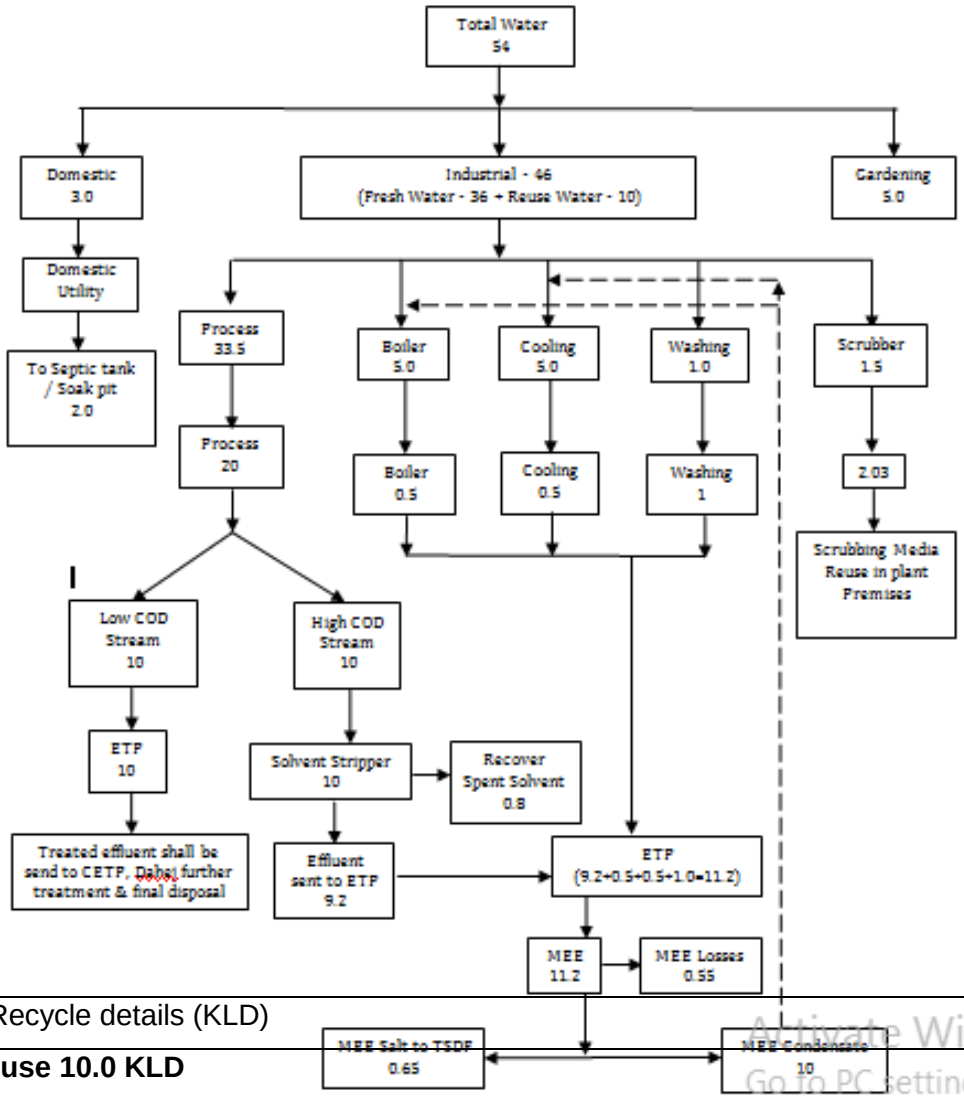
vii	**Simplified water balance diagram with reuse / recycle of waste water**

EXISITING WATER BALANCE DIAGRAM



Note:- All figure in KL/Day

TOTAL PROPOSED WATER BALANCE DIAGRAM



Vii	Reuse/Recycle details (KLD)	
	Total reuse 10.0 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.)**
Boiler, Cooling Tower and Washing	10.0	pH -6.5 to 8.5 COD -180 mg/L BOD - 80 mg/L TDS –500 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 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:-						
1	Fire Heater	**11**	**WOOD ***	1 MT/Day	**SPM - 150 MG/NM^3** SO_2 - 100 ppm **NO_X - 50 PPM**	**BAG FILTER**
TOTAL PROPOSED:-						
1	Fire Heater	**11**	**BRIQUETTE OF BIO COAL**	1 MT/Day	**SPM - 150 MG/NM^3** SO_2 - 100 ppm No_x - 50 ppm	**BAG FILTER**
2	Boiler (Cap.:1.5 MT/Hr)	**30 M**	**BRIQUETTE OF BIO COAL**	5 MT/Day		**MULTICYCLONE SEPARATOR WITH BAG FILTER**
3	D.G. Sets (Stand by) (Cap -250KVA)	**9 M**	**HSD**	200 Liter/Day		Adequate Stack Height
**** Note:- After the proposed expansion we will be used Briquette of Bio Coal instead of wood in fire- heater***						

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

-

Sr. No.	STACK ATTACHED TO	STACK HEIGHT	AIR POLLUTION CONTROL SYSTEM	PARAMETER	PERMISSIBLE LIMIT
EXISTING:-					
There is no process emission from the manufacturing process					
TOTAL PROPOSED:-					
1	Process Vent - 1 (Product No.11 -	11 m	Two Stage Water Scrubber	NH_3	175 mg/Nm^3

	Pregablin)					
2	Process Vent - 2 (Product No. 11 - Pregablin)	11 m	Two Stage Alkali Scrubber	Br_2	30 mg/Nm^3	
3	Process Vent - 3 (Product No.10 - Diclofenac Sodium)	11 m	Two Stage Chilled Water Scrubber	HCl	20 mg/Nm^3	

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

As below:

Following measures will be adopted to prevent and control fugitive emissions…

- Enclosed Processed
- Minimum joints/flanges
- Auto handling for charging Raw Materials
- Pumps with double mechanical seals
- Proper Ventilation
- PPEs

F **Hazardous waste**

(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	Total	
1	Discarded Drums/Bags/ Liners	Raw Materials/ Products	SCH-I/33.1	8400 Nos	1600 Nos	10000 Nos	Collection, Storage, Transportation, Decontamination & Sale to GPCB Approved Vendors.
2	Used/ Spent	Machineries/	SCH-I/5.1	50	50	100	Collection,

	Oil	Utility		Liter	Liter	Liter	Storage, Transportation & Sale to GPCB Registered Re-Processor.	
3	Inorganic Process Waste	Process (Product No. 18– Pregabalin)	SCH-I/26.1	30	30	60	Collection, Storage, Transportation and Disposal at common TSDF site of M/S BEIL, Dahej.	
4	ETP Sludge	ETP	SCH-I/35.3	NIL	40	40	Collection, Storage, Transportation and Disposal at common TSDF site of M/S BEIL, Dahej.	
5	Distillation Residue	Distillation	SCH-I/20.3	NIL	46	46	Collection, Storage, Transportation and sent for co-processing in cement industries or (In case of non – operation of Co-processing site)Disposal at common incineration site, M/s.	

							SEPPL/DIPL, Dahej.
6	Spent Solvent	Process	SCH-I/28.6	NIL	1850	1850	Collections, Storage, in house distillation and reuse in plant premises.
7	Organic waste	Process (Product No. 18 – Pregablin)	SCH-I/28.1	NIL	130	130	Collection, Storage, Transportation and sent for co-processing in cement industries or (In case of non – operation of Co-processing site)Disposal at common incineration site, M/s. SEPPL/DIPL, Dahej.
8	Spent Carbon	Process (Product No. 15 – Amlodipine Besylate)	SCH-I/28.3	NIL	83	83	Collection, Storage, Transportation and sent for co-processing in cement industries or (In case of non – operation of Co-processing site) Disposal at common incineration site,

							M/s. SEPPL/DIPL, Dahej.
9	Spent Catalyst	Process (Product No. 19 – Atorvastatin Calcium)	SCH-I/28.2	NIL	150	150	Collection, Storage, Transportation and send to regenerator under Rule-9 permission
10	Sodium Bromide solution (25%)	Scrubber	SCH-I/28.1	NIL	300	300	Collection, Storage, Transportation and Sell to end user who is having Rule-9 Permission.
11	Liq. Ammonia (24%)	Scrubber	SCH-I/28.1	NIL	624	624	Collection, Storage and reuse in plant premises. (Requirement of Liq. Ammonia in Product No 13 i.e. Phenylephrine Hydrochloride - 1521.6 MT/Year)
12	Off Specification Products	From mfg. Process (Batch failure)	SCH-I/28.4	NIL	2.0	2.0	Collection, Storage, Transportation and Disposal at common incineration site.
13	Aluminum Chloride	Process (Diclofenac	SCH-I/28.1	NIL	240	240	Collection, Storage,

		Solution	Sodium)					Transportation and Sell to end user who is having Rule-9 Permission.
	14	HCl (30%)	Scrubber	SCH-II/B-15	NIL	120	120	Collection, Storage and reuse in plant premises. (Requirement of HCL in Product No 13 i.e. Phenylephrine Hydrochloride – 585.6 MT/Year)
	15	MEE Salt	MEE	SCH-I/35.3	NIL	280	280	Collection, Storage, Transportation and Disposal at co-processing or (In case of non – operation of Co-processing site) common TSDF site of M/S BEIL, Dahej.
	16	Spent Solvent	From Solvent stripper	SCH-I/20.3	NIL	288	288	Collection, Storage, Transportation and Disposal at common incineration site,

								M/s. SEPPL/DIPL, Dahej

Ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	Company has membership of TSDF of M/s. BEIL, Please referee page no - 404 Annexure-9 in EIA Report
Iii	Details of Non-Hazardous waste & its disposal (MSW and others)	No such waste will be generated.
G	**Solvent management**, VOC emissions etc.	
I	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents	

Solvent Recovery Pattern after LDAR

SOLVENT	**INPUT (kg)**	**RECOVER (kg)**	**LOSSES (kg)**	**%RECOVER**	**%LOSSES**
Acetone	450	436.5	13.5	97.0	3.0
Methanol	218	210.15	7.85	97.25	2.75
Toluene	1300	1264.25	35.75	97.25	2.75
Dimethyl Formamide (DMF)	600	592	8	98.70	1.3%
Ethanol	823	804	19	97.69	2.31
Isopropyl alcohol	1319	1277	42	96.81	3.19
n-Hexane	428	413	15	96.5	3.5

Ii	**VOC emission** sources and its mitigation measures

- Enclosed Processed
- Minimum joints/flanges
- Auto handling for charging Raw Materials
- Pumps with double mechanical seals
- Proper Ventilation
- PPEs

H

- **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks

Storage tanks	--	
Drum/Barrel storage	Acetone , Formic Acid, Ethyl Acetate Hydrochloric Acid, Toluene, Methanol, Ethyl Acetate,	

- **Applicability of PESO** :
- Will apply after getting EC & CTE.

- During the meeting dated 04/03/2020, technical presentation made by technical expert M/s. Aqua Air Environmental Engineering Pvt. Ltd of 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 2018 to December 2018. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, NOx,NH3,O3.HC, 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 ISCST – 3 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.
- 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.
- During SEAC meeting, Committee asked for adequacy of area expansion, PP informed that they have sufficient area for installation of proposed expansion project machinery, raw material storage etc. PP informed regarding SCN issued by the Board and PP had submitted compliance of conditions mentioned in SCN.
- Committee asked about product profile and PP informed that Existing is non EC, inorganic products and proposed products are pharama and its intermediate products as group–A and dyes intermediate and specialty chemicals as group-B. PP informed that existing inorganic products will be manufactured by using fresh acid as raw material instead of spent acid. Committee asked about waste water management, PP informed that effluent segregated in two stream , High COD and TDS and Low COD and TDS stream. High COD stream will be first neutralized and then passed through solvent stripper and then will be evaporated in

in-house MEE. Low COD stream after ETP will be sent to CETP, Dahej for further treatment and disposal. Committee insisted for submission of revised water balance diagram with mentioning high Cod stream first passing through solvent stripper and then primary ETP treatment along with stage wise reduction of BOD, COD, TDS and Ammonical nitrogen of high COD and Low Cod stream and revised high COD treatability report. Committee also asked PP for submission of revised membership certificate of CETP mentioning total consented capacity, actual capacity, booked load and spare capacity of CETP as per GPCB letter dated 08/01/2020. PP informed that briquettes of bio-coal will be used as fuel for proposed boiler and fire heater and MCS and bag filter as APCM with it. Two stage scrubber as APCM will be proposed with each process stack.

- PP addressed Hazardous waste management and committee insisted for submit adequacy of total reuse of spent solvent within premises with technical justification and mentioning spent solvent from solvent stripper as Hazardous waste.
- EMP, CER, safety aspects, baseline data are discussed in length. Committee insisted for submission of revised need based CER for surroundings villages with budgetary provision for five years. Upon asking regarding LDAR, Committee insisted for submission of adequate LDAR for each solvent with its chemical properties.
- **After detailed discussion, it was decided to consider the proposal only after submission of the following documents**:
  1. Submission of revised water balance diagram with mentioning high COD stream first passing through solvent stripper and then primary ETP treatment along with stage wise reduction of BOD, COD, TDS and Ammonical nitrogen of high COD and Low COD stream. Revised high COD treatability report.
  2. Submission of revised membership certificate of CETP mentioning total consented capacity, actual capacity, booked load and spare capacity of CETP as per GPCB letter dated 08/01/2020.
  3. Submit revised need based CER activity for surroundings villages with budgetary provision for five years.
  4. Submit adequacy of total reuse of spent solvent within premises with technical justification and mentioning spent solvent from solvent stripper as Hazardous waste.
  5. Submission of adequate LDAR for each solvent with its chemical properties.
- Project proponent made presentation for the above mentioned query dated 18/03/2020 for the above mentioned points.
- PP presented replied as below:
  1. PP presented revised water balance diagram with mentioning high COD stream first passing through solvent stripper and then primary ETP treatment along with stage wise reduction of BOD, COD, TDS and Ammonical nitrogen of high COD and Low COD stream. Revised high COD treatability report.
  2. PP submitted revised membership certificate of CETP mentioning total consented capacity, actual capacity, booked load and spare capacity of CETP as per GPCB letter dated 08/01/2020.
  3. PP presented revised need based CER activity for surroundings villages with budgetary provision for five

years.

4. PP submitted adequacy of total reuse of spent solvent within premises with technical justification and mentioning spent solvent from solvent stripper as Hazardous waste.
5. PP presented adequate LDAR for each solvent with its chemical properties.

- Committee deliberated on the reply submitted by PP and found it satisfactory.
- Compliance of ToR found satisfactory.
- ***After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.***

8	SIA/GJ/IND2/47871/2019	**M/s. Gokulendu Life Science** Plot No: 1014, G.I.D.C Sarigam, Umbergaon, Valsad-396155, Gujarat.	EC – Reconsideration

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/47871/2019 on dated 18/01/2020 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 04/11/2019.
- Project proponent has submitted EIA Report prepared by M/s. Unistar Environment & Research Labs Pvt. Ltd. based on the TOR issued by SEIAA.
- This is new unit proposes for manufacturing of synthetic organic chemical as tabulated below:

Group	Sr. No.	Name of the Products	CAS Number/CI no.	Qty. MT/Month	End-use of Product
A	1.	Pantoprazole Sodium	138786-67-1	**10.00**	Gastroesophageal Reflux and Peptic Ulcer
	2.	Pantoprazole Sesquihydrate	164579-32-2		Gastroesophageal Reflux and Peptic Ulcer
	3.	Omeprazole	73590-58-6		Gastroesophageal Reflux and Peptic Ulcer
	4.	Lansoprazole	103577-45-3		Gastroesophageal Reflux and Peptic Ulcer
	5.	Rabeprazole Sodium	117976-90-6		Gastroesophageal Reflux and Peptic Ulcer
	6.	2,4-Dihydro-4-[4-[4-(4-hydroxyphenyl]-1-	106461-41-0		Intermediate of Itraconazole

		piperazinyl]phenyl]-2-(1-methylpropyl)-3H-1,2,4-triazol-3-one			
	7.	Sertaconazole Nitrate	99592-32-2		Anti-Fungal
	8.	cis-[2-(2,4-Dichlorophenyl)-2-(1H-imidazol-1-ylmethyl)-1,3-dioxolan-4-yl]methyl p-Tolylsulfonate	134071-44-6		Intermediate of Ketoconazole
	9.	1-Acetyl-4-(Hydroxyphenyl) piperazine	67914-60-7		Intermediate of Ketoconazole
	10.	1-(2,3-Dichlorophenyl)piperazine Hydrochloride	119532-26-2		Intermediate of Aripiprazole
	11.	Methyl-2-Methoxy-5-Sulfamoylbenzoate	33045-52-2		Intermediate of Levosulpiride
	12.	Trazodone Hydrochloride	19794-93-5		Antidepressant
	13.	Atazanavir Sulfate	229975-97-7		Antiretroviral
	14.	Pregabalin	148553-50-8		Epilepsy
	15.	TenofovirDisoproxilFumarate	202138-50-9		HIV infection (treat human immunodeficiency virus)
	16.	Zolpidem Tartrate	99294-93-6		Insomnia
	17.	Vildagliptin	274901-16-5		Antidiabetic
	18.	Diphenhydramine Hydrochloride	147-24-0		Antihistamine
	19.	Fexofenadine Hydrochloride	83799-24-0		Antihistaminic
	20.	Sofosbuvir	1190307-88-0		Antiviral
	21.	Sildenafil Citrate	171599-83-0		Erectile dysfunction
	22.	Metaxalone	1665-48-1		Muscle Relaxant
	23.	Pirfenidone	53179-13-8		Idiopathic pulmonary fibrosis (IPF)
B	24.	2-Chloromethyl-3,4-dimethoxy pyridine hydrochloride	72830-09-2	**10.00**	Intermediate for Pantoprazole
	25.	2-(Chloromethyl)-4-methoxy-3,5-dimethylpyridine Hydrochloride ($C_9H_{12}ClNO.HCl$)	86604-75-3		Intermediate of Omeprazole
	26.	2-Chloromethyl-3-methyl-4-(2,2,2-trifluoroethoxy)pyridine Hydrochloride ($C_9H_9ClF_3NO.HCl$)	127337-60-4		Intermediate of Lansoprazole
	27.	2-Chloromethyl-4-(3-	153259-31-5		Intermediate of Rabeprazole

		Methoxypropoxy) -3-Methylpyridine Hydrochloride ($C_{11}H_{17}Cl_2NO_2$)			
	28.	Ketoconazole	65277-42-1		Anti-Fungal
	29.	Posaconazole	171228-49-2		Anti-Fungal
	30.	Fluconazole	86386-73-4		Anti-Fungal
	31.	Aripiprazole	129722-12-9		Atypical antipsychotic
	32.	Levosulpiride	23672-07-3		Antipsycotic
	33.	Rosuvastatin Calcium	147098-20-2		Antilipidemic
	34.	Phenylephrine Hydrochloride	61-76-7		Decongestant
	35.	Famotidine	76824-35-6		Gastroesophageal reflux disease
	36.	Fluphenazinedecanoate	5002-47-1		Chronic schizophrenia
	37.	Clomipramine Hydrochloride	17321-77-6		Obsessive-compulsive disorder
	38.	Dabigatran	211914-51-1		Treat blood clots
	39.	Teneligliptin	760937-92-6		Antidiabetic
	40.	Doxofylline	69975-86-6		Asthma
	41.	Pentoxifylline	6493-05-6		Intermittent claudication
	42.	Ondansetron Hydrochloride Dihydrate	99614-02-5		Anti-vomiting
	43.	Zidovudine	30516-87-1		Antiviral
	44.	Avanafil	330784-47-9		Erectile dysfunction
	45.	Agomelatine	138112-76-2		Anxiety
	46.	Minoxidil	38304-91-5		Hair Growth
	47.	Modafinil	68693-11-8		Wakefulness
	48.	Itraconazole	84625-61-6		Anti-Fungal
	49.	Etiracetam	33996-58-6		Antiepileptic
	50.	Levetiracetam	102767-28-2		Antiepileptic
	51.	Loratadine	79794-75-5		Anti allergic
	52.	Montelukast Sodium	151767-02-1		Antiasthmatic
	53.	Oxpentifylline	6493-05-6		Intermittent claudication
	54.	Piracetam	7491-74-9		Alzheimer's disease
	55.	Sertraline Hydrochloride	79617-96-2		Antidepressant
	56.	Abacavir Sulfate	136470-78-5		Anti-HIV
	57.	Brexpiprazole	913611-97-9		Antipsychotic
	58.	Lopinavir	192725-17-0		Anti-HIV

	59.	Ritonavir	155213-67-5		Anti-HIV
C	60.	**R&D of APIs &Intermediates**	**--**	**0.20**	**--**
		TOTAL	**--**	**20.20**	**--**

Note:

- Unit will manufacture campaign-based products as per market demand.
- At a time, company will manufacture three to four products from each group. The total manufacturing quantity will be within the group total.

- 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 18/02/2020.
- Salient features of the project are as under:

Sr. no.	Particulars	Details
A	Total **cost of Proposed** Project (Rs. in Crores):	6.06
	Details of EMP	Capital Cost Provision for EMP- 115 lakhs Recurring Cost Provision for EMP- 47.32 lakhs (including 2% CER)
	Brief Details of EMP	

Capital Cost Provision for EMP/EMS:

Sr. No.	**Particulars**	**Proposed Amount (In Lakhs)**
1	**Capital for EMP for Ambient Environment**	**10.75**
	For Air	**8.50**
	Stacks for boiler & DG set	5.00
	APCD	3.50
	For Noise	**2.25**
	Foundation & Padding	2.25
2	**Capital for EMP for Water & Wastewater Management**	**86.00**
	Effluent Treatment Plant	30.00
	Rainwater Harvesting System	1.00
	CETP Membership	30.00
	Solvent Stripper followed by ATFD	25.00
3	**Capital for EMP for Solid /Hazardous Waste Management**	**5.25**

	Hazardous & non-hazardous Wastes handling system & facilities	5.00
	TSDF & CHWIF membership	0.25
4	**Capital for EMP for Occupational Health & Safety**	**10.00**
	Fire Fighting and other safety & emergency facilities	10.00
5	**Capital for EMP for Greenbelt**	**3.00**
	Sapling, Plantation, equipment & facilities	3.00
TOTAL CAPTAL COST PROVISION FOR EMP/EMS		**115.00**

Recurring Cost Provision for EMP/EMS

Sr. No.	Particulars	Proposed Amount (In Lakhs)
1	**Water and Wastewater Management**	**16.55**
	Maintenance of ETP & Pipeline	12.00
	Maintenance of solvent stripper & ATFD	2.00
	Monitoring	0.50
	CETP Charges	1.50
	Maintenance of Rainwater Harvesting System	0.30
	Water quality Monitoring	0.25
2	**Air Pollution and Noise Control**	**3.05**
	For Air	**2.75**
	Maintenance of APCDs	1.50
	Chemicals for APCDs O&M	1.00
	Emission & Ambient Air Monitoring	0.25
	For Noise	**0.30**
	Maintenance works for Noise & Vibration reduction	0.20
	Ambient Noise & Vibration Monitoring	0.10
3	**Solid/Hazardous Waste Management**	**24.55**
	Maintenance works	0.30
	TSDF & CHWIF charges	24.00
	Waste Monitoring	0.25
4	**Occupational Health & Safety**	**0.30**
	Maintenance works for Safety equipment & facilities	0.20
	Work Place Monitoring	0.10

5	**Greenbelt, soil & Ecological Conservation & Protection**	**0.45**
	Equipment & facilities	0.15
	Sapling, Plantation & replantation	0.10
	Soil Quality Monitoring	0.20
6	**ESR @2% of proposed capital**	**2.42**
	Activities in Villages every year as per CER Plan	**2.42**
TOTAL RECURRING COST PROVISION FOR EMP/EMS		**47.32**

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

Activity Wise CER Plan

Sr.No.	**Activities Planned & Particular**	***Cost (Rs.)***
1	Solar Street Lights for public lighting in Tribal/BPL Community Areas	600000.00
2	Gram panchyat through providing drinking water facilities in the villages of the region. (R.O.Plant) and BPL family	125000.00
3	Development and renovation of infrastructure for Public use	487000.00
TOTAL CER COST		**1212000.00**

Village wise Annual CER Plan

Sr. No.	**Name of Village**	**Budget Allocation, Rs.**								
		Need of Demand	**Project Capital Cost, Rs.**	**Total CER Cost**	**1st Yr.**	**2nd Yr.**	**3rd Yr.**	**4th Yr.**	**5th Yr.**	**Planned Activities**
1	Daheli, Kalgam, Angam	Planned activities are scheduled As per demand raised in FGD and meeting with Sarpanch	606.00 Lakhs	12.12 Lakhs	1,20,400	1,20,400	1,20,400	1,20,400	1,20,400	Solar Street Lights for public lighting in Tribal/BPL Community Areas
					25,000	25,000	25,000	25,000	25,000	R.O. based water Purifier to BPL family
					97,000	97,000	97,000	97,000	97,000	Development and renovation of infrastructure for Public Use

	Total Rs.	2,42,400	2,42,400	2,42,400	2,42,400	2,42,400	Various Activities as above

B	**Total Plot area** (sq. meter)	2400.00 Sq. m.
	Green belt area (sq. meter)	The greenbelt will be developed in area admeasuring 540.56 Sq. Mt. (About 23% of total plot area). Apart from this company will do plantation outside the company premises i.e. at kalgam Village @1000 sq. mt. The total greenbelt area developed by the company is 1540.56 sq. mt. which more than 64% of the total plot area.
C	**Employment generation**	15 Nos.
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC water supply department.
	Status of permission from the concern authority.	Obtained
ii	**Water consumption (KLD)**	

Category	Quantity KLD	Remarks
(M) Domestic	2.00	--
(N) Gardening	3.00	1.30 KLD reused from domestic wastewater after disinfection
(O) Industrial		
Process	20.00	--
Washing	5.00	--
Boiler	4.50	--
Scrubber	2.50	1.1 KLD reused from ATFD condensation & 1.4 KLD from ETP after ultrafiltration and softening
Cooling	5.00	3 KLD reused from ETP after ultrafiltration and softening
Others	-	--
Industrial Total	37.00	--
Total (A + B + C)	42.00	--

1) **Total water requirement** for the project: 42.00 KLD

2) Quantity to be **recycled**: 6.80 KLD

3) Total **fresh water** requirement: 35.20 KLD

iii **Waste water generation (KLD)**

Category	Waste water KLD	Remarks
(G) Domestic	1.30	Wastewater to ST/SP then to disinfection
(H) Industrial		
Process	22.30	High TDS WW (@ 1.30 KLD) from process get condensed through ATFD attached with solvent stripper & Low TDS wastewater 29.20 KLD to ETP and 5 KLD will go through Ultra filtration and softener and @4.40 KLD from it will be reused in Scrubbing and Cooling. 24.20KL will be disposed to CETP after ETP.
Washing	5.00	
Boiler	0.10	
Scrubbing	2.50	
Cooling	0.60	
Total Industrial waste water	30.50	--
Total [A + B]	**31.80**	--

-

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

- **In-house ETP (Primary, Secondary and Tertiary treatment)**
  ETP Capacity: 35.00 KLD
- Solvent stripper followed by ATFD - 2.10 KLD

Treatment scheme including segregation at source.

High TDS WW (@ 1.30 KLD) from process get condensed through ATFD attached with solvent stripper and its reused in scrubber. Low TDS wastewater (29.20 KLD) to in-house ETP

Stream wise quality of waste water generation

Sr. No	Parameters	Unit	Stream I	Stream II	Stream III	Stream IV	Stream V	Stream VI
1	Quantity/Flow	KLD	21.0	5.0	0.1	2.5	0.6	1.3
2	pH	--	5.49	7.12	7.34	7.05	7.25	6.5-9.0
3	Total Dissolved Solid	mg/lit	2250	1200	1200	2495	1200	15-120*
4	Total Suspended Solid	mg/lit	372	1372	425	1500	258	<5000
5	Chemical Oxygen Demand	mg/lit	9213	3713	150	3215	150	<65000

6	Biochemical Oxygen Demand	mg/lit	3125	1252	20	1075	20	<18000

Note: * indicates unit of TDS concentration as gm/lit;

Stream I- Process (low COD & TDS), Stream II- Washing, Stream III- Boiler blow down, Stream IV- Scrubber Bleed-off, Stream V- Cooling, Stream VI- Concentrated Stream from Process to Stripper & ATFD

Stream wise quality of wastewater in Solvent Stripper & ATFD

Sr. No	Parameters	Unit	Inlet to Stripper	Outlet of Stripper & Inlet to ATFD	Recovered Condensate
1	pH	--	6.5-9.0	6.9-7.1	6.8-7.0
2	Total Dissolved Solid	mg/lit	15000-120000	14600-119000	<100
3	Total Suspended Solid	mg/lit	4800-5000	4700-4900	<50
4	Chemical Oxygen Demand	mg/lit	<65000	1800-2200	<100
5	Biochemical Oxygen Demand	mg/lit	<18000	1200-1600	<20

- Stream I to Stream – V will be collected & combined in collection cum equalization tank and will be sent to ETP for further treatment. The details of stream to ETP, Technical details of ETP and Efficiency of ETP are presented below.
  - Total proposed wastewater quantity to be treated in proposed ETP is 29.20 KLD.
  - Design criteria of ETP, stream wise quality and stage wise quality of wastewater are given below.

❖ **Design Criteria of ETP:**

✓ **Source of Water Effluent:** process, washing and utility etc.

✓ **Water Effluent Generation:** 29.20 KL /Day Max.

✓ **Capacity of ETP:** 35.00 KL/Day Max.

Stage wise quality of effluent in the proposed ETP

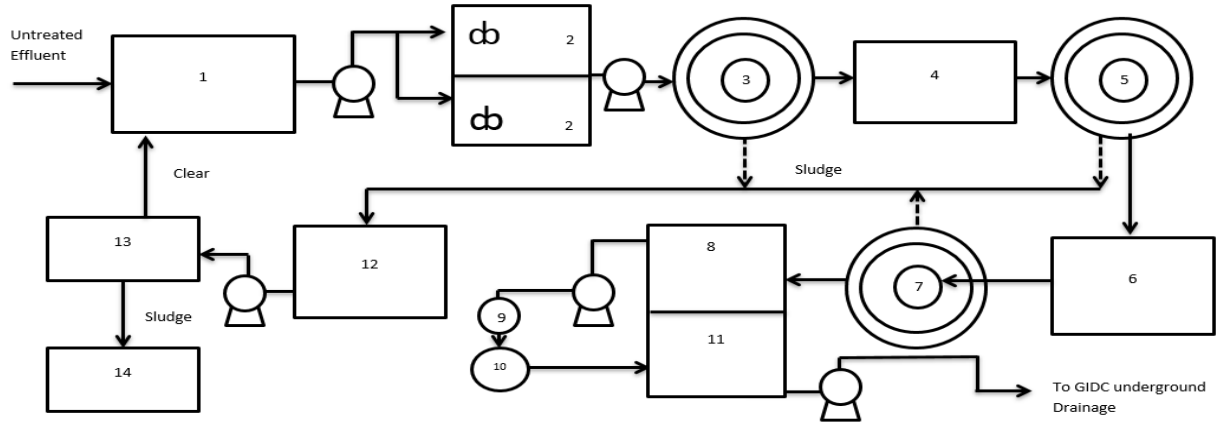
Sr. No	Parameters	Unit	I	II	III	IV
1	pH	--	6.0	7.3	7.2	7.5
2	Total Dissolved Solid	mg/lit	2070	2350	2200	2090
3	Total Suspended Solid	mg/lit	640	65	80	25
4	Chemical Oxygen Demand	mg/lit	7540	4900	750	590
5	Biochemical Oxygen Demand	mg/lit	2560	2050	310	245

Note: I. Untreated, II. Primary outlet, III. Secondary outlet, IV. Final outlet

List of the ETP units

SR NO.	ITEM	CAPACITY	NOS
1	Collection Tank cum equalization tank	50 KL	1
2	Neutralization Tank	6 KL	2
3	Primary Settling Tank	6 KL	1
4	1st stage Aeration tank	100 KL	1
5	1st stage secondary settling tank	6 KL	1
6	2nd stage aeration tank	50 KL	1
7	2nd stage secondary settling tank	6 KL	1
8	Holding Tank	10 KL	1
9	Dual Media Filter	3 KL/hr	1
10	Activated Carbon Filter	3 KL/hr	1
11	Treated water tank	30 KL	1
12	Sludge Holding Tank	5 KL	1
13	Filter Press	30 x 30 inch	1
14	Sludge storage area	10 m^2	1

Hydraulic Flow Diagram



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.

Sr.	Parameter	Unit	Raw Effluent	Treated	Sarigam

No.			Quality/Value	Effluent Quality/Value	CETP Inlet Norms
1.	Flow	KL/ Day	29.20	29.00	-
2.	pH	--	5.0 - 8.0	6.5 - 8.5	6.5 - 8.5
3.	Biochemical Oxygen Demand	mg/lit	200- 3500	<400	<400
4.	Chemical Oxygen Demand	mg/lit	800 - 9500	<1000	<1000
5.	Suspended Solids	mg/lit	300-400	<300	<300
6.	Fixed Dissolved Solid	mg/lit	1000-2500	<2100	<2100

The outlet of ETP parameters are well within the CETP inlet norms. Hence the unit will be comply Management of wastewater 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.

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

- Not Applicable

v Mode of Disposal & Final meeting point

Domestic:	Wastewater to ST/SP then to disinfection
Industrial:	High TDS WW (@ 1.30 KLD) from process get condensed through ATFD attached with solvent stripper and its reused in scrubber. Low TDS wastewater 29.20 KLD to ETP and 5 KLD will go through Ultra filtration and softener and @4.40 KLD from it will be reused in Scrubbing and Cooling. 24.20KL will be disposed to CETP after ETP.

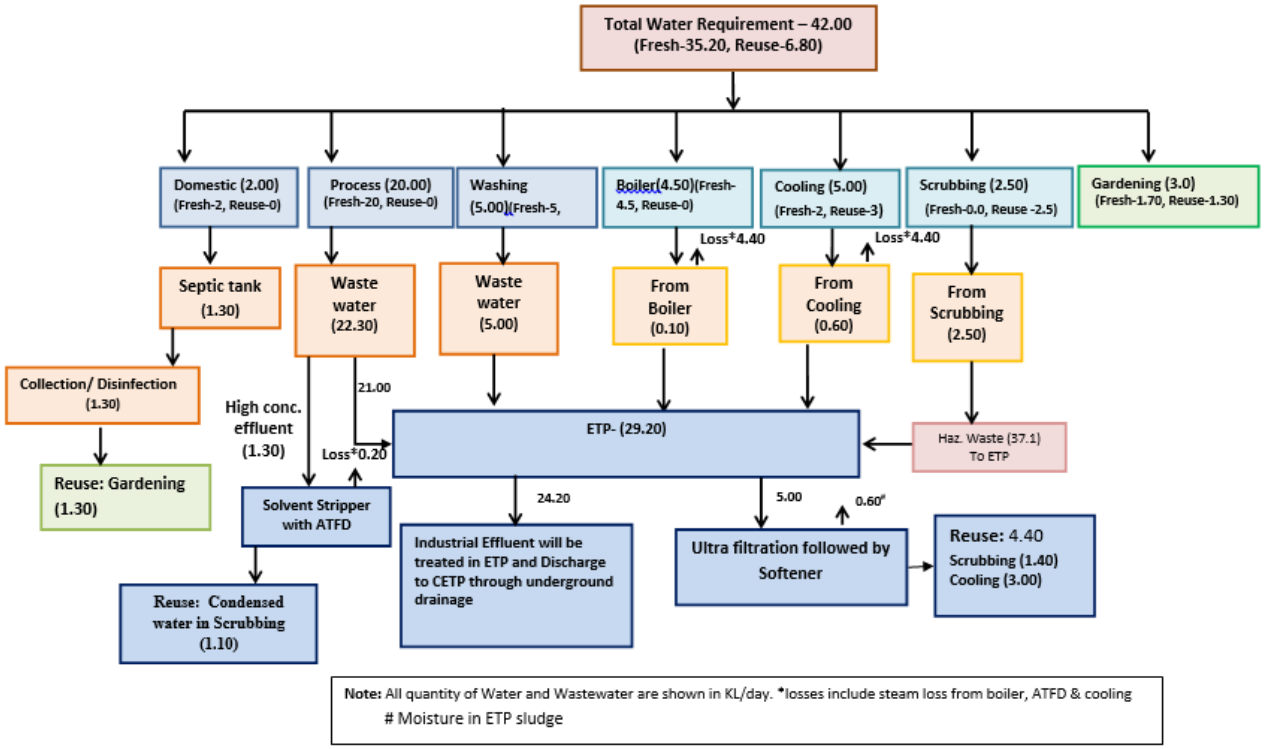
vi In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF**

- CETP- Sarigam Clean Initiative

Membership of Common facility (CF)
(For waste water treatment)

CETP/SCI/PROCER/124/ Dated:7/11/2019

vii **Simplified water balance diagram with reuse / recycle of waste water**



viii Reuse/Recycle details (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.**
Condensed water from ATFD (1.10 KLD)	Scrubber (1.10 KLD)	ATFD condensate will have TDS<100, BOD, COD and other parameter will be below detectable limit, which is feasibility for scrubbing.	ATFD condensate is feasible for scrubbing
4.40 KLD from Ultrafiltration followed by softner	Cooling -3.00 KLD Scrubber- 1.40 KLD	TDS<500, BOD, COD and other parameter will be below detectable limit, which is feasibility for scrubbing	Effluent treated through ETP and ultrafiltration followed by softening is feasible for Cooling & scrubbing

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 - 1 No. (Capacity- 850 Kg/Hr)	11	NG	55.00 SCM/Hr	PM<150 mg/Nm3 SO2< 100 ppm NOx< 50 ppm	Adequate stack height
2	D. G. Set - 2 Nos. (1 x 60 &1 x 25 KW)	5 & 4	Diesel	23.00 Lit/Hr.		

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

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 Reactor	SO_2, HCl	11	Two stage water-Alkali Scrubber
2	Process Reactor	NH_3	11	Acid scrubber

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

As below:

Fugitive emissions are expected to be generated during installation and operational stages of the project. During installation stage, main source of fugitive emission is dust which is expected mainly due to the movement of vehicles carrying machineries and equipment used for installation.

During operation stage, leakage through valves, pumps, emission from open drum containing chemicals, open feeding; storage tanks, etc. are the major sources of fugitive emissions of organic chemicals and VOCs. Excess use of solvent may also results fugitive emission from the process vessels.

Following measures will be adopted to prevent and control fugitive emissions:

- Airborne dust at all transfers operations/ points will be controlled either by spraying water or providing enclosures.
- Raw materials loading and unloading will be done in covered area.
- All the raw materials will be pneumatically transfer to the reactor.
- Care will be taken to store construction material properly to prevent fugitive emissions, if any.

- Plantation will be done around the project area and along the roads.
- Adequate ventilation will be provided.
- Regular maintenance of valves, pumps and other equipment will be done to prevent leakages and thus minimizing the fugitive emissions of VOCs.
- Entire process will be carried out in the closed reactors with proper maintenance of pressure and temperature.
- Periodic monitoring of work area will be carried out to check the fugitive emission as per the norms of Gujarat Factory Rules.
- Breather valves will be provided on solvent tanks.
- To eliminate chances of leakages from glands of pumps, mechanical seal will be provided at all solvent pumps.

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	ETP Operation	(Sch.I: 35.3)	25.00	Collection, Storage, Transportation, Disposal at TSDF site(located outside CEPI area).
2	Empty barrels/containers/liners	Handling of Raw materials	(Sch.I: 33.1)	500.00	Collection, Storage, Decontamination, Disposal by selling to registered vendor.
3	Used oil	From plant and machinery	(Sch.I: 5.1)	0.10	Collection, Storage, Transportation, disposal by selling to registered recyclers.
4	Process Residue and wastes	Mfg. Process (From most of the products)	(Sch.I: 28.1)	48.00	disposal by Co-processing or Incineration at authorized site

					(located outside CEPI area)
5	Spent Carbon	From ETP &Mfg. Process (From most of the products)	(Sch.I: 28.3)	5.4	Collection, storage, transportation, disposal by Co-processing or Incineration at authorized site (located outside CEPI area)
6	Off specification products	Mfg. Process	(Sch.I: 28.4)	0.1	Disposal byCo-processing or common incineration at authorized site (located outside CEPI area).
7	Date-expired products	Mfg. Process	(Sch.I: 28.5)	0.4	Disposal by Co-processing or common incineration at authorized site (located outside CEPI area).
8	Spent solvent	Mfg. Process (From most of the products)	(Sch.I: 28.6)	2480.00	Collection, sale to Registered recycler under Rule no.9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
9	Used Filter Cloths	Mfg. Process (From most of the products)	(Sch.I: 33.2)	99.20	Collection, Storage, Transportation, Disposal at TSDF site.
10	Evaporation Residue	From ATFD	(Sch.I: 37.3)	15.00	

	11	Scrubber bleed off waste	From scrubber	(Sch.I: 37.1)	792.00	Will be treated in in-house ETP.

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	TSDF Membership Letter No (Detox India Pvt. Ltd, Kutch)- DIPL/1300000311/2019-20/109. Dated: 23/11/2019 CHWIF Membership Letter No (SEPPL, Kutch)- SEPPL/1300000311/2019-20/114. Dated: 23/11/2019
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)

Sr. no.	Name of Solvent	Consumption per Month (KL/Month)	Recovery per Month (KL/Month)	Recovery %
1.	Acetone	12.42353	11.75354	94.27
2.	Toluene	15.59971	14.93397	95.82
3.	Dichloromethane	29.04653	27.90072	96.24
4.	Methanol	28.72538	27.57079	96.15
5.	Chloroform	1.33355	1.26725	95.11
6.	Isopropyl Alcohol	7.66037	7.30423	95.20
7.	Methyl Isobutyl Ketone	3.05313	2.91127	95.54
8.	Dimethyl Sulfoxide	0.44436	0.42427	96.11
9.	Dimethyl Formamide	8.04297	7.72034	95.94
10.	1,4-Dioxane	2.16815	2.11047	97.09
11.	Ethyl Acetate	10.09926	9.70782	96.40
12.	N-Butanol	0.7128	0.70308	98.48
13.	N-Hexane	0.5113	0.50062	98.18

14.	Xylene	0.91907	0.90599	97.38
15.	Cyclohexane	1.16411	1.11208	95.75
16.	Monoethylene Glycol	0.32856	0.29304	89.18
17.	N-Methyl-2-Pyrrolidone	0.618	0.60564	98.00
18.	T-Butanol	0.04538	0.04286	94.44
19.	Petrolium Ether	0.45325	0.42842	96.34
20.	Heptane	0.83276	0.79723	96.20
21.	Ethanol	4.02291	3.82565	96.17
22.	Tetra Hydrofuran	1.42979	1.36268	97.04
23.	Acetonitrile	0.15437	0.14307	91.52
24.	Methyl Tert-Butyl Ether	0.0296	0.02948	99.59
25.	Isopropyl Acetate	0.04385	0.0395	90.07

ii VOC emission sources and its mitigation measures

During operation stage, leakage through valves, pumps, emission from open drum containing chemicals, open feeding; storage tanks, etc. are the major sources of fugitive emissions of organic chemicals and VOCs.

Following measures will be adopted to prevent and control fugitive emissions:

- Regular maintenance of valves, pumps and other equipment will be done to prevent leakages and thus minimizing the fugitive emissions of VOCs.
- Entire process will be carried out in the closed reactors with proper maintenance of pressure and temperature.
- Periodic monitoring of work area will be carried out to check the fugitive emission as per the norms of Gujarat Factory Rules.

H

- **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Tank	Acetone, Methanol, Toluene, Hexane	--
Drum/Barrel storage	Methylene chloride, Isopropyl alcohol, Nitric Acid, Hydrochloric acid, Mono chlorobenzene, Methyl isobutyl ketone, Cyclohexane, Acetonitrile, Heptane, Methyl tert-butyl ether (MTBE), Bromobenzene, Tetra hydrofuran (THF), Hydrogen peroxide, Acetic acid	--

Total 80 hazardous chemicals are present in the proposed project. The major hazardous chemicals mentioned above which are more toxic and flammable as well as more quantity of storage.

- **Applicability of PESO** : Applicable

- During the meeting dated 18/02/2020, 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 December 2018 to February 2019. Ambient Air Quality monitoring was carried out for PM10, PM2.5, Sulphur Dioxide, Nitrogen Oxide, CO, O3, NH3, Pb, As, Ni, Benzene, BaP, HCl 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. 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 new in GIDC Sarigam.
- During SEAC meeting, Committee asked about R & D production mentioned 1 MT/Month in product profile which is not justify as R and D purpose, PP informed that they will submit revised product profile with curtail R and D production. Committee informed PP about green belt area proposed only 20% of total project area which is not as per CPCB guideline. Upon asking regarding waste water management, Committee insisted for submission of revised water balance diagram with mentioning maximum reuse of boiler and cooling blow down effluent and technical justification for high COD effluent treatment in in-house stripper and ATFD in place of CMEE as per ToR, with stage wise reduction of BOD,COD and TDS value in ETP, solvent stripper and ATFD. PP informed about low COD effluent having 9500 mg/l COD value will be treated in primary, secondary and tertiary units and treated effluent will be discharged to CETP of Sarigam through underground pipeline. Committee observed that low COD effluent having 9500 mg/l COD treatment in conventional ETP is not justifiable. Committee deliberated on natural gas as fuel will be provided for proposed boiler and two stage scrubber as APCM proposed for process reactor. Committee deliberated on Baseline data, CER, EMP, Green belt etc in length. Committee insisted for submit revised CER along with need based CER activity. Committee insisted for submission of change in Water, Air, Hazardous waste and EMP due to deviation from ToR regarding waste water management in tabular form.
- **After deliberation, SEAC unanimously decided to consider the proposal after submission of the following details.**

1. Submit revised product profile with curtail R and D production capacity and submission of change in Water, Air, Hazardous waste and EMP due to deviation from ToR regarding waste water management, in tabular form.
2. MoU with layout plan showing exact area in sq. mtr within premises and outside premises (In case of green belt development outside premises)
3. Submission of revised water balance diagram with mentioning maximum reuse of boiler and cooling blow down effluent and technical justification for high COD effluent treatment in in-house stripper and ATFD in

place of CMEE as per ToR, with stage wise reduction of BOD,COD and TDS value in ETP, solvent stripper and ATFD.

4. Submit technical justification regarding low COD effluent having 9500 mg/l treatment in conventional ETP to achieve CETP inlet norms is feasible.
5. Submit need based CER for surrounding villages with budgetary provision for five years.

- Project proponent made presentation for the above mentioned query dated 18/03/2020 for the above mentioned points.
- PP presented replied as below:

1. PP presented revised product profile with curtail R and D production capacity and submission of change in Water, Air, Hazardous waste and EMP due to deviation from ToR regarding waste water management, in tabular form.
2. PP presented MoU with layout plan showing exact area in sq. mtr within premises and outside premises in village: Kalgam.
3. PP presented revised water balance diagram with mentioning maximum reuse of boiler and cooling blow down effluent and technical justification for high COD effluent treatment in in-house stripper and ATFD in place of CMEE as per ToR, with stage wise reduction of BOD, COD and TDS value in ETP, solvent stripper and ATFD.
4. PP presented technical justification regarding low COD effluent having 9500 mg/l treatment in conventional ETP to achieve CETP inlet norms is feasible.
5. PP presented need based CER for surrounding villages with budgetary provision for five years.

- Committee deliberated on the reply submitted by PP and found it satisfactory.
- Compliance of ToR found satisfactory.
- ***After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.***

9	SIA/GJ/IND2/30398/2018	**M/s. Halcyon Labs Pvt. Ltd.** Block No.: D-2/CH, Plot No.: 335, 336, 337, GIDC Dahej-2, Bharuch, Gujarat-392110.	EC – Reconsideration

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/30398/2018 on dated 11/12/2019 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 25/03/2019.
- Project proponent has submitted EIA Report prepared by Ramans Enviro services Pvt. Ltd. based on the TOR issued by SEIAA.

- This is new unit proposes for manufacturing of synthetic organic chemical as tabulated below:

Sr. No.	Product Group	Products Name	CAS No. / CI No.	Quantity in MT/Month	End-use of Products
1	A	Betamethasone Dipropionate	5593-20-4	0.83	Used as Pharma intermediate in pharmaceutical industries.
2		Beclomethasone Dipropionate	4419-39-0		
3		Betamethasone Sodium Phosphate	151-73-5		
4		Betamethasone Valerate	2152-44-5		
5		Clobetasol Propionate	25122-46-7		
6		Dexamethasone Sodium Phosphate	2392-39-4		
7		Mometasone Furoate	105102-22-5		
8		Clobetasone Butyrate	25122-57-0		
9		Triamcinolone Acetonide	76-25-5		
10		Halobetasol Propionate	66852-54-8		
11		Fluocinolone Acetonide	67-73-2		
12		Betamethasone	378-44-9		
13		Dexamethasone	50-02-2		
14		Dexamethasone valerate	33755-46-3		
15		Dexamethasone tert-butyl acetate	24668-75-5		
16		Dexamethasone pivalate	1926-94-9		
17		Dexamethasone 21-linolate	14899-36-6		
18		Dexamethasone 21-isonicotinate	2265-64-7		
19		Betamethasone benzoate	22298-29-9		
20		Betamethasone admantoate	5593-20-4		
21		Betamethasone acetate	987-24-6		
22		Prednisolone	53-03-2		
23		Fluticasone	80474-14-2		
24		Difluprednate	23674-86-4		
25		Budesonide	51333-22-3		
26		Deflazacort	14484-47-0		
27		Fluocinolone	67-73-2		
28	B	Erythromycin Base	114-07-8	20.83	
29		Erythromycin Estolate	3521-62-8		
30		Erythromycin Ethyl Succinate	1264-62-6		

31		Erythromycin Stearate	643-22-1		
32		Clotrimazole	23593-75-1		
33		Ketoconazole	65277-42-1		
34		Fluconazole	86386-73-4		
35		Posaconazole	171228-49-2		
36		Efinaconazole	164650-44-6		
37		Luliconazole	187164-19-8		
38		Voriconazole	137234-62-9		
39		Sertaconazole	99592-32-2		
40		Ravuconazole	182760-06-1		
41		Isavuconazole	241479-67-4		
42		Itraconazole	84625-61-6		
43		Tavaborole	174671-46-6		
44		Crisaborole	906673-24-3		
45		Fosravuconazole	351227-64-0		
46		Betrixaban	330942-05-7		
47		Tenofovir	147127-20-6		
48		Lamivudine	134678-17-4		
49		Ticagrelor	274693-27-5		
50		Apixaban	503612-47-3		
51	C	Carbamazepine	503612-47-3	8.33	
52		Oxcarbazepine	28721-07-5		
53		Eslicarbazepine	236395-14-5		
54		Dexchlorpheniramine Maleate	2438-32-6		
55		Chlorpheniramine Maleate/Base	113-92-8		
56	D	Pamoic Acid	130-85-8	8.33	
57		Disodium Pamoate	6640-22-8		
58		Pyrantel Pamoate	22204-24-6		
59	E	2 CTC (2 Chlorotrityl chloride)	42074-68-0	8.33	
Total				**46.65**	

- 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 16/01/2020.
- Salient features of the project are as under:

Sr no	Particulars	Details
A	Total **cost of Proposed** Project (Rs. in Crores):	22.6 Crores
	Details of EMP	

Sr. No.	**Unit**	**Installed Capacity**	**Capital Cost (Rs. In Lacs)**	**Recurring Cost (Rs. In Lacs per month)**		
				Operating	**Maintenance**	**Total**
1	Effluent Treatment Plant	110 KLD	152.00	12.74	1.27	14.01
2	APCM	Scrubbing System	16.00	0.50	0.20	0.70
3	Hazardous Waste Management	Storage and Membership	7.00	3.50	--	3.50
4	Safety	--	7.00	0.70	0.10	0.80
5	Environment Monitoring	--	14.00	0.40	0.15	0.55
6	Green Belt	--	5.00	0.05	0.08	0.13
7	Dust suppression system during construction phase		1.00	-	-	-
Total			**202.00**	**17.89**	**1.80**	**19.69**

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

Sr. No.	**Activity**	**Beneficiary of surrounding village**	**Specific Activities**	**Budget Amount (In Lakhs)**				
				1st Yr	**2nd Yr**	**3rd Yr**	**4th Yr**	**5th Yr**
1	Up gradation of primary schools (std. 1 to 4) and preprimary schools (Nursery to std.	Rahiad & Samatpur, Vahiyal, Jolva	• Improvement in sanitation facilities • Improvement in infrastructure of school i.e. provision of better playground, better classes, ensure the availabilities of	5.86	5.86	5.86	5.86	5.86

	1)		Teachers. • Provision of recreational instruments • Other need based activities.					
2	Improvement in existing public health center activities	Rahiad & Suva	Health awareness program at PHC, health checkup program	3.00	3.00	3.00	3.00	3.00
Total				**8.86**	**8.86**	**8.86**	**8.86**	**8.86**

B	**Total Plot area** (sq. meter)	14861.20 Sq. m.
	Green belt area (sq. meter)	4948.00 Sq. m.
C	**Employment generation**	**50.00**
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc.)	GIDC Supply
	Status of permission from the concern authority	Permission obtained
ii	**Water consumption (KLD)**	

Category	**Quantity in KLD**	**Remarks**
(P) Domestic	8.00	➢ 70 KLD Fresh water from GIDC Water Supply and remaining @81.1 KLD will be reused from ETP RO product.
(Q) Gardening	10.00	
(R) Industrial		
Process	54.00	
Washing	2.00	
Boiler	52.10	
Cooling	5.00	
Others(RO/DM Reject)	20.00	
Industrial Total	133.10	
Total (A + B + C)	151.10	

1) **Total water requirement** for the project:151.10 KLD

2) Quantity to be **recycled**: 81.10 KLD

3) Total **fresh water** requirement:70.00 KLD

(Total water requirement = Fresh water + Recycled water)

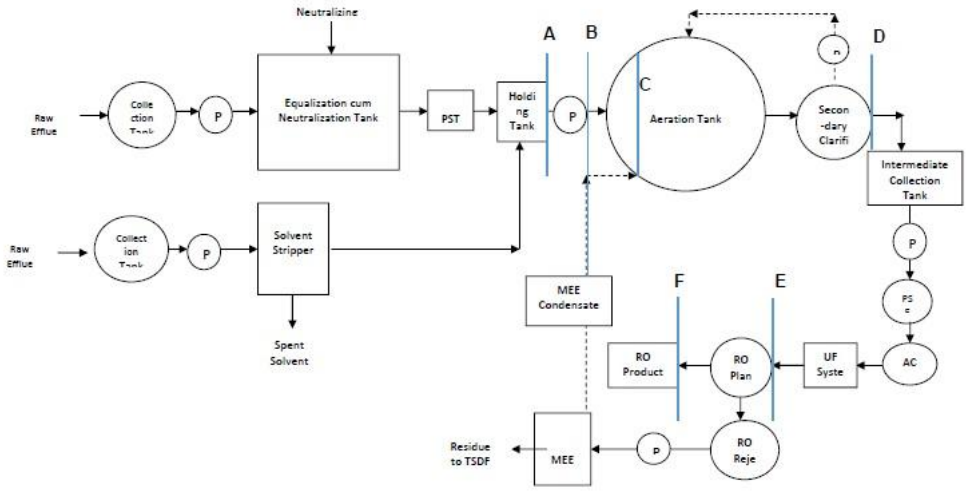
iii	**Waste water generation (KLD)**			
	Category	Wastewater KLD	Remarks	

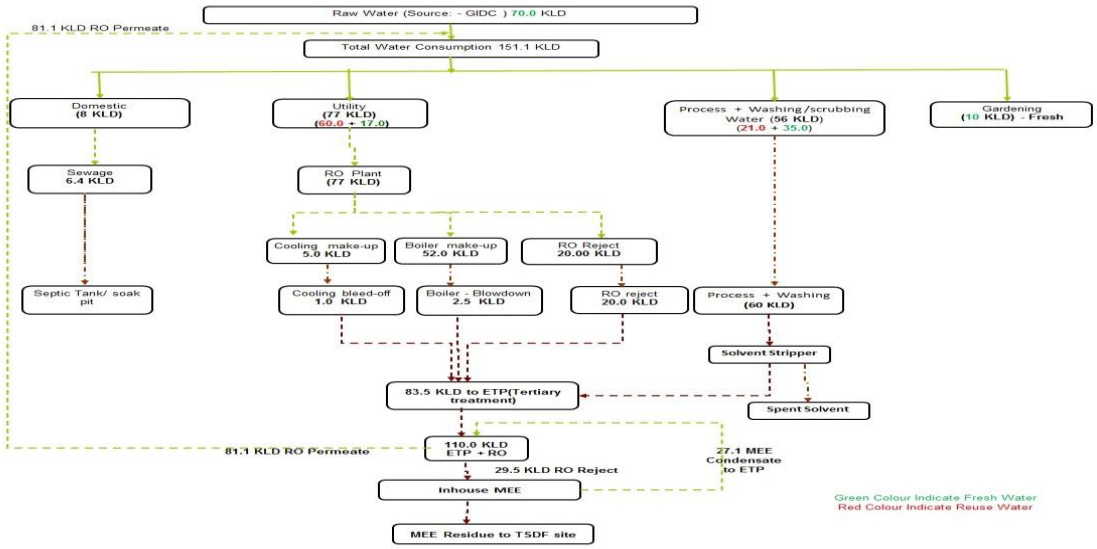
		(I) Domestic	6.4	➢ To be disposed to Septic Tank, Soak Pit
		(J) Industrial		
		Process	58.0	➢ Wastewater will be treated in ETP and then subjected to ETP-RO and its product will be reused. ➢ ETP RO reject will be subjected to in house MEE.
		Washing	2.0	
		Boiler	2.5	
		Cooling	1.0	
		Others(RO/DM Reject)	20.0	
		Total Industrial waste water	83.5	
		Total [A + B]	89.9	

iv Treatment facility within premises with **capacity**

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

Sr.No.	Description	Nos.	Volume in KL
1	Collection Tank	1	40
2	Equalization tank	2	60
3	PST	1	25
4	Holding Tank	1	40
5	Aeration Tank	1	170
6	SST	1	30
7	Intermediate collection tank	1	40
8	PSF	1	0.9 dia
9	ACF	1	0.9 dia
10	UF Filtration	1	6 m3/hr.
11	UF Storage Tank	1	10 KL
12	RO Plant	1	6 m3/hr.
13	RO Product Tank	1	20 KL
14	RO Reject Tank	1	20 KL
15	MEE	1	2.0 m^3/hr

	Treatment scheme including segregation at source.  	
	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 consolidated wastewater stream @83.5 KLD will be stored in the collection cum neutralization tanks. The wastewater will be neutralized, if required, prior to filtration. The filtrate will then be stored in filtrate storage tank. Clarified wastewater from the filtrate storage tank will be fed to Secondary and Tertiary treatment followed by UF & RO System. RO product will be reused in process and ETP RO reject will be subjected to MEE. The MEE condensate @27.1 KLD will be re-utilized in aeration tank for running of ETP plant activities effectively and efficiently.	
v	Mode of Disposal & Final meeting point	
	Domestic:	To be disposed to Septic Tank, Soak Pit
	Industrial:	Wastewater will be treated and then subjected to ETP RO.RO product will be reused &ETP RO reject will be subjected to in house MEE.
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 81.1 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.
RO Product @81.1 KLD	Process+, Washing/Scrubbing (21.0 KLD), Cooling + Boiler (60.1 KLD)	pH : 7 to 8 COD: @50 mg/L TDS: @100 mg/L	Feasible

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 in MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1	Boiler -1 (2 TPH)	13	Coal and/or PNG	8.0 MT/Day and/or 2456 SCM/Day	SPM SO_2 NO_x	Multi-Cyclone with Bag Filter Followed by water

								scrubber	
		2	Boiler -2 (1.5 TPH)	13	Coal and/or PNG	5.9 MT/Day and/or 1842 SCM/Day		Multi-Cyclone with Bag Filter Followed by water scrubber	
		3	D.G. set-1 Nos. (750 KVA)	9	Diesel	0.6 MT/Day		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)	Type of Emission	Stack Height (Meter)	Air Pollution Control Measures(APCM)
1	Reactor (2-CTC)	HCl	9	Two Stage Alkali Scrubber
2	Reactor(Prednisolone, Deflazacort)	HBr	9	Single Stage Alkali Scrubber
3	Reactor(Fluticasone)	H2S	9	Single Stage Alkali Scrubber
4	Reactor (Apixaban)	NH3	9	Two Stage Alkali Scrubber

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

- The entire manufacturing activities will be carried out in the closed reactors and regular checking and maintenance of reactors will be carried out to avoid any leakages.
- The tank vents will be equipped with either a carbon filter or an oil trap to prevent water vapor from entering the tank as it breathes.
- All the motors of pumps for the handling of hazardous chemicals will be flame proof and provided with suitable mechanical seal with stand-by arrangement.
- Control of all parameters on a continuous basis will be done by adequate control valves, pressure release valves and safety valves etc.
- All the flange joints of the pipe lines will be covered with flange guards.
- All the raw materials will be stored in isolated storage area and containers tightly closed.
- There will also be provision of adequate ventilation system in process plant and hazardous chemical storage area.

F **Hazardous wastes**

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

i

Sr. No.	Type/ Name of Haz. 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	Used oil	From Plant machinery	5.1	0.05	Collection, storage, transportation and sold out to the registered recyclers.
2	ETP Sludge	From ETP Plant	35.3	260.00	Collection, storage, transportation and disposal to authorized TSDF facility or send to co-processing units.
3	MEE Sludge	From MEE Plant	35.3	400.00	Collection, storage, transportation and disposal to authorized TSDF facility.
4	Process sludge	From Manufacturing Process (Product No. 45 to 50)	28.1	30.00	Collection, storage, transportation and disposal to authorized CHWI facility.
5	Discarded containers /liners/ barrels	From Raw material	33.1	180.00	Collection, storage and reused for disposal of waste to sold to recyclers.
6	Spent carbon or filter medium	From Manufacturing Process (Product No. 1 to 8, 14 to 16, 18, 19, 33, 51, 54 & 56)	28.3	15.00	Collection, storage, transportation and disposal to authorized CHWI facility or send to co-processing units.
7	Stripper Residue	From Stripper	36.1	5.00	Collection, storage, transportation and disposal to authorized CHWI facility.
8	Distillation Residue	From Distillation	36.1	1.00	Collection, storage, transportation and disposal to authorized CHWI facility.

	9	Spent Solvent	From Stripper	28.6	12.00	Collection, storage, transportation and disposal through sale to authorized recyclers as per Rule-9 of Haz Rules.
	10	Spent Solvent	From Distillation	28.6	85.00	Collection, storage, transportation and disposal through sale to authorized recyclers as per Rule-9 of Haz. Rules.
	11	HCl Solution (~15-20 %)	From Scrubbing System (2 Chloro trityle chloride)	26.3	780.00	Collection, storage and transportation and sold to actual users as per Rule-9 of Haz. Rules.
	12	Aluminiumchloride (@20 %)	From Scrubbing System (2 Chloro trityle chloride)	Sch. II B(15)	900.00	Collection, storage and transportation and sold to actual users as per Rule-9 of Haz. Rules.
	13	NaBr Solution (@20 %)	From Scrubbing System (Prednisolone, Deflazacort)	Sch. II B(15)	2.5 KL	Collection, Storage and send to in-house ETP followed by MEE.
	14	$NaSO_3H$ Solution (@10 %)	From Scrubbing System (Fluticasone)	Sch. II B(15)	0.6 KL	Collection, Storage and send to in-house ETP followed by MEE
	15	NH_3 Solution	From Scrubbing System (Apixaban)	Sch. II B(15)	96.0 KL	Collection, storage and reuse in same process.
	16	Exhausted scrubbed media	From Water Scrubber	Sch. II B(15)	350.0 KL	Collection, Storage and send to in-house ETP followed by MEE.

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	BEIL Infrastructure Ltd. RESP.
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)

Sr. No.	Solvent Name	Consumption in MT/Month	Recovered in MT/Month	Fresh inMT/Month	% Recovery
1	Acetone	500.00	476.00	24.00	95.20
2	Triethyl amine - TEA	71.28	67.79	3.49	95.10
3	MDC	700.00	673.40	26.60	96.20
4	Methanol	350.00	336.00	14.00	96.00
5	Ethylacetate	250.00	240.50	9.50	96.20
6	IPA	450.00	427.50	22.50	95.00
7	Pyridine	163.69	155.51	8.18	95.00
8	Toluene	600.29	582.28	18.01	97.00
9	DMF	97.05	93.36	3.69	96.20

ii VOC emission sources and its mitigation measures

- Use of effective engineering practices, like use of pneumatic system for transfer of raw materials will be continued to be adopted for control of VOC emissions; and manual handling will be avoided.
- Equipment / machineries engaged in handling and storage operations will be checked prior to loading/unloading and they will be kept in proper working conditions through regular inspection and maintenance.
- Transportation and handling of materials will be done in line with the established SOPs and under supervision.

H

- **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Storage tanks	Formamidine HCl, Fumaric Acid,etc	--
Drum/Barrel storage	Acetone, MDC, Methanol,Oil, Bromine, tetrahydrofuran, dimethyl amino pyridine, Ethanol, hydrazine, Acetonitrile,NaOCN, etc	--
Bags	Sodium Bicarbonate, 48 % NaOH,Raney Ni, 2-amino-5-chloro pyridine, etc	--

- **Applicability of PESO** : Will be obtained

- During the meeting dated 16/01/2020, 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

conductedfor the study area of 10 km radial distance from project site for the 29th October 2018 to 27th January 2019.Ambient Air Quality monitoring was carried out for PM2.5,PM10,SO2,NOx and HCl 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. 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 detailed proposed safeguard measures including On-Site / Off-Site Emergency Plan has been covered in the RA report.
- Committee noted that this proposal is Greenfield project in GIDC Dahej. Source of Water is GIDC. PP mentioned that total industrial effluent will be treated in proposed in-house primary, secondary and tertiary ETP and treated effluent will be passed through RO plant. RO permeate will be reused back in process while RO reject will be evaporated in MEE. MEE condensate will be further reutilized in aeration tank for further treatment. Committee asked about technical justification regarding reuse of treated waste water quantity more than mentioned in ToR. Also Committee asked about revised water balance diagram with justification regarding stage wise characteristic of effluent for reduction of pollutant like BOD, COD and TDS. Committee also noted that PP has not addressed bromination, nitration and amination process even though bromine, ammonia solution and conc. Nitric acid as raw material for proposed bulk drug products. Committee noted that PP has not properly addressed adequate APCM like water scrubber in addition to proposed APCM for coal fired boilers. Committee also observed not mentioned membership for ultimate disposal of various Hazardous Waste like spent solvent, process sludge, spent carbon etc. Committee also insisted for solvent stripper with losses at various stages like storage, transportation, handling and reactors with solvent recovery and its mitigation measures. Committee also submit revised EMP with mentioning dust emission during construction phase and need based CER in nearby villages with permission letter for utilize CER fund in School and PHC of concerned department. Committee also insisted for revised layout plan with mentioning green belt area
- **After detailed discussion, Committee unanimously decided to defer the project and consider the proposal only after submission of the following details.**

1. Submit technical justification regarding reuse of treated waste water quantity more than mentioned in ToR.
2. Revised water balance diagram with justification regarding stage wise characteristic of effluent for reduction of pollutant like BOD, COD and TDS in ETP, RO plant and MEE.
3. Submit technical justification regarding process stack and its APCM for bromination, nitration and amination process even though bromine, ammonia solution and conc. Nitric acid as raw material for proposed bulk drug products and subsequent change in EIA report.
4. Readdress adequate APCM like water scrubber in addition to proposed APCM for coal fired boilers.
5. Submit revised EMP with mentioning dust emission mitigation measures during construction phase & Need Based CER for nearby villages of proposed project with budgetary provision for five years.

6. Submit revised Hazardous matrix for disposal of incinerable waste other than critical polluted area, membership certificate for ultimate disposal of various Hazardous Waste like spent solvent, process sludge, spent carbon etc.
7. Readdress additional ToR no- 3 for LDAR as per proposed project with each solvent from process and solvent stripper(effluent) storage, handling, recovery, losses and its chemical property and additional ToR no – 10 considering scrubber bleed liquor disposal.

- Project proponent made presentation for the above mentioned query dated 18/03/2020 for the above mentioned points.
- PP presented replied as below:

1. PP presented technical justification regarding reuse of treated waste water quantity more than mentioned in ToR.
2. PP presented revised water balance diagram with justification regarding stage wise characteristic of effluent for reduction of pollutant like BOD, COD and TDS in ETP, RO plant and MEE.
3. PP presented technical justification regarding process stack and its APCM for bromination, nitration and amination process with subsequent change in EIA report.
4. PP presented adequate APCM like water scrubber in addition to proposed APCM for coal fired boilers.
5. PP presented revised EMP with mentioning dust emission mitigation measures during construction phase & Need Based CER for nearby villages of proposed project with budgetary provision for five years.
6. PP presented revised Hazardous matrix for disposal of incinerable waste other than critical polluted area, membership certificate for ultimate disposal of various Hazardous Waste like spent solvent, process sludge, spent carbon etc.
7. PP presented LDAR as per proposed project with each solvent from process and solvent stripper (effluent) storage, handling, recovery, losses and its chemical property.

- Committee deliberated on the reply submitted by PP and found it satisfactory.
- Compliance of ToR found satisfactory.
- ***After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.***

10	SIA/GJ/IND2/30487/2018	**M/s.Human Pharma Labs Pvt. Ltd.** Survey No. 1562, Pansar Road, Village: Pansar, Tal: Kalol, Dist.: Gandhinagar, Gujarat.	Appraisal

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/30487/2018 on dated 05/11/2019 for obtaining Environmental Clearance.

- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 03/05/2019.
- Project proponent has submitted EIA Report prepared by M/s. San Envirotech Pvt. Ltd, Ahmedabad based on the TOR issued by SEIAA.
- **Public Hearing** of the Project was conducted by **Gujarat Pollution Control Board** at Project Site of **M/s.Human Pharma Labs Pvt. Ltd., Survey No. 1562, Pansar Road, Vill: Pansar, Tal: Kalol, Dist.: Gandhinagar, Gujarat** dated **20/11/2019**.
- This is new unit proposes for manufacturing of synthetic organic chemical as tabulated below:

Sr. No.	Name of the Products	CAS no. / CI no.	Quantity MT/Month	End-use of products
(A) Hormones				
1	Norethisteron Enanthate	3836-23-5	0.5	Used in Pharma Industry
2	Testosteron Enanthate	315-37-7		
3	Testosteron Propionate	57-85-2		
4	Norethisteron Acetate	51-98-9		
5	Estradiol Benzoate	50-50-0		
6	Estradiol Valerate	979-32-8		
7	Estradiol Undecyclate	3571-53-7		
8	Estradiol	50-28-2		
9	Estradiol Cypionate	313-06-4		
10	Testosteron Cypionate	58-20-8		
11	Methyl Testosteron	58-18-4		
(B) Steroids				
12	Betamethasone	378-44-9	1.0	Used in Pharma Industry
13	Dexamethasone	50-02-2		
14	Prednisolone	53-03-2		
15	Hydrocortisone	50-23-7		
16	Fluocinolone Acetonide	67-73-2		
17	Dexamethasone Acetate	1177-87-3		
18	Methyl Prednisolone	83-43-2		
19	Mometasone Furoate	105102-22-5		
20	Fluticasone Propionate	80474-14-2		
21	Deflazacort	14484-47-0		
22	Budesonide	51333-22-3		
23	Beclomethasone Dipropionate	4419-39-0		

24	Betamethason Acetate	987-24-6		
25	Betamethasone Dipropionate	5593-20-4		
26	Betamethasone Sodium Phosphate	151-73-5		
27	Betamethasone Valerate	2152-44-5		
28	Clobetasole Propionate	25122-46-7		
29	Clobetasone Butyrate	25122-57-0		
30	Dexamethasone Sodium Phosphate	2392-39-4		
31	Hydrocortisone Hemi Succinate	2203-97-6		
32	Hydrocortisone Acetate	50-03-3		
33	Methyl Prednisolone Acetate	53-36-1		
34	Methyl Prednisolone Hemisuccinate	2921-57-5		
35	Prednisolone Acetate	52-21-1		
36	Prednisolone Sodium Phosphate	125-02-0		
(C) Steroids				
37	Halobetasol Propionate	66852-54-8	0.1	
38	Triamcinolone Acetonide	76-25-5		
39	Triamcinolone	124-94-7		
40	**Methylcobalamin**	13422-55-4	1.0	
		Total	**2.6**	

- 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 18/03/2020.
- Salient features of the project are as under:

Sr. no.	**Particulars**	**Details**
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	4.5 Crores
	Details of EMP	

COMPONENT	**CAPITAL COST OF EMP**	**RECURRING COST OF EMP (per Annum)**
TOTAL COST	Rs. 52 Lakh	Rs. 44.6 Lakh

Bifurcation of EMP Cost

Sr. No.	Particulars	Capital Cost (Rs. in Lakhs)	Recurring Cost per annum (Rs. in Lakh)
1	**Air Pollution Control**	**15.0**	**1.0**
2	**Water Pollution Control**	**20.0**	**31.9**
3	**Noise Pollution Control**	**5.0**	**1.0**
4	**Solid/Hazardous Waste Management**	**5.0**	**5.0**
5	**Environment Monitoring and Management**	**1.0**	**2.5**
6	**Occupational Health**	**0.5**	**2.0**
7	**Green Belt Development**	**2.0**	**0.7**
8	**Rain Water Harvesting System**	**3.5**	**0.5**
	Total	**52.0**	**44.6**

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

As per OM no. 22-65/2017 on dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER), Greenfield project have to contribute 2.0% of the Project Cost, the company will contribute **Rs. 9.0 lakhs (2.0%)** as funds for CER activities.

Component	As per Norms	Allocation
CER	Rs. 9.0 Lakhs (2.0%)	Rs. 9.0 Lakhs (2.0%)

Detailed expenditure break-up for CER activities

Sr. No.	Activities	Total Budget (Rs. in Lakhs)	Focus area
1	Provide Dengue Fogging Machines to Pansar and Vadavsvami village (3 Machine in each village)	3.0	Pansar and Vadavsvami village
2	Health check-up during rainy days and provide free medicine to Pansar and Vadavsvami village.	6.0	
	Total	**9.0**	

B	**Total Plot area** (sq. meter)	5665 Sq. m.
	Green belt area (sq. meter)	1870 Sq. m.
C	**Employment generation**	**12 persons**

D	Water	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc.)	Source of water supply will be from Pansar Village Panchayat
	Status of permission from the concern authority.	Permission already obtained

ii **Water consumption (KLD)**

Category	Quantity, KLD	Remarks
(S) Domestic	1.0	Fresh
(T) Gardening	5.0	Fresh (2.0 KLD) + Reuse (3.0 KLD from RO permeate)
(U) Industrial		
Process	6.0	Fresh
Washing	1.0	Reuse
Boiler	1.0	Reuse
Cooling	2.0	Reuse
Others		
Water treatment (DM/RO Plant)	0.5	Reuse
Industrial Total	**10.5**	**--**
Total (A + B + C)	**16.5**	**--**

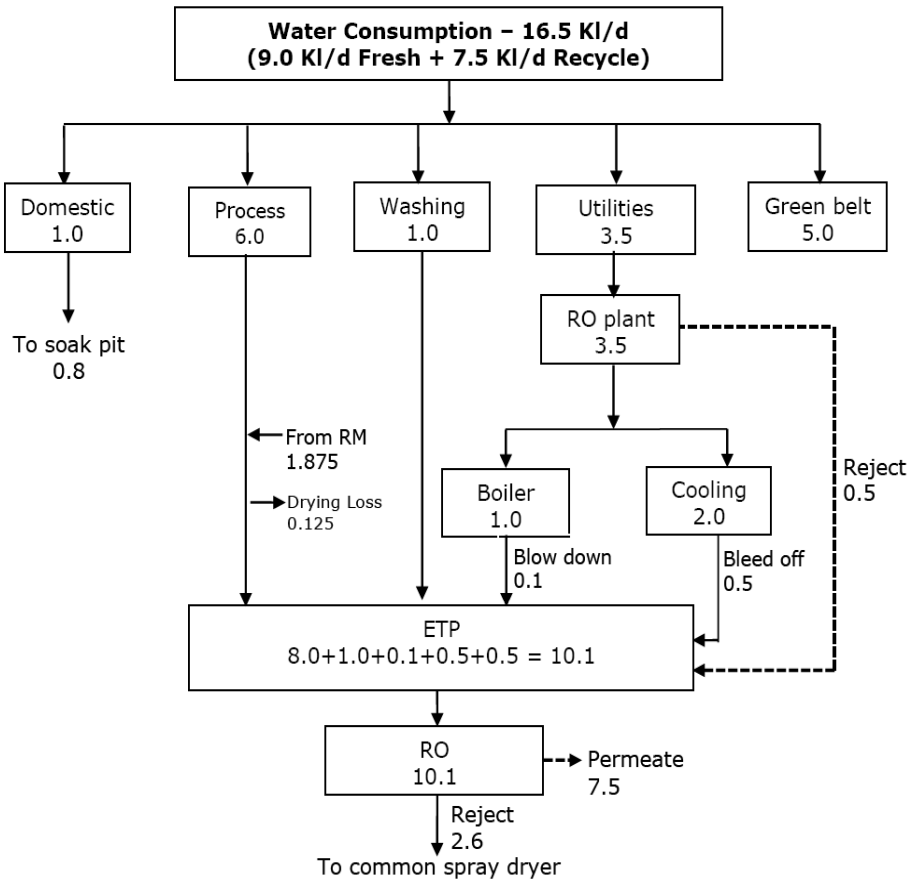
1) **Total water requirement** for the project: 16.5 KLD
2) Quantity to be **recycled**: 7.5 KLD
3) Total **fresh water** requirement: 9.0 KLD

iii **Waste water generation (KLD)**

Category	Waste water, KLD	Remarks
(K) Domestic	0.8	To soak Pit
(L) Industrial		
Process	8.0	--
Washing	1.0	--
Boiler	0.1	--
Cooling	0.5	--
Others		
Water treatment (DM/RO Plant)	0.5	--

		Total Industrial waste water	10.1	ETP-RO-Common Spray Dryer	
		Total [A + B]	10.9		

iv	Treatment facility within premises with **capacity** [In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc. ➢ ETP (Capacity-15 KLD), RO (Capacity-1.0 m^3/hr)	
	Treatment scheme including segregation at source. ➢ Wastewater generated from industrial activities (10.1 KLD) will be treated into in- house ETP and then Treated effluent will be passed through RO. Permeate from RO (7.5 KLD) will be reused (in utilities, washing & Greenbelt) and reject of RO (2.6 KLD) will be sent for evaporation at Common Spray Drying Facility (Chhatral Environment Management Pvt. Ltd.). ➢ 0.8 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**. ➢ **Not applicable**	
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ **Not applicable**	
v	Mode of Disposal & Final meeting point	
	Domestic:	0.8 KLD disposed of to soak pit through **septic tank**.
	Industrial:	Total industrial effluent (10.1 KLD) will be treated into in-house ETP having primary & tertiary treatment units and then passed through RO. Permeate from RO (7.5 KLD) will be reused and reject (2.6 KLD) will be sent for evaporation at Common Spray Drying Facility (Chhatral Environment Management Pvt. Ltd.).
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ Common Spray dryer	
	Membership of Common facility (CF) **(For waste water treatment)**	
	Membership Already Obtained. Attached as **Annexure II** of EIA report (Page no. 297)	
vii	**Simplified water balance diagram with reuse / recycle of waste water**	



viii Reuse/Recycle details (KLD)

Total reuse – 7.5 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.**
• RO Permeate: 7.5 KLD	Cooling- 2.0 KLD Boiler- 1.0 KLD Washing- 1.0 KLD DM/RO Plant- 0.5 KLD Gardening- 3.0 KLD	As below	Quality of reuse water is given in following table. Mention quality can be easily use for utilities, washing and Gardening without any adverse impact on product quality

Characteristics of waste water to be reused (COD, BOD, TDS etc.)

Parameters	Unit	ETP Inlet	ETP Outlet	RO Permeate
pH	pH unit	4.5-5.0	7.0-7.5	7.5-8.0
Color	mg/L	45-50	20-30	< 5
SS	mg/L	450-500	50-60	20-30
TDS	mg/L	12000-12500	12000-12500	350-400
COD	mg/L	3500-4000	2800-3000	50-70
BOD	mg/L	1200-1500	900-1000	20-25
Oil & Grease	mg/L	30-35	5-10	--
Ammonical Nitrogen	mg/L	45-50	20-25	-
Volume	**--**	**10.1 KLD**	**10.1 KLD**	**7.5 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.

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 (0.3 TPH)	11	Agro Waste (Briquettes)	1.5 Mt/day	SPM, SO_2, NO_X	Cyclone & Bag filter
2	DG Set (75 KVA)	11	Diesel	25 Lit/Hr.	SPM, SO_2, NO_X	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)
No process gas emission				

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

As below:

Sources of fugitive emission

In proposed activities, there will be chances of VOCs generation from solvent tank farm, process area & raw material storage area. There will be also chances of generation of PM from packing/finishing area.

Mitigation Measures:

- Close handling system provided for transfer of chemicals.
- Pneumatically transfer of liquid raw material in reactor.
- Raw material will be stored in the covered structure.
- Regular maintenance of valves, pipes etc.
- Periodic work area monitoring will be carried out.
- Greenbelt will be developed around the plant to arrest the fugitive emission.

F **Hazardous wastes**

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

i

Sr. No.	Type of Waste	Category	Quantity	Disposal method
Hazardous Waste				
1	ETP Sludge	35.3	24.0 MTPA	Collection, storage & disposal at TSDF site approved by GPCB.
2	Distillation residue	20.3	21.0 MTPA	Collection, storage & disposal at CHWIF or co-processing.
3	Used Lubricating Oil	5.1	0.2 Kl/year	Collection, storage & use within premises as lubricant/ sell to registered recyclers.
4	Discarded containers Liners	33.1	2400 Nos./Annum & 3.0 MTPA	Collection, storage and reuse for packing of products or disposal by selling to approved recyclers.
5	Spent carbon	28.3	0.9 MTPA	Collection, storage & return back to supplier for regeneration.
6	Off Specific Products	28.4	What so ever generation	Collection, storage & disposal at CHWIF.
7	Date expired	28.5	What so ever generation	Collection, storage & disposal at CHWIF.

			products			
		8	Spent Solvent	28.6	225 MTPA	Collection, storage, in-house distillation and recovered solvent will be reused.
		Solid Waste				
		1	Fly Ash	--	4.0 MT/month	Collection, Storage & sold to brick manufacturers
ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**				Membership of TSDF, CHWIFwill be obtained after getting EC.	
iii	Details of Non-Hazardous waste & its disposal (MSW and others)				Fly ash generation will be around 4.0 MT/Month, which will be sold to brick manufacturers.	
G	**Solvent management**, VOC emissions etc.					
i	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)					

- Methanol, Chloroform, Dimethyl Formamide, IPA, Acetone and n-Hexane will be used as solvent. Self-reflux condenser will be provided with dual valve system for solvent recovery. At the end of reaction, solvent will be collected in receiving tank and reused again in next batch.

Sr. No.	Name of solvent	Boiling Point (^{0}C)	Flash point (^{0}C)	Recovery	Remark
1	Chloroform	61	---	~93%	Losses goes with residue
2	Methanol	64.5	12	~96%	
3	DMF	153	57.77	~98%	
4	IPA	82.5	18.3	~96%	
5	Acetone	56.2	-20	~95%	
6	N-Hexane	69	-22	~97%	

ii VOC emission sources and its mitigation measures

VOC generation will be from the manufacturing activities and raw material storage.

Mitigation measures:

- Close handling system provided for transfer of chemicals.
- Pneumatically transfer of liquid raw material in reactor.
- Raw material will be stored in the covered structure.
- Regular maintenance of valves, pipes etc.

	➢ Periodic work area monitoring will be carried out. ➢ Greenbelt will be developed around the plant to arrest the fugitive emission.
H	➢ **Details regarding storage of Hazardous chemicals**

Storage details	**Name of major Hazardous chemicals**	**Remarks**
Storage tank	HCl (30-32%)	1 Tank x 5 KL
Storage tank	Sulphuric acid (70%)	1 Tank x 2 KL
Storage tank	Methanol	1 Tank x 5 KL
Drum	Chloroform	2 drums x 0.2 KL
Drum	DMF	2 drum x 0.2 KL
Drum	Isopropyl Alcohol	4 drum x 0.2 KL
Bottle	Acetic Anhydride	10 Carboys x 0.065 KL
Bottle	Acetic Acid	10 Carboys x 0.065 KL
Drum	MDC	2 drums x 0.2 KL
Drum	Acetone	5 drums x 0.2 KL
Drum	N-Hexane	5 drums x 0.2 KL
Drum	Pyridine	2 drums x 0.2 KL

➢ **Applicability of PESO**: Not applicable

- During the meeting dated 18/03/2020, technical presentation made 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 March 2019 to May 2019. Ambient Air Quality monitoring was carried out for PM2.5, PM10, SO2, NOx, Benzene, Toluene, Xylene, VOC, CO & HC 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 ISCST3. 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 deliberated on the Minutes of the Public Hearing dated **20/11/2019** along with the representation made by the Public and noted that PP has not submitted point wise compliance of the same as status of the issue raised by the public as on date and asked PP to submit the same.
- Committee noted that proposal is new in Village: Pansar. Source of water is Pansar Village Panchayat. PP mentioned that effluent generated from process, washing, boiler blow down, cooling tower blow down will be

treated into in-house ETP having primary & tertiary treatment followed by RO. RO – Permeate will be reused/recycled back into process while reject will be sent for evaporation at Common Spray Drying Facility Chhatral Environment Management Pvt. Ltd for final treatment and disposal. PP has proposed one steam boiler. Fuel used will be Briquettes. Committee noted PP has not addressed LDAR properly and asked to address the same. PP has addressed Hazardous Waste as per HWR – 2016.Committee noted that PP has addressed EMP & CER satisfactorily.

- ***After detailed discussion, Committee unanimously decided to consider the proposal only after submission of the following documents.***

1. Membership Certificate from Common Facility (mentioning total capacity, consented quantity, occupied capacity and spare capacity and norms of acceptance of effluent from member units) in-line with the direction given by GPCB vide Letter No. GPCB/P-1/8-G (5)/550706 dated 08/01/2020.
2. Compliance of issues raised during Public Hearing in Tabular Form and current status of compliance.
3. 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.
4. Addendum to EIA Report Incorporating all the above mentioned correction.

11	SIA/GJ/IND2/34301/2019	**M/s. Fermenta Biotech Limited** Plot No. T-33, and T-34 in the Notified GIDC Estate, Saykha, inside the Dahej PCPIR, Ta - Vagra, Dist: Bharuch	EC – Reconsideration

Category of the unit: 5(f)

Project status: New

- PP has submitted online application vide no. SIA/GJ/IND2/34301/2019 dated 14/11/2019 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: Aditya Environmental Services Pvt. Ltd, Mumbai based on the TOR issued by SEIAA.
- This is a new unit proposes manufacturing of synthetic organic chemicals as tabulated below:

Format

- 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 08/01/2020.
- Salient features of the project are as under:

Format

- During the meeting dated 08/01/2020, 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 April 2019 to June 2019. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2 and NOx at Ten 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.
- Committee noted that this proposal is Greenfield project in GIDC Sayakha. Source of Water is GIDC. PP mentioned that high COD steam will be segregated and evaporated in MEE while Low COD stream and domestic effluent stream will be treated in proposed in-house primary, secondary and tertiary ETP and treated effluent will be further treated in two stage RO plant and RO reject will be evaporated in in-house MEE while RO permeate will be reused back . MEE condensate further return Back to ETP instead of reuse. Committee asked about MEE condensate again treatment justification, technical expert of PP along with characteristic of effluent explained in brief. Committee asked about treatability report from schedule-I auditor with stage wise reduction of pollutant in ETP, RO and MEE units. Committee asked for submit revised APCM details for process gas emission. Committee also insisted for revised Hazardous matrix for disposal of incinerable waste other than critical polluted area, Bleed liquor generation and its disposal details and Off specification products and medicine details. Committee noted that PP has not properly address EMP as not mentioning Mitigation measures for dust control during construction phase as per MoEFCC Notification dated 25/01/2018 & adequate CER cost as per need based in surrounding villages with budgetary provision. Technical expert of PP explained in length regarding compliance of ToR and Committee insisted PP to readdress additional ToR no- 5 for LDAR as per proposed project with each solvent storage, Handling, recovery, losses and its chemical property, Additional ToR no- 8 and additional ToR no – 10.
- **After detailed discussion, Committee unanimously decided to consider the proposal only after submission of the following details.**

1. Submit treatability report from schedule – Iauditor with stage wise reduction of pollutant in ETP, ROand MEE units and Feasibility report for reuse treated wastewater for industrial purpose.
2. Submit revised EMP with mentioning Mitigation measures for dust control during construction phaseas per MoEF&CC Notification dated 25/01/2018 & Need Based CER for nearby villages of proposedproject with budgetary provision for five years.

3. Submit revised APCM for process gas emission and revised Hazardous matrix for disposal ofincinerable waste other than critical polluted area, scrubber Bleed liquor generation and offspecification products and medicine details.
4. Separate fuel consumption rate for FO and NG (For Steam Boilers).
5. Readdress additional ToR no- 5 for LDAR as per proposed project with each solvent storage,Handling, recovery, losses and its chemical property and additional ToR no – 10 consideringscrubber bleed liquor disposal.

- Project proponent made presentation for the above mentioned query dated 18/03/2020 for the above mentioned points.
- PP presented replied as below:

1. PP presented treatability report from schedule – I auditor (ATIRA, Ahmedabad) with stage wise reduction of pollutant in ETP, RO and MEE units and Feasibility report for reuse treated wastewater for industrial purpose.
2. PP presented revised EMP with mentioning Mitigation measures for dust control during construction phase as per MoEF&CC Notification dated 25/01/2018 & Need Based CER for nearby villages of proposed project with budgetary provision for five years.
3. PP presented revised APCM for process gas emission and revised Hazardous matrix for disposal of incinerable waste other than critical polluted area, scrubber Bleed liquor generation and off specification products and medicine details.
4. PP presented separate fuel consumption rate for LSHS and NG for steam boiler by eliminating FO.
5. PP presented ToR no- 5 for LDAR as per proposed project with each solvent storage, Handling, recovery, losses and its chemical property

- Committee deliberated on the reply submitted by PP and found it satisfactory.
- Compliance of ToR found satisfactory.
- ***After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.***

12	SIA/GJ/IND2/48029/2019	**M/s Majdha Industries Pvt. Ltd.** Plot No. D-2/CH/55, Dahej II, Dahej Industrial Estate, Tal: Vagra, Dist: Bharuch, Gujarat.	EC – Reconsideration

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/48029/2019 on dated 06/01/2020 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated

07/09/2019.

- Project proponent has submitted EIA Report prepared by M/s. Aqua Air Environmental Engineers Pvt. Ltd. based on the TOR issued by SEIAA.
- This is new unit proposes for manufacturing of synthetic organic chemical as tabulated below:

SR. NO.	NAME OF PRODUCTS	CAS NO.	PROPOSED PRODUCTION CAPACITY (MT/MONTH)	END USE
1	2,4 Di Chloro Aniline	554-00-7	4000	Pharma
2	Ortho Nitro Chlorobenzene	88-73-3		Pharma
3	Para Nitro Chlorobenzene	121-73-3		Pharma
4	Meta Nitro Chlorobenzene	100-00-5		Pharma
5	Ortho Nitro Bromobenzene	577-19-5		Pharma
6	Para Nitro Bromobenzene	586-78-7		Pharma
7	Meta Nitro Bromobenzene	585-79-5		Pharma
8	Ortho Di Chlorobenzene	95-50-1		Pharma/Dyes
9	Para Di Chlorobenzene	106-46-7		Pharma/Dyes
10	Ortho Anisidine	90-04-0		Pharma
11	Para Anisidine	104-94-9		Pharma
12	Ortho Nitro Anisole	91-23-6		Pharma
13	Para Nitro Anisole	100-17-4		Pharma
14	Ortho Toluidine	95-53-4		Pharma
15	Para Toluidine	106-49-0		Pharma
16	Meta Di Chlorobenzene	541-73-1		Pharma/Dyes
17	Ortho Chloro Aniline / Meta Chloro Aniline	95-51-2		Pharma
18	Para Chloro Aniline	106-47-8		Pharma
19	Ortho Nitro Aniline	88-74-4		Pharma
20	Para Nitro Aniline	100-01-6		Pharma/Dyes
21	Pivaloyl Chloride/ Benzoyl Chloride	3282-30-2/ 98-88-4		Pharma
22	Valeroyl chloride	638-29-9		Pharma
23	Chloro Acetyl Chloride / Tri Chloro Acetyl Chloride	79-04-9		Pharma
24	2 Chloro Valeroyl Chloride	1575-61-7		Pharma

25	2-Ethyl Hexanoyl Chloride	760-67-8		Pharma
26	Chlorination Derivatives			Pharma
	Mono Chloro benzene	108-90-7		Pharma/Dyes
	Di Chloro benzene	95-50-1		Pharma/Dyes
	Tri Chloro benzene	120-82-1		Pharma/Dyes
27	2,6 Di Chloro Phenol	87-65-0		Pharma
28	2,4 Di Chloro Phenol	120-83-2		Pharma
TOTAL			**4000**	

- 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 18/02/2020.
- Salient features of the project are as under:

S. no	Particulars	Details
A	Total **cost of Proposed** Project (Rs. in Crores):	50Crore
Ii	**EMP details (Capital cost & Recurring cost)**	

Brief details of EMP

COMPONENT	**CAPITAL COST OF EMP**	**RECURRING COST OF EMP (per Month)**
Cost	Rs. 2.94Crore	Rs. 90.24Lakh

Bifurcation of EMP Cost

Sr. No	**Unit**	**Installed Capacity (KLD)**	**Capital Cost (Rs. in Lakh)**	**Operating Cost (Lakh/ Month)**	**Maintenance Cost (Lakh/Month)**	**Total Recurring Cost (Lakh/Month)**
1	Effluent Treatment Plant, RO & MEE Cost	ETP - I= 47 KLD ETP - II= 87 KLD RO = 47KLD, MEE = 99.5KLD	125.0	55.50	0.83	56.33
2.	APCM	--	138.0		8.333	0.03
3.	Hazardous Waste	--	11.0	34.58	--	34.58

4.	AWH Monitoring Cost	--	5.0	--	--	0.08
5.	Greenbelt	--	15.0	--	0.04	0.04
	Total		**294.0**	**90.49**	**9.2**	**10.82**

Iii **CER details (As per MoEF&CC OM dated 01/05/2018)**

As per OM no. 22-65/2017 on dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER), greenfield projects have to contribute 2% of the Additional Capital Investment; the company will contribute Rs. 100.0 Lakh as funds for CER activities.

Component	**As per Norms**	**Allocation**
CER	Rs. 100.0 Lakh (2%)	Rs. 100.0 Lakh (2%)

Activities to be carried out under CER:

FUND FOR CER ACTIVITIES

Year	**Description**	**Amount (INR in Lakh)**
2019-2020	Awareness to local farmers to increase yield of crop, Distribution of Fertilizer in nearby village.	5.0
2020-2021	To provide fund for Road development from Jolva to Dahej and Galenda to Vav and/ or required other places	25.0
2021-2022	To construct science lab & Provide necessary instrument for laboratory to Vadadla High secondary School	25.0
2022-2023	Providing medicines and carrying out operation of animals that require fund for such cause in Dahej.	5.0
	Provide 200 Nos. of science kit to Dahej, Jolva School	5.0
2023-2024	Basic needs provide to Primary School of Sambheti - Shamantpor Village Color to primary School School Uniform Stationary for student Computer Drinking Water Facility Benches for Classroom	20

	Fund given for jogal Park for children as per discussion with gram panchayat	15.0
Total		**100.0**

B	**Total Plot area** (sq. meter)	10000 Sq. m.
	Green belt area (sq. meter)	3300 Sq. m.
C	**Employment generation**	150 persons
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC Water Supply Authority, Dahej
	Status of permission from the concern authority.	Membership of GIDC Water Supply, letter no. GIDC/DEE(WS)/BRH/837, dated: 07/11/2019.

ii **Water consumption (KLD)**

Category	Quantity (KLD)	Remarks
(V) Domestic	10.00	
(W)Gardening	5.00	
(X) Industrial		
Process	135.0	
Washing	5.0	
Boiler	160.0	
Cooling	100.0	
Scrubbing	150.0	
Industrial Total	550.0	
Total (A + B + C)	**565.0**	

1) **Total water requirement** for the project: 565KLD
2) Quantity to be **recycled:** 158 KLD
3) Total **fresh water** requirement: 407 KLD

iii **Waste water generation (KLD)**

Category	Waste water (KLD)	Remarks
(M) Domestic	8.0	
(N) Industrial		
Process	125.0	
Washing	5.0	
Boiler	32.0	
Cooling	10.0	
Scrubbing	220.0	
Total Industrial waste water	**392.0**	
Total [A + B]	**400.0**	

iv Treatment facility within premises with **capacity**

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

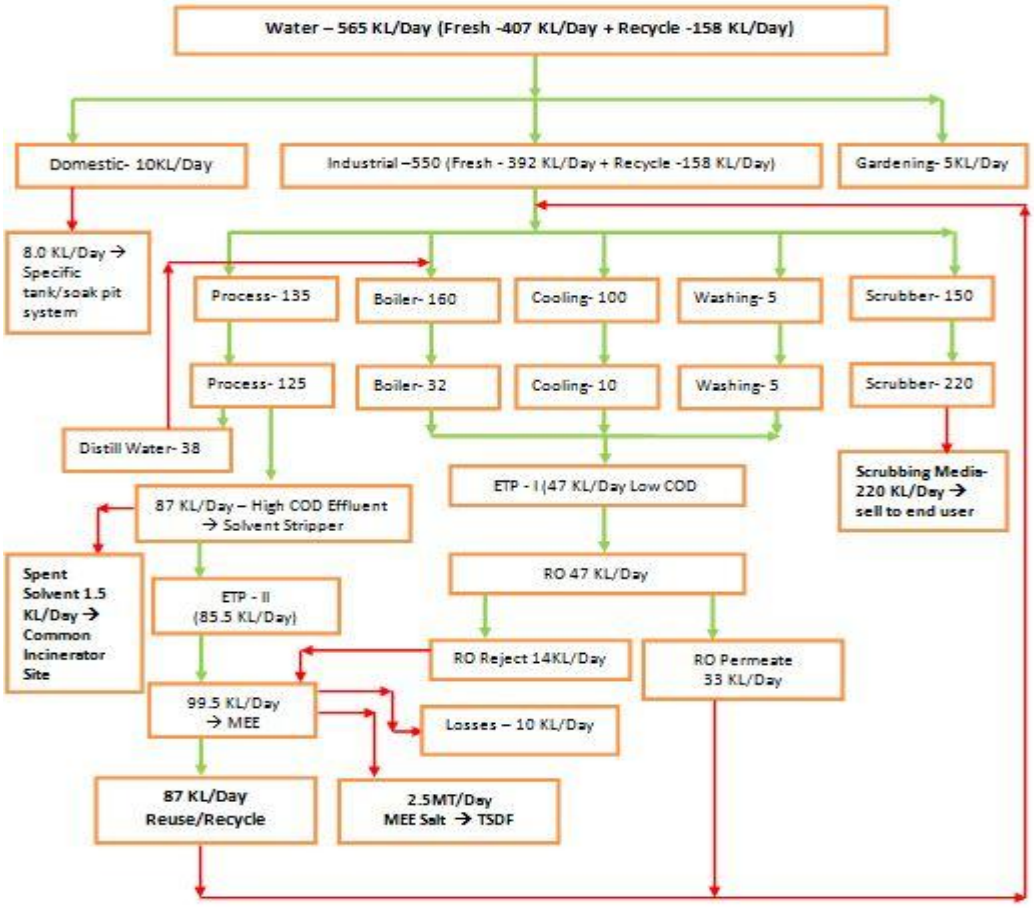
- ETP (Primary treatment)- 85.5 KL/day
- ETP (Primary, secondary treatment)- 47 KL/day

Treatment scheme including segregation at source.

- Total 400 KL/day (392 KL/day Industrial + 8.0 KL/day domestic) of effluent shall be generated.
- **Stream-I: 47 KL/day low COD & TDS stream** (from Boiler, cooling, washing) will be treated in ETP giving primary & secondary treatment then sent to RO. RO permeate will be reuse within premises & RO reject will sent to In-house MEE.

		• **Stream-II: 87 KL/Day high COD & TDS stream (from process)** will be sent to Solvent Stripper. 1.5KL/Day Spent Solvent generate from solvent stripper will disposed to common incineration site & remaining 85.5 KL/Day effluent will be given by primary treatment and then sent to In-house MEE. • **Stream-III: 38 KL/day distilled waterstream** will be recovered & reuse by process distillation in process water. • **220 KL/day scrubbing media** will be sold to authorized end user registered under Rule-9 and reuse within the premises. • Domestic waste water (8.0 KL/day) will be disposed by septic tank or soak pit system.
		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): • Total 400 KL/day (392 KL/day Industrial + 8.0 KL/day domestic) of effluent shall be generated. • **Stream-I: 47 KL/day low COD & TDS stream** (from Boiler, cooling, washing) will be treated in ETP giving primary & secondary treatment then sent to RO. RO permeate will be reuse within premises & RO reject will sent to In-house MEE. • **Stream-II: 87 KL/Day high COD & TDS stream (from process)** will be sent to Solvent Stripper. 1.5KL/Day Spent Solvent generate from solvent stripper will disposed to common incineration site & remaining 85.5 KL/Day effluent will be given by primary treatment and then sent to In-house MEE. • **Stream-III: 38 KL/day distilled waterstream** will be recovered & reuse by process distillation in process water. • **220 KL/day scrubbing media** will be sold to authorized end user registered under Rule-9 and reuse within the premises. • Domestic waste water (8.0 KL/day) will be disposed by septic tank or soak pit system.
v	Mode of Disposal & Final meeting point	
	Domestic:	• Domestic waste water (8.0 KL/day) will be disposed by septic tank or soak pit system.

	Industrial:	• **Stream-I: 47 KL/day low COD & TDS stream** (from Boiler, cooling, washing) will be treated in ETP giving primary & secondary treatment then sent to RO. RO permeate will be reuse within premises & RO reject will sent to In-house MEE. • **Stream-II: 87 KL/Day high COD & TDS stream (from process)** will be sent to Solvent Stripper. 1.5KL/Day Spent Solvent generate from solvent stripper will disposed to common incineration site & remaining 85.5 KL/Day effluent will be given by primary treatment and then sent to In-house MEE. • **Stream-III: 38 KL/day distilled waterstream** will be recovered & reuse by process distillation in process water. • **220 KL/day scrubbing media** will be sold to authorized end user registered under Rule-9 and reuse within the premises
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE, CHWIF etc. **Name of Common facility (CF)**	
	➢Incinerable / Co-process waste at M/s BEIL, Dahej.	
	Membership of Common facility (CF)	
	➢Membership of TSDF Facility, M/s. BEIL, Dahej vide letter no. BEIL/ANK/2019, dated: 18/11/2019.	
vii	**Simplified water balance diagram with reuse / recycle of waste water**	



vi	Reuse/Recycle details (KLD)

i [Source of reuse & application area]

Total reuse 158 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.**
Distilled water Stream: 38 KLD	Process: 120 KLD	COD: 50 mg/l BOD: 10 mg/l TDS: 130 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 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 (16 TPH-1 Nos.)	30	Briquettes of Bio-coal/Coal	45 MT/Day	SPM SO_X NO_X	ESP with water scrubber
2	Thermic Fluid Heater (4.0 LAC K.CAL/Hr)	20	Natural Gas	1200 SCM/Day	SPM SOX NOX	Adequate Stack height
3	Thermic Fluid Heater (6.0 LAC K.CAL/Hr)	20	Natural Gas	1800 SCM/Day	SPM SOX NOX	Adequate Stack height
4.	D.G. Set (1500 KVA x 1 Nos.) Stand By	10	HSD	400Liter /Day	SPM SOX 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)
PROPOSED				
1.	Process Vent -1 (Valeroyl Chloride/2-Ethyl Hexanoyl Chloride)	HCl SO_2	12	Two Stage Water + Alkali Scrubber
2.	Process Vent -2 (Nitro Chloro benzene/Nitro Bromo benzene)	NOx	12	Two Stage Alkali Scrubber
3.	Process Vent -3 (Chlorination-MCB/DCB/TCB)	Cl_2	12	Two Stage Water + Chilled Water Scrubber + Alkali Scrubber
4.	Process Vent -4 (Ortho/Para nitro aniline)	NH_3	12	Two Stage Water Scrubber

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

- Airborne dust at all transfers operations/ points will be controlled either by spraying water or providing enclosures.
- Adequate ventilation will be provided.
- Care will be taken to store construction material properly to prevent fugitive emissions, if any
- Regular maintenance of valves, pumps, flanges, joints and other equipment will be done to prevent leakages and thus minimizing the fugitive emissions of VOCs.
- Entire process will be carried out in the closed reactors with proper maintenance of pressure and temperature.
- Periodic monitoring of work area will be carried out to check the fugitive emission.
- Stand by pumps will be provided on all scrubbers. Besides, scrubbers will be equipped with on-line pH meter with hooter system for better operational control.
- To eliminate chances of leakages from glands of pumps, mechanical seal will be provided at all solvent pumps.
- Close feeding system will be provided for centrifuges. Centrifuge and filtrate tank vents will be connected to vent chillers.
- Fugitive emission over reactors, formulation areas, centrifuges, chemical loading and transfer area will be collected through hoods and ducts by induced draft and controlled by scrubber/ dust collector.

- Dedicated scrubber will be provided are used for fugitive emissions to control.
- For dust emissions bag filter will be provided.
- Minimum number of flanges, joints and valves in pipelines.
- 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.
- Nitrogen blanketing will be provided, besides special care needs to be taken for control in respect of odorous chemicals.

F **Hazardous waste**

(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	Used/Spent oil	Machineries/ Utilities	SCH-I/5.1	0.3 KL	Collection, Storage, Transportation and reused for Machine Lubrication / Given to GPCB registered reprocessor
2	Spent Solvent	Process	SCH-I/28.6	5640	Collection, Storage, In-house distillation and reuse within premises.
3	Distillation Residue	Distillation	SCH-I/ 20.3	600	Collection, Storage, Transportation and sell to co-processing or send to Common Incineration Facility
4	Residual Salts from MEE	MEE	SCH-I/35.3	900	Collection, Storage, Transportation and dispose to Landfill at TSDF
5	Sludge from ETP	ETP	SCH-I/35.3	180	Collection, Storage, Transportation and dispose to Landfill at

					TSDF
6	Spent Residue from Stripper	Solvent Stripper	SCH-I/20.3	54	Collection, Storage, Transportation and sell to co-processing or send to Common Incineration Facility
7	Used Containers				Collection, Storage, Transportation and sold to GPCB authorized dealer after decontamination
	Drums	RM/FG	SCH-I/33.1	108	
	Bags and Liners	RM/FG	SCH-I/33.1	12	
8	Spent Catalyst	Process	SCH-I/28.2	180	Collection, Storage, Transportation and send to regenerator who is having Rule-9.
9	Spent Sulphuric Acid (25%)	Process	SCH-I/28.1	2880	Collection, Storage, Transportation and sell to end user who is having Rule-9.
10	HCl (30%)	Scrubber	SCH-I/28.1	39000	Collection, Storage, Transportation and sell to end user who is having Rule-9.
11	$AlCl_3$ Soln. (25%)	Process	SCH-I/28.1	2016	Collection, Storage, Transportation and sell to end user who is having Rule-9.
12	Sodium Sulfite (22%)	Scrubber	SCH-I/28.1	27000	Collection, Storage, Transportation and sell to end user who is having Rule-9.

	13	Liquor Ammonia (24%)	Scrubber	SCH-I/28.1	6600	Collection, Storage, Transportation and sell to end user who is having Rule-9.
	14	Ammonium Chloride (20%)	Process	SCH-I/28.1	3264	Collection, Storage, Transportation and sell to end user who is having Rule-9.
	15	Sodium Nitrate (25%)	Scrubber	SCH-I/28.1	1800	Collection, Storage, Transportation and sell to end user who is having Rule-9.
	16	Ash	Boiler	--	600	Sell to brick manufacturer
	17	Sodium Hypo Chlorite	Scrubber	SCH-II/B-36	50	Collection, Storage, Transportation and sell to end user who is having Rule-9.

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	➢ Membership of Hazardous Landfill (M/s. BEIL, Dahej) & Hazardous Incineration (M/s BEIL, Ankleshwar), Ref no. BEIL/ANK/2019, Dated: 18/11/2019
iii	Details of Non-Hazardous waste & its disposal(MSW and others)	Non Hazardous Waste will not be generated.
G	**Solvent management**, VOC emissions etc.	
i	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)	
	• All the solvents shall be directly distilled from product mixes and; if required shall be purified in packed column with the help of reflux. • The solvent distillation system shall be designed so as to achieve minimum 95.0 % recovery of solvent. • All the pumps shall be mechanical seal type to avoid any leakage of solvent. • All necessary fire fighting systems shall be provided with alarm system. Flame proof wiring and flame proof electrical accessories shall be provided to avoid any mishap. • All the distillation column vents are also connected to cooling water/ chilled brine condensers for maximum possible recovery of the solvents. • All the vents will be connected to a common carbon Adsorber for removing traces of solvent from vent gases.	

- Residue generated from the distillation will be sent to nearer commonincinerator site.
- Two condensers will install with cooling water and chilled brine to recover the solvent.
- Primary Condenser HE-01: Cooling water or Chilled water (at 10^0C) 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 -05 ^{0}C will be used to trap any traces of Solvent which is slipped from Secondary condenser
- **SOLVENT RECOVERY TABLE**

Solvent	B.P (°C)	M.P (°C)	(g/mL)	F.P (°C)	Qty Consumed	Qty Losses	% of Re-covery	% of Losses
Hexane	69	-95	0.659	-22	400	19.2	95.2	4.8
Methanol	64.6	-98	0.791	12	13380	402	97.0	3.0

ii **VOC emission** sources and its mitigation measures

During operation stage, leakage through valves/pumps, leakage and emission from open drum containing chemicals, open feeding, storage tanks, etc. will be major sources of fugitive emissions and VOCs. Excess use of solvent/s may also results fugitive emission from the process vessels.

- 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. Centrifuge and filtrate tank vents will be connected to vent chillers.
- Fugitive emission over reactors, formulation areas, centrifuges, chemical loading, transfer area, will be collected through hoods and ducts by induced draft and controlled by scrubber/dust collector.
- Emphasis will be given to solvent management/solvent loss prevention.
- Control by having proper scrubbing system.
- Condenser to trap VOC.
- 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 maintenance schedule will be adhered to avoid emissions through flange joints, pump seals etc.
- Minimum number of flanges, joints and valves in pipelines.
- 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.
- Solvent tank vents will be connected to vent chillers.
- Adequate ventilation will be provided.
- Airborne dust at all transfers operations/ points will be controlled either by spraying water or providing enclosures.
- Breather valves will be provided on solvent tanks.

H

➢ **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Storage tanks	Methanol, Ammonia, Sulfuric Acid, Thionyl Chloride, Benzene, Caustic Lye, Hexane, MCB	
Drum/Barrel storage	Nitric Acid	
Bank, Cylinder, Bottle or Tonner	Hydrogen, Chlorine	

➢ **Applicability of PESO** :

➢ Permission will be taken after getting EC, if applicable and all the standards of PESO for storage of solvents will be followed.

- During the meeting dated 18/02/2020, technical presentation made 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 October 2018 to December 2018. Ambient Air Quality monitoring was carried out for Particulate Matter (PM10), Particulate Matter (PM2.5), Sulphur Dioxide (SO2), Oxides of Nitrogen (NOx), Ozone (O3), Lead (Pb), Carbon Monoxide (CO), Ammonia (NH3), Benzene (C6H6), Arsenic (As), Nickel (Ni), HBr, HCl & VOCs,at nine 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 ISCST3. 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 new in GIDC Dahej-II, Bharuch.
- During SEAC meeting on 27/12/2019, committee noted that Source of water is GIDC. PP mentioned that Low COD effluent from Plant is treated in primary and secondary ETP and RO plant and RO permeate will be used for process while RO reject along with high COD and TDS effluent will be evaporated in in-house MEE. Distillate water from distillation process directly reuse back in process while exhausted scrubbing media effluent will be sold to end users having Rule- 9 permission and reuse in plant. Committee insisted for segregation of stream like high COD/TDS, Low COD/TDS and distilled water from distillation unit with distinctly mentioning characteristics of each segregated stream and its source. Committee noted that PP has addressed ESP and water scrubber as APCM with coal fired boiler and natural gas as fuel will be used for thermopack. Committee insisted for submit revised adequate APCM details for chlorination reactor. Committee noted that PP has not addressed Hazardous Waste table as per HWR – 2016 along with MoU/LOI for selling of spent acid, scrubber bleed liquor disposal etc. Committee also insisted for explore possibility for reuse of hazardous waste like spent acid. Committee noted that PP has not properly addressed Specific ToR No. 5, 9 and ToR No- 65.Committee also noted that PP has not submitted need based CER activity for surrounding villages. Committee also asked PP to submit revised EMP with mentioning mitigation measures for dust control during construction phase as per MoEF &CC OM dated 25/01/2018. Committee deliberated on baseline data, green belt and LDAR etc for proposed project
- **After detailed discussion, Committee unanimously decided to defer the proposal and call the project proponent for presentation only after satisfactory submission of the following details.**

  1. Segregation of stream like high COD/TDS, Low COD/TDS and distilled water from distillation unit with distinctly mentioning characteristics of each segregated stream and its source.
  2. Submit revised adequate APCM details for chlorination reactor and its bleed liquor disposal.
  3. Submit revised EMP with mentioning mitigation measures for dust control during construction phase as per MoEF &CC OM dated 25/01/2018.
  4. Submit need based CER activity for surrounding villages with budgetary provision for five years.
  5. Readdress Compliance of Specific ToR No. 5, 9 and ToR no-65.
  6. MoU/LOI for selling of Hazardous waste like spent acid, scrubber bleed liquor etc to end users having Rule- 9 permission and explore possibility for reuse of hazardous waste like spent acid.

- Project proponent made presentation for the above mentioned query dated 18/03/2020 for the above mentioned points.
- PP presented replied as below:

  1. PP presented Segregation of stream like high COD/TDS, Low COD/TDS and distilled water from

distillation unit with distinctly mentioning characteristics of each segregated stream and its source.

2. PP presented revised adequate APCM details for chlorination reactor and its bleed liquor disposal.
3. PP presented revised EMP by mentioning mitigation measures for dust control during construction phase as per MoEF & CC OM dated 25/01/2018.
4. PP submitted need based CER activity for surrounding villages with budgetary provision for five years.
5. PP readdressed Compliance of Specific ToR No. 5, 9 and ToR no-65.
6. PP submitted MoU/LOI for selling of Hazardous waste like spent acid, scrubber bleed liquor etc to end users having Rule- 9 permission.

- Committee deliberated on the reply submitted by PP and found it satisfactory.
- Compliance of ToR found satisfactory.
- ***After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.***

13	SIA/GJ/IND2/30681/2019	**M/s. Riddhi Pharma** Plot No. D-2/CH/384, GIDC Estate, Dahej-II, Dist.: Bharuch, State: Gujarat – 392 130, India	Appraisal

Category of the unit: 5(f)

Project status: New

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/30681/2019 on dated 21/01/2020 for obtaining Environmental Clearance.
- The SEAC had recommended TOR to SEIAA and SEIAA issued TOR to PP vide their letter dated 03/05/2019.
- Project proponent has submitted EIA Report prepared by Siddhi Green Excellence Pvt. Ltd, Ankleshwar based on the TOR issued by SEIAA.
- This is new unit proposes for manufacturing of synthetic organic chemical as tabulated below:

Sr. No.	Name of the Products	CAS no. / CI no.	Quantity MT/Month	End-use of products
1.	Beflubutamid (FMB)	113614-08-7	15.0	Fine Chemical
2.	Trans-4-Aminocyclohexanol	27489-62-9	20.0	Ambroxol HCl
3.	Menadione Sodium Bi Sulfite/ Vitamin K3	130-37-0	15.0	Poultry Feeding
4.	Mono Bromo Acetic Acid	79-08-3	25.0	Fine Chemical
5.	1-H-1,2,4 Triazole	288-88-0	200.0	Fluconazole
6.	1-H-1,2,4 Triazole salt (Na salt)	41253-21-8		
7.	1-H-1,2,4 Triazole salt (K salt)	41253-23-0		
8.	Acetophenone	98-86-2	50.0	Fluconazole
9.	1-(2,4-Difluorophenyl)-2-(1H-1,2,4-Triazol-1-yl) Ethanone (DFTA)	86404-63-9	20.0	Fluconazole
10.	1[-2-(2,4-Difluorophenyl)-2,3-Epoxy Propyl]-1h-1,2,4-Triazole Methane Sulfonate(DFTA Epoxy Mesylate)	86386-77-8	20.0	Fluconazole

11.	1-(3-Carboxy Pyridyl)-2-Phenyl-4-Methyl Piperazine (Acid)	61338-13-4	3.0	Metrazepine
12.	1-(3-Hydroxy Methylpyridyl-2) -2-Phenyl-4-Methylpiperazine (Alcohol)	61337-89-1	3.0	Metrazepine
13.	4-(2-Aminoethyl) Thiomethyl-2 DimethylaminomethylThiazole (NI-5)	78441-62-0	5.0	Nizatidin
14.	2-[4-(4-chlorobutanoyl) phenyl]-N,N,2-trimethyl propanamide (FEXO-3)	HSN code: 29029090	70.0	Fexotidine
15.	1-[4 (Cyclopropylcarbonyl) Phenyl]1-Methylpropionic Acid Cyclohexylamine Salt (FEXO-6)	1690344-90-1	50.0	Fexotidine
16.	IsoThiourea- [(S)-((2-Guanidino-4-Thiazolyl) Methyl isothiourea Dihydrochloride] (ITU)	88046-01-9	4.0	Famotidin
17.	2,2-Bis-(1-H-1,2,4-Triazole-1-yl-Methyl)-1,3-Dioxolane (DCDO-2)	144333-84-6	5.0	Fine Chemical
18.	1,3-Bis (1H-1,2,4-triazole-1-yl)propan-2-one (DCDO-3)	98414-56-3	5.0	Fine Chemical
19.	3-Amino-1,2,4-Triazole	61-82-5	50.0	Anti Fungal
20.	3, 3-Diphenyl Propionitrile	2286-54-6	3.0	Fine Chemical
21.	Trans, trans 2,4-Hexadienyl Acetate	1516-17-2	10.0	Fine Chemical
22.	AP-200 Acetate	53880-51-6	8.0	Fine Chemical
23.	R & D Product [R & D shall be carried out for the betterment of proposed products (Sr. No.1 to 22) by means of diluents like Solvents]	--	2 MTM (24 MTA)	Fine Chemical
	Total		**583**	

- 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 18/03/2020.
- Salient features of the project are as under:

Sr. no.	Particulars	Details
A		
A	Total **cost of Proposed** Project (Rs. in Crores):	8.008 Crore
	Details of EMP	

Brief details of EMP

Component	Capital Cost Of EMP	Recurring cost of EMP (per Month)
Total cost	Rs. 84.5 Lakh	Rs. 16.09 Lakh

Bifurcation of EMP Cost

Sr. No.	Unit	Installed Capacity (KLD)	Capital Cost (Rs. in Lakh)	Operating Cost (Lakh/ Month)	Maintenance Cost (Lakh/ Month)	Total Recurring Cost (Lakh/ Month)
1	Effluent Treatment Plant	40 KLD	50	9	1	10
2	APCM	Multi cyclone separator, bag filter, process scrubber systems,	10	2.25	0.25	2.5

		Installation of stacks with platform and sampling arrangements, local exhaust systems				
3	Hazardous Waste management	98.8 m^2 (1.97 % of total plot area)	10	3	0.33	3.33
4	AWH Monitoring Cost + Noise Pollution control + Green belt development + OHS	--	14.5	0.2322	0.0258	0.258

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

As per MoEF&CC's OM no. 22-65/2017-IA.III dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER), Green field projects having investment <100 Crore have to contribute 2% of the Capital Investment. Accordingly proponent has committed to allocate Rs. ~17 Lakh for CER activities to be conducted after the project is operational.

Activities are identified based on need based survey and five year plan with year-wise budget is formulated.

Tentative CER Activities

Sr. No.	Activity	Beneficiary village (Tentative)	Capital Cost Rs. (Lakh)
	1st Year - 2020		
1.	Drinking Water Facility- maintenance, repair and replacement of RO plants, construction of approach roads and pucca internal roads	Atali, Jolva, Rahiad, Suva	2
	2nd Year - 2021		
2.	Greenbelt development on village periphery and school, Construction of community hall for skill development	Dahej, Vadadala	4
	3rd Year - 2022		
3.	Solar Electrification through Solar Street Lights on access roads to village and solar heating systems	Galenda, Ambheta	5
	4th Year - 2023		
4.	Drinking Water Facility- Provided overhead tank	Vav, Nandida	3
	5th Year - 2024		
5.	Up-gradation of sanitation facility- Toilet blocks & infrastructure development	Kadodara, Goladara, Ambhel	3
	Total		**17**

B	**Total Plot area** (sq. meter)	5010.99 Sq. m.
	Green belt area (sq. meter)	1635.74 Sq. m.
C	**Employment generation**	Company employees 15 Nos. + Contract Labour 35 Nos.
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC reservoir
	Status of permission from the concern authority.	Requested to GIDC
ii	**Water consumption (KLD)**	

Category	Quantity KLD	Remarks
(Y) Domestic	**10**	GIDC water supply
(Z) Gardening	**6**	GIDC water supply
(AA) Industrial		
Process	27	GIDC water supply
Washing	6	Utility blow down water (Boiler: 2 KLD + Cooling tower: 4 KLD = 6 KLD) shall be directly reused for washing purpose after passing through cartridge filter.
Boiler	12	GIDC water supply
Cooling	40	GIDC water supply
Others (APCM)	6	GIDC water supply
Industrial Total	91	**Fresh water (GIDC): 85 KLD + Recycled water: 6 KLD**
Total (A + B + C)	**107**	**Fresh water (GIDC): 101 KLD + Recycled water: 6 KLD**

4) **Total water requirement** for the project: 107 KLD
5) Quantity to be **recycled**: 6 KLD
6) Total **fresh water** requirement: 101 KLD

(Total water requirement = Fresh water + Recycled water)

iii **Waste water generation (KLD)**

Category	Waste water KLD	Remarks
(O) Domestic	4	Sewage shall be disposed to soak pit via septic tank.
(P) Industrial		
Process	18	Process effluent shall be treated in own ETP consisting of Primary treatment, Secondary & Tertiary treatment and treated water shall be sent to CETP, Dahej for further treatment and disposal into GIDC drainage network connected to GIDC pumping station for final disposal into deep sea through common effluent conveyance pipeline. If required, unit shall install MEE for process effluent
Washing	6	Effluent shall be given Primary & Tertiary treatment and treated water shall be sent to CETP, Dahej for final treatment & discharge into GIDC drainage network connected to GIDC pumping station for final disposal into deep sea through common effluent conveyance pipeline.
Boiler	2	Boiler blow down of 2 KLD shall be reused for washing purpose after passing through cartridge filter.
Cooling	4	Cooling tower blow down of 4 KLD shall be reused for

			washing purpose after passing through cartridge filter.
	Others (APCM)	5	Effluent shall be given Primary & Tertiary treatment and treated water shall be sent to CETP, Dahej for final treatment & discharge into GIDC drainage network connected to GIDC pumping station for final disposal into deep sea through common effluent conveyance pipeline.
	Total Industrial waste water	35	**Discharge quantity: 29 + Recycled water: 6 KLD**
	Total [A + B]	39	**--**

iv

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

- ETP capacity - 40 KLD (Consisting of Primary, Secondary & Tertiary Treatment)

Treatment scheme including segregation at source.

- There shall be segregation of process effluent (high COD) and Washing and APCM effluent (low COD).
- Industrial effluent shall be treated in own ETP consisting of Primary treatment, Secondary & Tertiary treatment and treated water shall be sent to CETP, Dahej for further treatment and disposal into GIDC drainage network connected to GIDC pumping station for final discharge through u/g Dahej-Vilayat Effluent Conveyance Pipeline up to deep sea.
- Process effluent Characteristics

Sr. No.	Parameters of process effluent	Unit	Inlet to ETP	Final Treated Effluent
1.	pH	-	5-10	6.5 - 8.5
2.	Temperature	°C	40	30-35
3.	Total Dissolved Solids	mg/L	7000 – 8000	4000 – 5000
4.	COD	mg/L	12000 – 18000	250
5.	Suspended Solids	mg/L	100 -150	< 10
6.	Ammonical Nitrogen	mg/L	30-50	<10

- Other than process effluent Characteristics (Washing and APCM effluent (low COD))

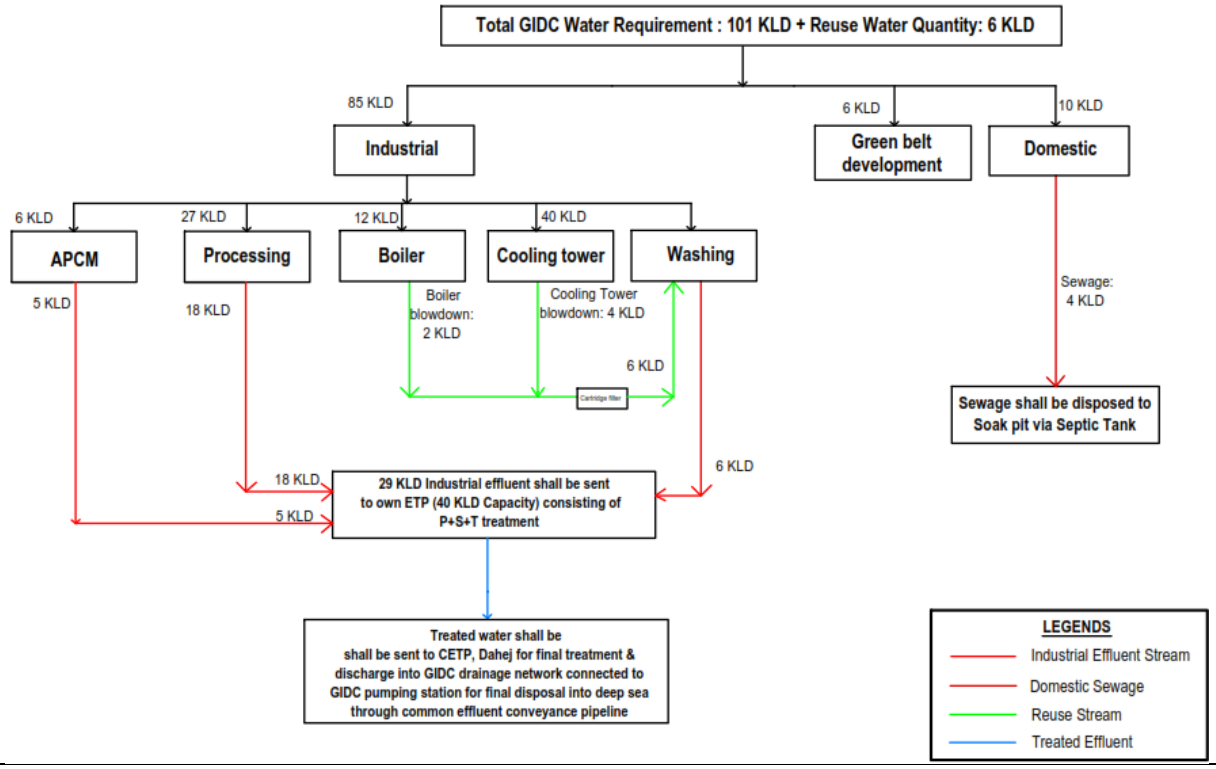
Sr. No.	Parameters of Other than process effluent	Unit	Inlet to ETP	Final Treated Effluent
1.	pH	-	6.5-8.5	<7.5
2.	Temperature	°C	35	30-32
3.	Total Dissolved Solids	mg/L	2000-3000	5000
4.	COD	mg/L	1000-1500	< 250
5.	Suspended Solids	mg/L	50	<10
6.	Ammonical Nitrogen	mg/L	10	<10

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.

- Treated effluent shall be sent to CETP, Dahej for further treatment. Treated effluent from CETP,

	Dahej shall be discharged into GIDC drainage network connected to GIDC pumping station for final discharge through u/g Dahej Vilayat Effluent Conveyance Pipeline upto deep sea.	
	Brief note on adequacy of ZLD (In case of Zero Liquid Discharge): ➢ Not applicable.	
v	Mode of Disposal & Final meeting point	
	Domestic:	Sewage shall be disposed to soak pit via septic tank
	Industrial:	Treated effluent shall be sent to CETP, Dahej for further treatment. Treated effluent from CETP, Dahej shall be discharged into GIDC drainage network connected to GIDC pumping station for final discharge through u/g Dahej Vilayat Effluent Conveyance Pipeline upto deep sea
vi	In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE etc. **Name of CF** ➢ CETP, Dahej	
	Membership of Common facility (CF) **(For waste water treatment)**	
	Assurance letter from GIDC, Bharuch for discharge of booked quantity of 29 KLD after final treatment in CETP, Dahej for final disposal into deep sea through common effluent conveyance pipeline.	
vii	**Simplified water balance diagram with reuse / recycle of waste water**	



viii Reuse/Recycle details (KLD)

Total reuse : 6 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.**
Boiler blow down: 2 KLD & Cooling tower blow down: 4 KLD	Boiler blow down (2 KLD) & Cooling tower (4 KLD) blow down shall be used	COD: <100 mg/l BOD: <30 mg/l TDS: <500 mg/l	Blow down shall be passed through cartridge filter and

			for washing purpose after passing through cartridge filter.		then shall be used. Hence it is feasible.	

E **Air**

Flue gas emission details

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

i

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.	Hot Air Generator Capacity: 1.0 lac Kcal/hr	11	Natural Gas **OR** Coal/ Briquette	1000 m3/ day **OR** 1.5 MT/ day	PM SO_2 NO_X	Multi-cyclone + Bag filter + Water scrubber
2.	Boiler Capacity: 4 TPH **OR**	15	Coal**/** Briquette	12 MT/ day		Multi-cyclone + Bag filter + Water scrubber
	Multi Fuel Boiler Capacity: 2 TPH		Coal/ Briquette **OR** LDO	6.0 MT/ day OR 150 L/h		
3.	DG Set (Standby) Capacity: 350 KVA	6	Diesel	60 L/h		With Adequate stack height

-Proponent is committed to follow all the guidelines given by solid fuel policy (Office order no. GPCB/ANK-C992/215695 dated 07/06/2014)

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.	Spray Dryer (1 no.) (Capacity – 500 Kg/h)	PM	12	Venturi Scrubber
2.	Process Emission Vessel – Bromination process carried out for production of Mono Bromo Acetic Acid	HCl	11	Water Scrubber (1 no.)
	Process Emission Vessel – Friedel Craft process carried out for production of Acetophenone			
	Process Emission Vessel – Condensation process carried out for production of 1-(2,4-Difluorophenyl)-2-(1H-1,2,4-Triazol-1-yl) Ethanone (DFTA)			
3.	Process Emission Vessel – Acid Chloride reaction carried out for production of 2-[4-(4-chlorobutanoyl) phenyl]-N,N,2-trimethyl propanamide (FEXO-3)	HCl SO_2 Cl_2	11	Water + Caustic Scrubber (1 no.)
	Process Emission Vessel – Acid Chloride reaction carried out for production of AP-200 Acetate			

Final solution obtained from scrubbers and their disposal:

- 30-32% HCl solution generated from scrubbing of HCl gas shall be sold to authorized actual end users having permission under rule 9 of Hazardous waste rules.
- 28 - 32% Sodium Bisulphite (Sodium salt) Solution generated from scrubbing of SO_2 gas shall be

sold to authorized actual end users having permission under rule 9 of Hazardous waste rules.

- 10% Sodium Hypochlorite solution generated from scrubbing of Cl_2 gas shall be reused completely in ETP for purification, bleaching, odour removal & water disinfection.

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

Sr.	Probable sources	Control measures
1.	Pump glands and seals	All pumps handling HAP chemicals with low V.Ps will be provided mechanical seals which are presently best for preventing emissions.
2.	Emissions from Bulk Storage Tanks during storage, loading and unloading	Storage tanks storing low V.Ps chemicals will be provided with Breather valve assembly. Set pressure of breather valves will be kept above the vapor pressures of stored material to avoid fugitive emission. Vents of such tanks will be connected with scrubber system. Tank Pressure equalization will be applied wherever required Closed transfer system will be provided with SOPs for loading and unloading
3.	During reactions & Solvent recovery systems	Liquid raw materials will be charged by pumping & closed loops. Suitable stoichiometric calculations are done and followed to regulate the quantity of reactants to be charged to reaction vessels in order to avoid use of excess chemicals, which in turn will minimize organic load in the effluent. All reactors shall be closed and provided with main condenser with cooling water circulation and vent condensers with chilled water circulation or chilled brine for maximum vapor recovery Distillation is carried out at atmospheric as well as vacuum conditions to obtain min. 95% recovery. Temperature and pressure conditions shall be stringently controlled as per the process requirement and optimized with low temperature and vacuum conditions wherever feasible. All temperature and critical process control shall be on PLC and rest operations will be manually.
4.	Pressure Relief Valve Emissions from pipelines	For highly pressurized lines, pressure equalization shall be followed with return lines so that the pipelines as well as connected equipment do not get pressurized unduly.
5.	Release from Sampling Lines	Shall be carried out using a closed loop sampling system.
6.	Valves, Flanges, plugs and instrument connections	Welded pipes to be used wherever feasible Suitable gasket material to be used Suitable gland packing to be used in valves LDAR shall be planned and implemented for periodic inspection and maintenance of pipes and pipe fittings.
7.	Chemical vapors during filtration and drying process	Covered systems shall be adopted, workers shall be provided PPEs, dust extraction systems, local exhausts and roof top ventilators, wherever required.
8.	Drum filling machinery	Covered transfer systems shall be adopted with minimum manual operations, workers shall be provided PPEs, area should be well-ventilated, facilitated with local exhausts and roof top ventilators
9.	Warehouse storing drums and bags	Spillages shall be strictly prevented by providing drip pans; proper handling equipment, Spill control procedures and equipment shall be provided.

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.	Empty barrels/ Containers/ Liners contaminated with hazardous chemicals/ wastes	From Raw material containers/ bags/ Drums	Cat.: 33.1 Sch.: I	68 (Bags & Liners) & 400 (Drums)	Collection, Storage, Decontamination and reuse within premises/ sell to local scrap vendor OR Disposal by selling to registered re-cyclers approved by GPCB/ CPCB.	
		2.	Used or Spent oil	From Machineries	Cat.: 5.1 Sch.: I	0.12	Collection, Storage, Transportation & Disposal by selling to Registered Re-refiners approved by GPCB/ CPCB.	
		3.	Process Residue and wastes	**During Production of:** Through isolation & distillation process of product no. 1; Hydrolysis reaction of product no. 2; Friedel craft reaction of product no. 8; Mesylation of product no. 10; Acid Hydrolysis reaction of product no. 11; Hydrogenation of product no. 12; Friedel craft reaction of product no. 14; Salt reaction of product no. 15; ITU Purification	Cat.: 28.1 Sch.: I	84	Collection, Storage, transportation, Disposal by sending to M/s. RSPL, Panoli for Co-processing	

			stage of product no. 16; Condensation reaction of Product no. 17; Breaking reaction of product no. 18; Cyclisation reaction of product no. 19; Friedal craft reaction of Product no. 20; Esterification reaction of product no. 21 and through R & D.				
	4.	Chemical sludge from waste water treatment	From ETP	Cat.: 35.3 Sch.: I	360	Collection, Storage, Transportation & Disposal to common TSDF facility at M/s. BEIL, Dahej.	
	5.	Off specification products	From manufacturing process	Cat.: 28.4 Sch.: I	42	Collection, Storage, transportation, Disposal by sending to M/s. RSPL, Panoli for Co-processing	
	6.	Spent Solvent	From Production of Product no. 2, 4, 5, 10 – 18 & 20 – 22.	Cat.: 26.4 Sch.: I	161 *	Reused continuously in production through distillation columns having Primary and secondary condensers inbuilt with reactors without any storage in the premises.	
	7.	10 – 12% Potassium Bromide	From Production of Beflubutamid (FMB)	Cat.: B-10 Sch.: II	114	Collection, Storage, Transportation & Disposal by selling out to authorized users	

					who are having authorization with valid CTO and Rule 9 permission.	
8.	25%- Spent Aluminium chloride solution OR Poly Aluminium Chloride	**During Production of:** Through Friedal craft reaction of Product no. 8, 9, 14 & 20	Cat.: B-10 Sch.: II	7506	Collection, Storage, Transportation & Disposal by selling out to authorized users who are having authorization with valid CTO and Rule 9 permission **OR** shall be converted to Poly Aluminium chloride & then sell out to authorized users who are having authorization with valid CTO and rule 9 permission.	
9.	Potassium Iodide Solution	From Production of 1[-2-(2,4-Difluorophenyl)-2,3-Epoxy Propyl]-1h-1,2,4-Triazole Methane Sulfonate(DFTA EPOXY MESYLATE)	Cat.: B-10 Sch.: II	936	Collection, Storage, Transportation & Disposal by selling out to authorized users who are having authorization with valid CTO and Rule 9 permission	
10.	28 - 32% Sodium Bisulphite (Sodium salt) Solution	**From Production of:** Through Caustic scrubber attached to reaction vessel of 2-[4-(4-chlorobutanoyl) phenyl]-N,N,2-trimethyl propanamide (FEXO-3)	Cat.: B-23 Sch.: II	990	Collection, Storage, Transportation & Disposal by selling out to authorized users who are having authorization with valid CTO and Rule 9 permission	
11.	Ammonium Sulphate-10%	**From Production of:** During	--	354	Collection, Storage, Transportation	

			Breaking reaction of 1,3-Bis (1H-1,2,4-triazole-1-yl)propan-2-one (DCDO-3)			&Disposal to common TSDF facility at M/s. BEIL, Dahej	
	12.	Mixture of Chromium sulphate & Sodium salt **OR** 50% Basic Chromium Sulphate after Spray Drying	**From Production of:** During centrifugation step of Menadione Sodium Bi Sulfite/ Vitamin K3	--	492 **OR** 246	Collection, Storage, Transportation & Disposal by selling out to authorized users who are having authorization with valid CTO and Rule 9 permission **OR** shall be converted to 50% Basic Chromium Sulphate using Spray Dryer & then sell out to authorized users who are having authorization with valid CTO and rule 9 permission.	
	13.	30 – 32 % HCl Solution	**During production of:** From water scrubber attached to reaction vessel of Product no. 4, 8, 9 & 14	Cat.: B10 Sch.: II	1614	Collection, Storage, Transportation & Disposal by selling out to authorized users who are having authorization with valid CTO and Rule 9 permission.	
	14.	10% Sodium Hypochlorite solution	**During production of:** From Caustic scrubber attached to reaction vessel of AP-200 Acetate	Cat.: B-7 Sch.: II	324	Collection, Generation, Storage & Reuse completely (i.e. 324 MTA) in ETP for purification, bleaching, odour removal & water disinfection. Additional quantity (i.e. 100	

						MTA) shall be procured from authorized vendors

*We have received TOR vide letter no. SEIAA/GUJ/TOR/5(f)/647/2019 dated 03-05-2019 for spent solvent quantity generated from manufacturing process about 4140 MTA. As per the recent suggestions given by the committee for updating actual spent solvent quantity rather than showing the recovered quantity. Hence, here we have incorporated all the suggestions and updated the Hazardous waste matrix and mentioned the actual spent solvent quantity.

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	Unit is having NOC for disposing landfilling waste to TSDF of M/s. BEIL, Dahej and co-processing to M/s. RSPL, Panoli
iii	Details of Non-Hazardous waste & its disposal (MSW and others)	Details as below:

Sr. No.	Type of Waste	Specific Source of generation	Category (As Per Sch)-2016	Quantity (MT/Annum)	Management of Non Hazardous Waste
1.	Ash	From Coal/ Briquette combustion	--	1068	Collection, Storage, Transportation, Sale to brick manufacturers or manufacturers of Cement articles or products.

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

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

Product Sr. No.	Name of **Product**	Solvent	Solvent charged per batch (kg)	Recovered Solvent	
				per batch (kg)	% Recovery
1	Beflubutamid (FMB)	Acetone	200	190	95
		IPA	250	242	97
3	Menadione Sodium Bisulfite/ Vitamin K3	IPA	245	238	97
4	Mono Bromo Acetic Acid	Toluene	92	87	94.6
9	1- (2, 4-Difluorophenyl)- 2- (1H-1, 2, 4-Triazol -1-yl) Ethanone (DFTA)	MDC	40	38	95
		Acetone	100	96	96
10	1[-2- (2, 4-Difluorophenyl)- 2, 3-Epoxy Propyl]-1h-1, 2, 4-Triazole Methane Sulfonate (DFTA Epoxy Mesylate)	MDC	30	29	97
		Acetonitrile	50	48	96
11	1-(3-Carboxy Pyridyl)-2-Phenyl-4-Methyl Piperazine (Acid)	DMF	73.00	69	95
		Ethyl acetate	1235	1173	95
		Chloroform	1000	980	98
		Toluene	606	576	95
		MEG	62	59	95
12	1- (3-Hydroxy	Methanol OR	964	916	95

	Methylpyridyl-2)-2-Phenyl-4-Methylpiperazine (Alcohol)	Toluene	964	916	95
13	4-(2-Aminoethyl) Thiomethyl-2 Dimethylaminomethyl Thiazole (NI-5)	Toluene	600	590	98
14	2-[4-(4-chlorobutanoyl) phenyl]-N,N,2-trimethyl propanamide (FEXO-3)	MDC	50	48	96
15	1-[4 (Cyclopropylcarbonyl) Phenyl]1-Methylpropionic Acid Cyclohexylamine Salt (FEXO-6)	Toluene	50	48	96
		Methanol	50	48	96
16	Iso Thiourea- [(S)-((2-Guanidino-4-Thiazolyl) Methylisothiourea Dihydrochloride] (ITU)	Acetone	400	384	96
		IPA	300	285	95
17	2,2-Bis-(1-H-1,2,4 Triazole-1-yl-Methyl)-1,3-Dioxolane [DCDO-2]	Toluene	500	490	98
		MDC	500	485	97
		N-methyl-2-pyrollidone	1000	980	98
20	3, 3-Diphenyl Propionitrile	Methanol	500	490	98
21	Trans, trans 2,4-Hexadienyl Acetate	THF	1167	1108	95
22	AP-200 Acetate	THF	1200	1152	96
		Toluene	1000	965	97

- Spent solvent generated from distillation process shall be reused continuously in production through distillation columns having Primary and secondary condensers inbuilt with reactors without any storage at the premises.
- Solvent recovery shall be carried out by distillation directly from process vessels provided with distillation assembly in dedicated distillation units depending on the solvent composition. Recovered solvents shall be completely reused in process. Distillation assembly shall comprise of packed column, condensers with cooling water and chilled water/ chilled brine circulation to obtain min. 95% recovery.

ii

VOC emission sources and its mitigation measures

- Handling of chemicals will be in closed system.

H

- **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Storage tanks (Aboveground)	Methanol & Sulphuric acid	--
Drum/ Carboys storage	1,3-Dichloro Acetone; Mono Bromo Acetic Acid; Acetophenone; 3-Amino-1,2,4-Triazole; Trans, trans 2,4-Hexadienyl Acetate; 1,3-Difluorobenzene; 4- chloro Butyryril chloride; Acetic anhydride; Acetic Acid; Acetone; Isopropyl alcohol; Acetonitrile; Acetyl chloride; Chloro Acetyl Chloride; Chloroform; Cyclohexylamine; Dimethyl Formamide; Ethyl acetate; Ethyl Chloroformate; Toluene; Formic acid; Hydrobromic acid; Methacrylic acid;	--

	Methylene dichloride; Thionyl chloride; Thiourea; Vitride (sodium bis(2-methoxyethoxy)aluminum hydride solution); Benzene; Benzyl Amine; Ethylene glycol; Methane sulfonic acid; Methyl 2- bromo butyrate; Sodium Borohydride; Sodium methoxide; Tetrahydrofuran; Copper Chloride & Dimethyl amine in THF solution	
Bag Storage	Beflubutamid (FMB); Aluminium chloride; Magnesium metal; Mono Chloro Acetic Acid; Potassium hydroxide; Sodium dichromate; Sodium hydroxide; Sodium Nitrite & Sorbic Acid	--
Gas cylinder/ Tonner storage	Hydrogen, Methyl chloride & Ammonia	--

- **Applicability of PESO** :
- Unit will obtain licence from PESO if required.

- During the meeting dated 18/03/2020, technical presentation made 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 January 2019 to March 2019. Ambient Air Quality monitoring was carried out for $PM_{10,}$ $PM_{2.5,}$ $SO_{2,}$ $NO_{x,}$ NH_3, CO, VOCs as BTX, Benzene, HCl & Cl_2 fourteen 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. 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 new in GIDC Dahej. Source of water is GIDC. PP mentioned that effluent generated from process, washing and scrubber will be treated in in-house ETP consisiting of primary, secondary and tertiary treatment and treated effluent will be disposed into CETP, Dahej for final treatment and disposal. PP has proposed one steam boiler and HAG. Fuel used will be Natural Gas/Coal*/* Briquette. PP has addressed Hazardous Waste as per HWR – 2016. Committee noted that PP has addressed EMP & CER satisfactorily.
- Compliance of ToR found satisfactory.
- ***After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.***

14	SIA/GJ/IND2/20470/2015	**M/s. Govind Organics Industries LLP** Plot No. D3/135, GIDC Phase III, Dahej,	EC – Reconsideration

		Tal. Vagra, Dist.: Bharuch, Gujarat, India	

Category of the unit: 5(f)

Project status: Expansion

- Project proponent (PP) has submitted online application vide no. SIA/GJ/IND2/20470/2015 dated 16/01/2020 for obtaining Environmental Clearance.
- SEIAA issued TOR to PP vide letter dated 23/08/2019.
- Project proponent has submitted EIA Report prepared by Siddhi Green Excellence Pvt. Ltd, Ankleshwar 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 (MT/Month)			End - use of the products
			Existing	Proposed	Total	
1.	Monochlorobenzene (MCB)	108-90-7	250	0	250	Pharma intermediates, Solvents, Air freshener, Rubber chemical, Pigments etc.
2.	Paradichlorobenzene (PDCB)	106-46-7				
3.	Orthodichlorobenzene (ODCB)	95-50-1				
4.	Trichlorobenzene (TCB)	120-82-1				
5.	Meta dichlorobenzene	541-73-1	0	200	200	Pharma Intermediate
6.	Nitro naphthalene (NN)	86-57-7	0	500	500	To manufacture 1-Aminonaphthalene
7.	1, 5 Dinitro naphthalene	605-71-0				To manufacture 1, 5 Diaminonaphthalene
8.	1, 8 Dinitro naphthalene	602-38-0				To manufacture 1, 8 Diamino naphthalene
9.	2, 5 Dimethyl nitro benzene (2, 5 DMNB)	89-58-7				To manufacture 2, 5 Dimethyl aniline
10.	2, 5 Dichloro nitro benzene (2, 5 DCNB)	89-61-2				To manufacture 2, 5 Dichloro aniline
11.	3, 4 Dichloro nitro benzene	99-54-7				To manufacture 3, 4 Dichloro aniline
12.	2, 3 Dichloro nitro benzene	3209-22-1				To manufacture 2, 3 Dichloro aniline
13.	2, 4 Dichloro nitro benzene	611-06-3				To manufacture 2, 4 Dichloro aniline
14.	2, 6 Dichloro nitro benzene	601-88-7				To manufacture 2, 6 Dichloro aniline
15.	2, 4, 5 Trichloro nitro benzene	89-69-0				To manufacture 2, 4, 5 Trichloro aniline
16.	2, 3, 4 Trichloro nitro benzene	17700-09-3				To manufacture 2, 3 Dichloro 6 Nitroaniline
17.	2, 3 Dichloro 4 nitro phenol	59384-57-5				To manufacture 2, 3 Dichloro 4 Aminophenol

18.	2, 5 Dichloro 4 nitro phenol	5847-57-4				To manufacture 2, 5 Dichloro 4 Amino Phenol
19.	Ortho chloro aniline	95-51-2	0	500	500	Dye Intermediate
20.	Para chloro aniline	106-47-8				Pharma & Dye intermediate
21.	Alpha naphthyl amine	134-32-7				Dye Intermediate & To manufacture Sodium Naphthioate
22.	2, 5 Xylidine	95-78-3				Dye Intermediate
23.	N-isopropyl Parachloro Aniline (IPPCA)	770-40-1				Pharma Intermediate
24.	2, 5 Dichloroaniline	95-82-9				Dye Intermediate & to manufacture 2, 5 Dichloro Phenol
25.	2, 3 Dichloro aniline	608-27-5				Dye Intermediate & to manufacture 2, 3 Dichloro Phenol
26.	3, 4 Dichloro Aniline	95-76-1				Dye Intermediate
27.	2, 4 Dichloro Aniline	554-00-7				Dye Intermediate
28.	2, 4, 5 Trichloro Aniline	636-30-6				Pigment Intermediate
29.	2, 3 Dichloro 4 Amino Phenol	39183-17-0				Drug Intermediate for Triclabendazole
30.	3-Chloro Aniline	108-42-9				Dye Intermediate
31.	2, 3 Dichloro Phenol	576-24-9	0	50	50	Drug Intermediate for Triclabendazole
32.	2, 5 Dichloro Phenol	583-78-8				Drug Intermediate for Lufenuron
33.	Parachloro aniline hydrochloride	20265-96-7	0	30	30	Drug Intermediate for CH-Base
34.	O – Chloro Trityl Chloride (O -CTC)	42074-68-0				Specialty compound
35.	Nitro RF (O, O, O-Tris (4 – nitro phenyl) thio phosphate)	64131-85-7				To manufacture Amino RF
36.	4-(Trifluoromethyl) benzene Sulphonamide (TBSA)	830-43-3				Specialty compound
37.	Thiophosphoric Acid Tri (4 Amino Phenyl) Ester (AMINO RF)	52664-35-4				Specialty compound
38.	1, 5 Diamino Naphthalene	2243-62-1				Dye & Pigment Intermediate
39.	1, 8 Diamino Naphthalene	479-27-6				Dye & Pigment Intermediate
40.	Sodium naphthionate	130-13-2	0	200	200	Dye Intermediate
41.	Alpha Naphthol	90-15-3	0	100	100	Drug Intermediate
42.	N-Phenyl 1-naphthyl amine (PANA)	90-30-2				Anti oxidant
43.	Nevile Winther acid (N.W.	84-87-7	0	100	100	Food Colour Intermediate

	Acid)					
44.	Sulphanilic Acid	121-57-3	0	500	500	Dye-Intermediate
45.	Sulphanilic Acid - Na Salt	6106-22-5				
TOTAL (Excluding Potassium Sulphate) – proposed for EC			**250**	**2180**	**2430**	
46.	Potassium Sulphate - It is an **Inorganic Product**, hence not included in total production proposed for EC.	7778-80-5	0	500	500	To manufacture potassium per sulphate

- 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 04/02/2020.
- Salient features of the project for Water, air and Hazardous waste management are as under:

Sr. no.	Particulars	Details
A	Total **cost of Proposed** Project (Rs. in Crores):	Existing: 8.05 Crores Proposed: 25 Crores Total: 33.05 Crores
	Details of EMP	

COMPONENT	**ADDITIONAL CAPITAL COST OF EMP**	**RECURRING COST OF EMP (per month)**
TOTAL COST	Rs. 325 Lakh	Rs. 88.675 Lakh

Bifurcation of EMP Cost

Sr. No.	**Particulars**	**Capacity**	**Additional Capital Cost (Rs. in Lakh)**	**Operating Cost (Lakh/ Month)**	**Maintenance Cost (Lakh/ Month)**	**Total Recurring Cost (Lakh/ Month)**
1	Effluent Treatment Plant	150KLD	140	33.75	3.75	37.5
2	APCM	Multi cyclone separator, bag filter, process scrubber systems, Installation of stacks with platform and sampling arrangements, local exhaust & dust collector systems	60	0.747	0.083	0.83
3	Hazardous Waste managemen	100 m^2 (1.71 % of total plot area)	60	45	5	50

	t					
4	AWH Monitoring Cost + Noise Pollution control + Green belt developmen t + OHS	--	65	0.306	0.034	0.34

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

As per OM no. 22-65/2017-IA.III on dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER), Greenfield projects having investment <100 crore have to contribute 2% of the Capital Investment. Accordingly proponent has committed to allocate Rs. 50 lakh for CER activities to be conducted after the project is operational.

Component	As per Norms	Allocation
CER	Rs. 50 Lakh (2%)	Rs. 50 Lakh (2%)

Tentative CER Activities

Sr. No.	CER Activity	Beneficiary village (Tentative)	Capital Cost Rs. (Lakh)
1.	Tree plantation on village boundary and pond boundary	Dahej, Vadadala	5
2.	Donation to schools and hospitals for improving drinking water, sanitation facilities and solar electrification	Atali, Jolva, Rahiad, Suva	25
3.	Providing paverblocks on internal roads of surrounding villages or constructing RCC roads	Kadodara, Goladara, Ambhel	20

B	**Total Plot area** (sq. meter)	Existing: 5858.38 Sq. m. Proposed: NIL Total: 5858.38 Sq. m.
	Green belt area (sq. meter)	Existing: NIL Proposed: 660 Sq. m. Total: 660 Sq. m.
C	**Employment generation**	**Existing Man power:** 26 Nos. company employees + 10 Nos. on Contract basis **Proposed additional Man power:** 14 Nos. company employees + 10 Nos. on Contract basis **Total after proposed expansion:** 40 Nos. company employees + 20 Nos. on Contract basis Max. efforts for recruitment from local area and within district and state.
D	**Water**	
i	Source of Water Supply (GIDC Bore well, Surface water, Tanker supply etc...)	GIDC reservoir
	Status of permission from the concern authority.	Requested to GIDC
ii	**Water consumption (KLD)**	

	Existing KLD	Proposed (Additional) KLD	Total after Expansion KLD	Remarks

(BB)	Domestic	1.72	8	9.72	GIDC water supply
(CC)	Gardening	NIL	5	5	GIDC water supply
(DD)	Industrial				
	Process	NIL	67	67	GIDC water supply
	Washing	6.5	8	14.5	**Proposed Additional water requirement for washing:** Boiler blow down of 2 KLD & Cooling tower blow down of 6 KLD shall be reused for washing purpose after passing through cartridge filter.
	Boiler	NIL	22	22	GIDC water supply
	Cooling	35	51	86	GIDC water supply
	Others (APCM)	12	8	20	GIDC water supply
Industrial Total		**53.5**	**156**	**209.5**	**Fresh water (GIDC) : 201.5 KLD + Recycled water: 8 KLD**
Grand Total (A+B+C)		**55.22**	**169**	**224.22**	**Fresh water (GIDC): 216.22 KLD + Recycled water: 8 KLD**

7) **Total water requirement** for the project: 224.22 KLD
8) Quantity to be **recycled:** 8 KLD
9) Total **fresh water** requirement: 216.22 KLD

(Total water requirement = Fresh water + Recycled water)

iii **Waste water generation (KLD)**

Category	**Existing KLD**	**Proposed (Additional) KLD**	**Total after Expansion KLD**	**Remarks**
(Q) Domestic	1.4	6.6	8	Sewage shall be disposed to soak pit via septic tank.
(R) Industrial				
Process	0	56	56	High COD Effluent: Primary treated effluent shall be sent to CMEE (Common Multi Effect Evaporator) of M/s. BEIL (Bharuch Enviro Infrastructure Limited), Dahej for final disposal.
		53	53	Low COD Effluent: Primary

				treated effluent shall be sent to CETP, Dahej for further treatment and disposal.
Washing	0	8	8	**Recycled: 8 KLD** Boiler blow down of 2 KLD & Cooling tower blow down of 6 KLD shall be reused for washing purpose after passing through cartridge filter. Washing effluent shall be given primary treatment in own ETP & then shall be sent to CETP, Dahej for further treatment and disposal.
Boiler	0	2	2	Boiler blow down of 2 KLD shall be reused for washing purpose after passing through cartridge filter
Cooling	0	6	6	Cooling tower blow down of 6 KLD shall be reused for washing purpose after passing through cartridge filter
Others (APCM)	0.02	0	0.02	Primary treated effluent shall be sent to CETP, Dahej for further treatment and disposal.
Total Industrial waste water	**0.02**	**125**	**125.02**	**Discharge quantity: 117.02 KLD + Recycled water: 8 KLD**
Total [A + B]	**1.42**	**131.6**	**133.02**	**Discharge quantity: 125.02 KLD + Recycled water: 8 KLD**

iv

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

- Proposed ETP capacity- 150 KLD (Consisting of Primary treatment)

Treatment scheme including segregation at source. **(Give Characteristics of each stream i.e. COD, BOD, TDS etc.)**

- There shall be segregation of Effluent streams based on COD.
- Characteristics of High COD process effluent

Sr. No.	Parameters	Unit	Estimated value
7.	pH	-	3 to 10
8.	Total Dissolved Solids (TDS)	mg/L	8000 – 10000
9.	COD	mg/L	13000 – 25000
10.	Suspended Solids	mg/L	100
11.	Oil & Grease	mg/L	<10
12.	Ammonical Nitrogen	mg/L	<50

- **Low COD effluent characteristics**

Sr. No.	Parameters	Unit	Collection Tank (Inlet to ETP)	Partially Treated Effluent to CETP
1.	pH	-	6.5 – 8.5	6.5 - 8.5
2.	Total Dissolved Solids	mg/L	1200 – 1500	1500
3.	COD	mg/L	2000 – 2500	1500 - 2000
4.	Suspended Solids	mg/L	< 100	< 10
5.	Oil & Grease	mg/L	< 10	< 1
6.	Ammonical Nitrogen	mg/L	<10	<10

➢ **Treatment & Disposal of segregated effluent streams:**

Sr. No.	Waste stream Details	Source of generation of effluent	Treatment Methodology	Disposal
1.	Low COD	Process (during manufacturing of products **EXCEPT** Sodium naphthionate & Nevile Winther acid (N.W. Acid)) and washing (as and when generated) & APCM effluent (as and when generated)	To ETP	Primary treated effluent shall be sent to CETP, Dahej.
		Boiler blowdown & Cooling tower blowdown (as and when generated)		Reused for washing purpose
2.	High COD	Process (during manufacturing of Sodium naphthionate & Nevile Winther acid (N.W. Acid))	To ETP (Primary Treatment)	Primary treated effluent shall be sent to CMEE (Common Multi Effect Evaporator) of M/s. BEIL (Bharuch Enviro Infrastructure Limited), Dahej

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.

➢ Low COD Process Effluent & washing effluent shall be primarily treated and shall be sent to CETP, Dahej for further treatment and disposal. Treated effluent from CETP, Dahej shall be discharged into GIDC drainage network connected to GIDC pumping station for final discharge through u/g Dahej-Vilayat Effluent Conveyance Pipeline up to deep sea.

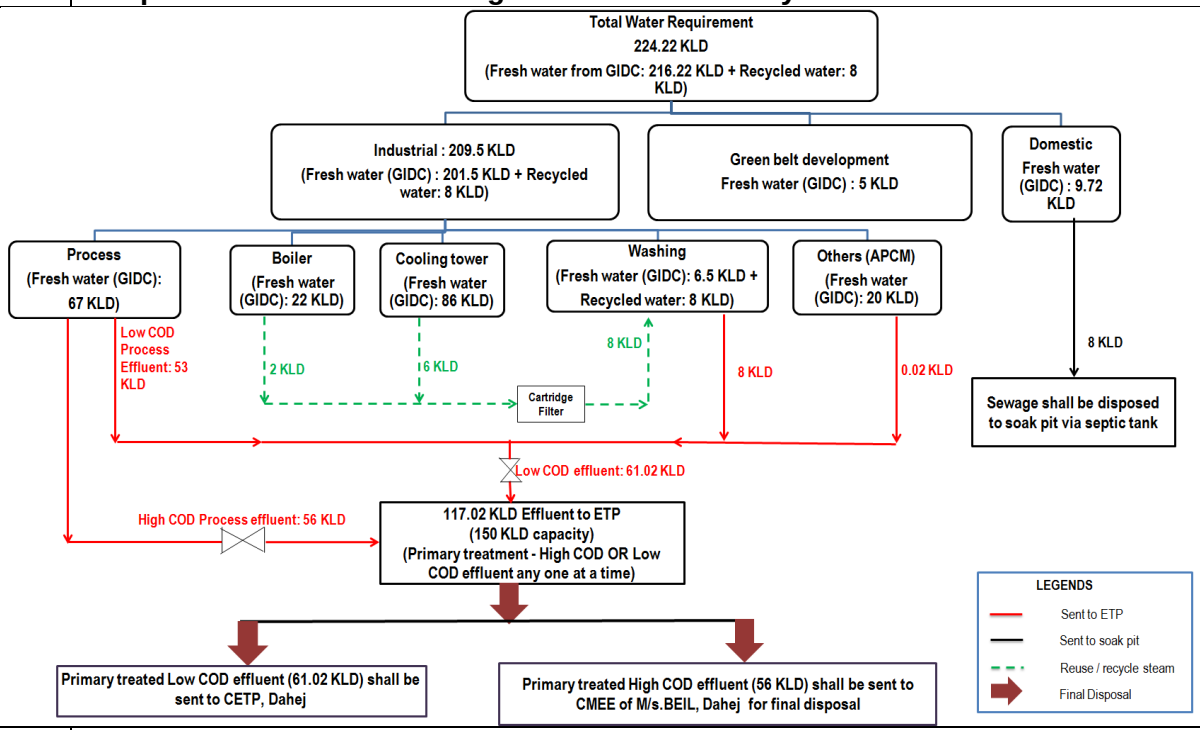
Brief note on adequacy of ZLD (In case of Zero Liquid Discharge):

➢ Not Applicable

v Mode of Disposal & Final meeting point

Domestic:	Sewage shall be disposed to soak pit via septic tank.
Industrial:	➢ High COD process effluent shall be primarily treated and shall be sent to CMEE plant of M/s. of Bharuch Enviro Infrastructure Limited (BEIL), Dahej. ➢ Low COD Process Effluent & washing effluent shall be primarily treated and shall be sent to CETP, Dahej for further treatment and disposal. Treated effluent from CETP, Dahej

		shall be discharged into GIDC drainage network connected to GIDC pumping station for final discharge through u/g Dahej-Vilayat Effluent Conveyance Pipeline up to deep sea.
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)**	
	➢ CMEE plant of M/s. BEIL (Bharuch Enviro Infrastructure Limited), Dahej. ➢ CETP, Dahej	
	Membership of Common facility (CF)	
	(For waste water treatment) 1. Assurance letter from GIDC, Bharuch for discharge of booked quantity of 61 KLD after final treatment in CETP, Dahej for final disposal into deep sea through common effluent conveyance pipeline. 2. NOC Letter of M/s. BEIL, Dahej for CMEE plant.	
vii	**Simplified water balance diagram with reuse / recycle of waste water**	



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

Total reuse: 8 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.**
Boiler blowdown: 2 KLD Cooling tower blowdown: 6 KLD	Boiler blow down of 2 KLD & Cooling tower blow down of 6 KLD shall be passed through cartridge filter and used for	COD: <100 BOD: <30 TDS: <500	Blow down will be used only after passing through cartridge filter. Thus, parameters will remain within

		washing purpose.		permissible limit and feasible to use for washing purpose.	

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	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
Flue Gas Stacks & Emission Details as per existing EC						
1	Thermic fluid heater Capacity: 9 Lakh Kcal/hr	11	Natural gas OR	5000 m^3/ day	PM SO_2 NOx	As natural gas is used as fuel, the flue gas parameter shall be within permissible limits, hence APCM is not required. Adequate stack height with SMF shall be provided.
			HSD	30 kL/Month		
2	D. G Set (Stand By) Capacity: 100 KVA	6	Diesel	20 Lit./hr		Adequate stack height with SMF
Proposed Additional Flue Gas Stacks & Emission Details:						
3	Boiler Capacity: 2 TPH	11	Natural gas OR	1080 m^3/ day	PM SO_2 NOx	As natural gas is used as fuel, the flue gas parameter shall be within permissible limits, hence APCM is not required. Adequate stack height with SMF shall be provided.
			HSD	20 kL/Month		
	Thermic fluid heater Capacity: 8 Lakh Kcal/hr		Natural gas OR	1440 m3/ day		
			HSD	30 kL/Month		
4	Multi fuel boiler Capacity: 2 TPH	15	Coal	3 MT/ day		Multi Cyclone + Water scrubber
	Thermic fluid heater Capacity: 20 Lakh Kcal/hr		Coal	7 MT/ day		
5	D. G. Set (Standby) Capacity: 500 KVA	6	Diesel	102 Lit./hr		Adequate stack height with SMF

- Proponent is committed to follow all the guidelines given by solid fuel policy (Office order no.

GPCB/ANK-C992/215695 dated 07/06/2014)

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)
Process Gas Emission Details as per existing EC				
1.	Reaction Column – Chlorination reaction of Monochlorobenzene (MCB), Paradichlorobenzene (PDCB), Orthodichlorobenzene (ODCB) & Trichlorobenzene (TCB)	HCl	11	2 stage Water Scrubber
Proposed additional Process Gas Emission Details				
2.	Reaction vessel – Reaction carried out for production of O – Chloro Trityl Chloride	HCl	11	2 stage Water Scrubber
3.	Reaction vessel – Reaction carried out for production of N-Phenyl 1-naphthyl amine (PANA) Reaction vessel – Drawning reaction carried out for production of Nevile Winther acid (N.W. Acid)	NH_3	11	2 stage – Water scrubber
4.	Reaction vessel – Drawning reaction carried out for production of Nevile Winther acid (N.W. Acid)	SO_2	11	Water + Alkali Scrubber

Final solutions obtained from scrubbers and their disposal

- 30 - 33% HCl solution generated from scrubbing of HCl will be used in ETP to the maximum extent OR If required shall be sold to authorized actual end user.
- 20 - 25% Ammonia solution generated from scrubbing of NH_3 shall be sold to authorized actual end user.
- 8 - 10% Sodium Bisulphite solution generated from scrubbing of SO_2 shall be utilized within plant premises.

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

Sr.	Probable sources	Control measures
1.	Pump glands and seals	All pumps handling HAP chemicals with low V.Ps will be provided mechanical seals which are presently best for preventing emissions.
2.	Emissions from Bulk Storage Tanks during storage, loading and unloading	Aboveground Storage tanks storing low V.Ps chemicals will be provided with Breather valve assembly. Set pressure of breather valves will be kept above the vapor pressures of stored material to avoid fugitive emission. Vents of such tanks will be connected with scrubber system. Tank Pressure equalization will be applied wherever required Closed transfer system will be provided with SOPs for loading and unloading. Very low V.P chemicals shall be stored underground
3.	During reactions & Solvent recovery systems	Liquid raw materials will be charged by pumping & closed loops. Suitable stoichiometric calculations are done and

			followed to regulate the quantity of reactants to be charged to reaction vessels in order to avoid use of excess chemicals, which in turn will minimize organic load in the effluent. All reactors shall be closed and provided with main condenser with cooling water circulation and vent condensers with chilled water /chilled brine circulation or chilled brine for maximum vapor recovery Distillation shall be carried out at atmospheric as well as vacuum conditions to obtain min. 95% recovery. Temperature and pressure conditions shall be stringently controlled as per the process requirement and optimized with low temperature and vacuum conditions wherever feasible. Critical processes will be controlled through PLC	
	4.	Pressure Relief Valve Emissions from pipelines	For highly pressurized lines, pressure equalization is followed with return lines so that the pipelines as well as connected equipment do not get pressurized unduly.	
	5.	Release from Sampling Lines	Shall be carried out using a closed loop sampling system.	
	6.	Valves, Flanges, plugs and instrument connections	Seamless pipes to be used wherever feasible Suitable gasket material to be used Suitable gland packing to be used in valves LDAR shall be planned and implemented for Periodic inspection and maintenance of pipes and pipe fittings	
	7.	Chemical vapors during filtration and drying process	Covered systems to be adopted, workers shall be provided PPEs, dust extraction systems, local exhausts and roof top ventilators, wherever required.	
	8.	Drum filling machinery	Covered transfer systems to be adopted with minimum manual operations, workers shall be provided PPEs, area should be well-ventilated, facilitated with local exhausts and roof top ventilators	
	9.	Warehouse storing drums and bags	Spillages shall be strictly prevented by providing drip pans; proper handling equipment, Spill control procedures and equipment shall be provided.	

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/Annum)			Management of HW
				Existing	Proposed	Total	
1.	Discarded Containers/ Bags/ Liners	Raw material & Finished product packing material	Cat.: 33.1 Sch.: I	2	24	26	Collection, Storage, Decontamination and reuse within premises/ sell to local scrap vendor OR Disposal by selling to registered re-cyclers approved by GPCB/ CPCB.
2.	ETP Sludge	From ETP	Cat.: 35.3 Sch.: I	0.2	720	720.2	Collection, Storage, Transportation & Disposal to common TSDF facility at M/s. BEIL, Dahej.

3.	Used oil	From Machineries	Cat.: 5.1 Sch.: I	2	22	24	Collection, Storage, Transportation & Disposal by selling to Registered Re-refiners approved by GPCB/ CPCB.
4.	Distillation residue	During Production of: Through distillation process of product no. 1 to 5, 7, 8, 17 - 32, 34 - 35 & 37 - 42 in product list	Cat: 36.1 Sch: I	2.4	1932	1934.4	Collection, Storage, Transportation & Disposal by Co-processing to cement industry OR Co-processing at M/s. RSPL, Panoli.
5.	30 – 33% Hydrochloric acid	During production of: From water scrubber attached to reaction vessel of Product no. 1 to 4 & 34 in product list	Cat.: B15 Sch.: II	4992	312	5304	Collection, Storage, Transportation, Disposal by selling out to authorized users who are having authorization with valid CTO and Rule 9 permission – M/s. Ideal Dye Chem Industries (unit-2), Vapi.
6.	Carbon waste	During production of: Product no. 45 & 46 in product list	Cat: 28.3 Sch: I	NIL	828	828	Collection, Storage, Transportation & Disposal by Co-processing to cement industry OR Co-processing at M/s. RSPL, Panoli.
7.	Spent Filter cloth	Filtration Process	Cat: 36.2 Sch: I	NIL	3	3	Collection, Storage, Transportation & Disposal by Co-processing at M/s. RSPL, Panoli.
8.	Spent catalyst	From manufacturing process	Cat: 26.5 Sch: I	NIL	276	276	Collection, Storage in Bags at separate place (shed with RCC flooring), Transportation & sent for regeneration.
9.	Spent Solvent	From Production of Product no. 1 - 5, 7, 8, 17 – 21, 23 – 32, 34 - 36, 38 – 40 & 42 in product list	Cat.: 26.4 Sch.: I	203	1272	1475	Completely Reused in production through distillation columns having Primary and secondary condensers inbuilt with reactors followed by carbon tower without any storage in the premises.
10.	Spent acid (70%)	During production of: Product no. 6 - 18, 31 & 32 in product list	Cat: 26.3 Sch: I	NIL	11148	11148	Collection, Storage, Transportation, Disposal by selling out to authorized users who are having authorization with valid CTO and Rule 9 permission – M/s. Rama Phosphates Ltd., Udaipur, Rajasthan.
11.	20 – 22% Aluminium Chloride Solution	From Production of: During Dumping reaction of Meta dichlorobenzene & reaction of O – Chloro Trityl Chloride	Cat.: B-10 Sch.: II	NIL	2736	2736	Collection, Storage, Transportation & Disposal by selling out to authorized users who are having authorization with valid CTO and Rule 9 permission – M/s. Ureca Industries, Vapi.
12.	Nitro compound mixture	During production of: Product no. 6, 9 - 10 & 15 - 16 in product list	Cat.: 20.1 Sch.: I	NIL	840	840	Collection, Storage, Transportation & Disposal by selling out to authorized users who are having authorization with valid CTO– M/s. Shreyas Industries, Vapi.
13.	60 - 80% Spent Sulphuric acid	From Production of Products 2, 5 Dimethyl nitro benzene (2, 5 DMNB); 2, 3 Dichloro Phenol & 2, 5 Dichloro	Cat.: B15 Sch.: II	NIL	6312	6312	Collection, Storage & Completely reuse as raw material in manufacturing of product no. 17, 18, 43, 44 & 45. Fresh additional quantity required = 9553.2 MTA

		Phenol					
14.	20 – 25% Ammonia Solution	During production of: Product no. 42 & 43 in product list.	Cat: A-10 Sch: II	NIL	984	984	Collection, Storage, Transportation & Disposal by selling out to authorized users who are having authorization with valid CTO and Rule 9 permission – M/s. Jackson & Sons, Panoli.
15.	8 – 10% Sodium Bisulphite	From Production of Product Nevile Winther acid (N.W. Acid)	Cat.: B 23 Sch.: II	NIL	2004	2004	Collection, Storage & Completely reuse as raw material in manufacturing of product no. 36 & 43. Fresh additional quantity required = 100.8 MTA
16.	Aniline	From Production of Product N-Phenyl 1-naphthyl amine (PANA)	Cat.: B 3 Sch.: II	NIL	1788	1788	Collection, Storage & Completely reuse as raw material in manufacturing of product no. 42, 44 & 45. Fresh additional quantity required = 4254 MTA

ii	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	Unit is having NOC for disposing landfilling waste to TSDF of M/s. BEIL, Dahej; incinerable/ co-processing waste to CHWIF of M/s. BEIL, Ankleshwar and membership letter of M/s. RSPL, Panoli for co-processing of haz. waste.
iii	Details of Non-Hazardous waste & its disposal (MSW and others)	**Ash:** Source of generation: From Coal Combustion Quantity: 360 MTA Disposal: Sale to brick manufacturers or manufacturers of Cement articles or products
G	**Solvent management**, VOC emissions etc.	
i	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)	

Prod. Sr. No.	**Name of Product**	**Solvent**	**Solvent charged per batch (kg)**	**Recovered Solvent**	
				per batch (kg)	**% Recovery**
1.	Monochlorobenzene (MCB)	Benzene	1230	500	94.5
2.&3.	Paradichlorobenzene (PDCB) & Orthodichlorobenzene (ODCB)	Mono chloro Benzene	250	250	100
4.	Trichlorobenzene (TCB)	Dichlorobenzene	250	250	100
5.	Meta dichlorobenzene	ortho or para-Dichlorobenzene	1010	500	99
7.&8.	1,5 Dinitro Naphthalene & 1,8 Dinitro Naphthalene	Ethylene dichloride	1700	1615	95
17.	2, 3 Dichloro 4 nitro phenol	Ethylene dichloride	1000	970	97
18.	2, 5 Dichloro 4 nitro phenol	Ethylene dichloride	1000	970	97
19.	Ortho chloro aniline	Methanol	2000	1940	97
20.	Para chloro aniline	Methanol	2000	1940	97

21.	Alpha naphthyl amine	Methanol	2000	1942	97.1
23.	N-isopropyl Parachloro Aniline (IPPCA)	Acetone	1600	1013	95.5
24.	2, 5 Dichloroaniline	Toluene	516.53	501.03	97
25.	2, 3 Dichloro aniline	Toluene	508.30	493.02	97
26.	3, 4 Dichloro Aniline	Toluene	508.26	493.02	97
27.	2, 4 Dichloro Aniline	Toluene	508.26	493.02	97
28.	2, 4, 5 Trichloro Aniline	Methanol	2000	1940	97
29.	2, 3 Dichloro 4 Amino Phenol	Methanol	2000	1940	97
30.	3-Chloro Aniline	Toluene	516.53	501.03	97
31.	2, 3 Dichloro Phenol	o - Dichlorobenzene	1750	1700	97.1
32.	2, 5 Dichloro Phenol	o - Dichlorobenzene	1750	1700	97.1
34.	O – Chloro Trityl Chloride (O - CTC)	Benzene	2800	1900	92.9
35.	Nitro RF (O, O, O-Tris (4-nitrophenyl) thiophosphate)	Acetone	1738	1686	97
36.	Thiophosphoric Acid Tri (4 Amino Phenyl) Ester (Amino RF)	Methanol	4000	3880	97
38.	1, 5 Diamino Naphthalene	Xylene	2000	1940	97
39.	1, 8 Diamino Naphthalene	Xylene	2000	1940	97
40.	Sodium naphthionate	o-dichloro benzene	2280	2200	96.5
42.	N-Phenyl 1-naphthyl amine (PANA)	Aniline	2850	2200	99.3

- Spent solvent generated from distillation process shall be reused continuously in production through distillation columns having Primary and secondary condensers inbuilt with reactors without any storage at the premises.
- Solvent recovery shall be carried out by distillation directly from process vessels provided with distillation assembly in dedicated distillation units depending on the solvent composition. Recovered solvents shall be completely reused in process. Distillation assembly shall comprise of packed column, condensers with cooling water and chilled water/ chilled brine circulation to obtain min. 95% recovery.

ii **VOC emission** sources and its mitigation measures

- Handling of chemicals will be in closed system.

H
- **Details regarding storage of Hazardous chemicals**

Storage details	Name of major Hazardous chemicals	Remarks
Storage tanks	Monochlorobenzene (MCB), Benzene, Ethylene dichloride, p-Xylene, Methanol, Acetone, Toluene, Sulphuric acid, Nitric Acid, 30% Hydrochloric acid, Sodium hydroxide solution, Orthodichlorobenzene (ODCB), Meta dichlorobenzene, Ortho chloro aniline, Aniline, Para Dichlorobenzene (PDCB), Nitro naphthalene (NN), Trichlorobenzene (TCB), 3-Chloro Aniline; 3, 4 Dichloro nitro benzene, Para chloro aniline, Alpha naphthyl amine; 2, 5 Xylidine; 2, 3 Dichloro aniline, O - Nitro chloro benzene, p- Nitro chloro benzene, 3 Chloro nitrobenzene	--
HDPE OR MS drums/ Carboys	2-(Trifluoromethyl) aniline & Xylene	--
Bags	Aluminium Chloride, Naphthalene, Sodium hydroxide, 4-Nitro	--

	phenol, Sodium Nitrite	
Cylinders/ Tonners	Chlorine, Hydrogen, Ammonia	--

- **Applicability of PESO** :
- Unit will obtain licence from PESO if required.

- During the meeting dated 04/02/2020, 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 January 2019 to March 2019. Ambient Air Quality monitoring was carried out for PM10, PM2.5, SO2, NOx, NH3, CO, Cl2, HCl and VOC at Fourteen 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.
- This unit was established after year 2006. They have valid EC for existing unit. Copy of EC and its compliance report is submitted. PP ensured that there are no court cases pending and no public complaints against the project.
- During SEAC meeting, Committee asked for certified compliance report by MoEF&CC, Bhopal or RO site visit report, PP informed about unit is fully complied EC order conditions. PP informed that existing plant is under construction phase and still not in operation stage. Committee asked about area adequacy of proposed expansion as huge expansion in proposed project, PP informed that they have sufficient plot area to accommodate proposed expansion project plant machinery, utility area etc. Committee asked about readdressed ToR no-2 regarding NOC letter from previous Management of unit for use of old EC. Committee asked about waste water management, PP informed that high COD effluent will be sent to CMEE of M/s. BEIL, Dahej after in-house ETP treatment and low COD effluent will be treated in primary ETP and treated effluent will be sent to CETP, Dahej for further treatment. Committee asked for submit membership certificate of CMEE with mentioning total consented quantity, booked quantity, spare capacity of CMEE and acceptance norms of effluent for MEE. Committee also insisted for readdressed ToR no- 3 regarding technical justification for ETP sludge quantity against industrial effluent treatment. Committee asked about justification regarding nitration process for proposed project eventhough mentioning Nitric acid

as raw material for 2, 3 Dichloro 4 nitro phenol and 2, 3, 4 Trichloro nitro benzene product, PP is unable to satisfy regarding its justification during meeting . Committee asked about submit membership certificate for disposal of incinerable waste other than Ankleshwar CEPI area. Committee asked clarification regarding nitro compound mixture as Hazardous waste with its category and disposal of it and revised Hazardous waste matrix for disposal of spent acid, reuse of Hazardous waste for which product process with its mass balance and disposal of incinerable waste. Committee insisted for readdressed ToR no-65 regarding Specific safety measures to be taken for general Public living in the vicinity , ToR no- 8 for safety precaution for hydrogen gas, chlorine gas, and ammonia gas and ToR no- 14 for LDAR with each solvent and its technical details.

- **After deliberation, it was unanimously decided to consider the project for further consideration only after satisfactory submission of the following:**

1. Readdress ToR no-2 regarding NOC letter from previous Management of unit for use of old EC readdress ToR no- 3 regarding technical justification for ETP sludge quantity against industrial effluent treatment with its mass balance.
2. Readdress ToR no-65 regarding Specific safety measures to be taken for general Public living in the vicinity , ToR no- 8 for safety precaution for hydrogen gas, chlorine gas, and ammonia gas and ToR no- 14 for LDAR with each solvent and its technical details.
3. Submit Membership certificate of CMEE/common spray dryer with mentioning total capacity, consented quantity, occupied capacity and spare capacity and norms of acceptance of effluent from member units.
4. Justification regarding nitration process for proposed project even though mentioning Nitric acid as raw material for 2, 3 Dichloro 4 nitro phenol and 2, 3, 4 Trichloro nitro benzene product.
5. Clarification regarding Nitro compound mixture as Hazardous waste or not. If yes then mention its category and disposal of the same and revised Hazardous waste matrix for disposal of spent acid, reuse of Hazardous waste for which product process with its mass balance.
6. Submit membership certificate for incinerable waste disposal other than CEPI area.

- Project proponent made presentation for the above mentioned query dated 18/03/2020 for the above mentioned points.
- PP presented replied as below:

1. PP presented regarding NOC letter from previous Management of unit for use of old EC and also gave technical justification for ETP sludge quantity against industrial effluent treatment with its mass balance.
2. PP presented regarding ToR no-65 regarding Specific safety measures to be taken for general Public living in the vicinity , ToR no- 8 for safety precaution for hydrogen gas, chlorine gas, and ammonia gas and ToR no- 14 for LDAR with each solvent and its technical details.
3. PP presented Membership certificate of CMEE/common spray dryer with mentioning total capacity, consented quantity, occupied capacity and spare capacity and norms of acceptance of effluent from member units.

4. PP presented regarding nitration process for proposed project even though mentioning Nitric acid as raw material for 2, 3 Dichloro 4 nitro phenol and 2, 3, 4 Trichloro nitro benzene product.
5. PP presented for Clarification regarding Nitro compound mixture by saying that it is not covered under schedule of Hazardous Waste.
6. PP presented Membership Certificate of RSPL, Panoli for Co-processing.

- Committee deliberated on the reply submitted by PP and found it satisfactory.
- Compliance of ToR found satisfactory.
- ***After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance.***

Meeting ended with thanks to the Chair.

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. R. J. Shah, Member, SEAC	
5.	Shri. A. K. Muley, Member, SEAC	
6.	Dr. V. K. Jain, Member, SEAC	
7.	Shri A. V. Shah, Secretary, SEAC	